PROJECT MANAGEMENT KNOWLEDGE AND PROJECT SUCCESS AMONG RELIGIOUS INSTITUTES OF THE CATHOLIC CHURCH IN KENYA: A CASE OF NAIROBI ARCHDIOCESE

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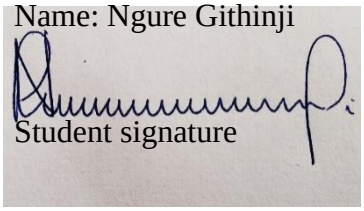
An Applied Research Project Submitted in Partial Fulfilment of The Requirements for the Award of Master of Business Administration Degree in the Business School of Africa Nazarene University

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DECLARATION

I declare that this document and the research that it describes are my original work and that they have not been presented in any other university for academic work.

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DEDICATION

To my father, Mr. Robinson Njagi Gachogu, who has always supported me in this long journey of education. To Rev. Prof. Sahaya G. Selvam for his continued support and motivation to complete my MBA.

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ABSTRACT

Projects and project managers must balance between competing priorities obstacles and constraints to deliver the project successfully. Project managers therefore need the necessary knowledge, skills, abilities, and competencies if they are to manage a project to its successful completion. The purpose of the study was to explore the relationship between project management knowledge and project success in the Religious Institutes of the Catholic Church in Kenya. Specifically, the study sought to examine the role of general management skills on project success in Religious Institutes of the Catholic Church, determine the role of technical project management skills on project success in Religious Institutes of the Catholic Church and establish the role of industry skills on project success in Religious Institutes of the Catholic Church. The study was anchored on the theory of constraints and the human capital theory. A simple random sampling method was used. 145 project managers, coordinators and leads of the Religious Institutes in the Archdiocese of Nairobi formed the sample and were surveyed using a questionnaire. A cross-sectional analysis was done so as determine and gain insights on the extent of the relationship between project management knowledge and project success. This was done by use of SPSS 21 and Excel. The Pearson r coefficient and regression analysis was used to determine if there was any correlation and influence between project management knowledge and project success. The study determined that 54.9% of the respondents did not have general management skills while 45.1% did, 60.4% did not have technical project management skills while 39.6% did, and 59.3% did not have industry skills while 40.7% did. It also revealed that only 33% of the respondents thought the factors of project success were important while 67% did not. Project success in the Religious Institutes of the Catholic Church in Kenya was correlated to and influenced by general management skills, technical project management skills, and industry skills. The Pearson r values were 0.509 for general management skills, 0.566 for technical project management skills, and 0.602 for industry skills. The study also proposed that further research should be explored in the areas of leadership, Skills for project success as opposed to skills for project management, and the project success practices of contributing and impacting the vision, mission, and future of the Religious Institutes.

DEFINITION OF TERMS

Archdiocese: A territorial area or district that is under the pastoral care, jurisdiction and administered by an Archbishop.

Charism: This refers to the vision and mission of a Religious Institute. It is often inspired by the holy spirit and grounded within the framework of the Catholic Church. The charism is what defines the unique purpose and aim of every Religious Institute.

Diocese: A territorial area or district that is under the pastoral care, jurisdiction and administered by a bishop. In the Roman Catholic church, only the Pope can divide or merge dioceses or create new ones.

Ecclesiastical Province: An ecclesiastical province consists of several dioceses, one of them being the archdiocese, headed by a metropolitan bishop or archbishop who has ecclesiastical jurisdiction over all other bishops of the province.

General management skills: Knowledge, skills and abilities required by project managers and any manager to work and thrive within the context of an organization. Organization is the larger institution from whence the project originates as well as the project itself.

Industry skills: Competencies required for an organisation, project, or individual to perform inside a given sector, industry, or domain.

Leadership: The capacity to lead, motivate, and steer a group.

Project Communications Management: The process of getting the correct information delivered to the appropriate person at the right time and at a reasonable cost.

Project Cost Management: The skills necessary to prepare a budget for the project, find the necessary funds, and control the costs to ensure the project is completed within the allotted budget.

Project Integration Management: The coordination of all elements of a project.

Project Management Knowledge: These are the skills, competencies, and behaviours that a project manager possesses and uses to manage a project.

Project Manager: The person in overall charge of the planning and execution of a particular project. In this study is applied to anyone who manages, coordinates, leads, or runs a project or projects in the Religious Institutes. This is regardless of whether they hold the title of project manager or not. They may hold a different job title and have other responsibilities but managing a project or projects falls under their purview. They are also referred to as project leaders in this study.

Project Procurement Management: The process of acquiring products and/or services for the project from outside sources.

Project Quality Management: Ensuring the project meets the expectations of the stakeholders.

Project Resource Management: Methods for identifying, acquiring, and managing the resources required for a project's successful completion.

Project Risk Management: The process of identifying the types and severity of risks on the project, then creating and implementing risk-mitigation strategies.

Project Scope Management: Detailing what goes into the project; that is the work and processes that will go into completing a project successfully.

Project Stakeholder Management: Effectively engaging stakeholders in project decisions, as well as the planning and execution of project work.

Project Time/Schedule Management: The skills and competencies required to ensure the project is completed within a given timeframe.

Religious Institutes: This is a type of organization/body of consecrated life. Its members pronounce public vows, either perpetual or temporary, and lead a life in community with fellow members as brothers or sisters in common.

Technical project management skills: Knowledge, skills, and abilities to effectively apply project management knowledge to deliver the desired outcomes for programs or projects.

ABBREVIATIONS AND ACRONYMS

AIPM – Australian Institute for Project Management

ANU – Africa Nazarene University

AOSK – Association of Sisterhoods in Kenya

CBO – Community Based Organization

ICT – Information and Communication Technology

IPMA – International Project Management Association

NACOSTI – National Commission for Research, Technology and Innovation

NGO – Non-Governmental Organization

OECD – Organization for Economic Co-operation and Development

PMA – Project Management Association

PMCC – Project Management Professionals Certification Centre

PMI – Project Management Institute

RSCK – Religious Superiors Conference of Kenya

SPSS – Statistical Package for the Social Sciences

WBS – Work Breakdown Schedule

CHAPTER ONE

INTRODUCTION AND BACKGROUND OF THE STUDY

1.1 Introduction

The study investigated the relationship between project management knowledge and project success in the Religious Institutes of the Catholic Church in Kenya. It aimed to determine if the project management knowledge project managers and project teams possess ensured project success, supplement existing knowledge on the relationship between project management knowledge and project success by examining this relationship within the context of the Religious Institutes of the Catholic Church in Kenya. This chapter covers the background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, scope of the study, delimitations of the study, limitations of the study, assumptions of the study, theoretical framework, conceptual frameworks, and the hypotheses.

1.2 Background of the Study

Managing a project is very difficult. There are often competing priorities, obstacles, and constraints to meet the project objectives and performance, remain within budget, and deliver the project on time. Further, projects also need to tie into direct business and organizational success, as well as preparing for the future and sustainability (Shenhar, Dvir, Levy, & Maltz, 2001). The project manager and project team therefore have to balance between the competing priorities and constraints to successfully complete any project.

To this end project managers and project teams, who comprise the human capital of a project, need to have the requisite knowledge, skills and competencies that will be used to manage and complete a project successfully. The project management

knowledge that these project managers need to possess are general management skills, project management skills, and industry skills.

The study aimed to investigate the relationship between the three variables (general management skills, project management skills, and industry skills) and project success (within budget, on time, meeting the performance objectives of the project, acceptance by the clients, and fitting within the vision and mission of the Religious Institute).

1.2.1 General Management Skills

General management and organizational knowledge are the skills required by project managers, project teams and any manager to work and thrive within the context of an organization. Organization should be viewed as the larger institution from whence the project originates as well as the project itself as an organization. Project manager needs to understand how the organization works so as make decisions that are beneficial to the organization and organizational performance (Black, et al., 2019) and provide for project success.

The general management knowledge and skills required are leadership, project integration management, project quality management, and project procurement management.

1.2.2 Technical Project Management Skills

Technical project management skills are defined as the skills to effectively apply project management knowledge to deliver the desired outcomes for programs or projects (Project Management Institute, 2017). They are the abilities and capabilities required of a project manager and project team to effectively apply specific project management knowledge to achieve and attain the project, programme, or portfolio's

goals, objectives, or expected outcomes. They are skills and knowledge that are specific to Project Management.

The technical project management skills required are project scope management, project cost management, project resources management, and project risk management.

1.2.3 Industry Skills

The competencies required for an organisation, project, or individual to perform inside a given sector, industry, or domain are known as industry specific skills. Every industry has its own distinct set of technical skills, competences, products, knowledge, and functions. Within that industry/domain, there is a certain context, tools, and techniques that are associated with working in and solving challenges of that industry (Becerra-Fernandez & Sabherwal, 2010).

The industry knowledge and skills required are project stakeholder management, project time/schedule management, and project communication management.

1.2.4 Project Success

Traditionally, project success has been defined as the accomplishment of a task within the constraints of time, cost, and performance. This has recently been updated to completion within the allocated time frame, within the budgeted cost, at the appropriate performance or specification level, with customer/user acceptance, with minimal or mutually agreed upon scope changes, without disrupting the organization's main work flow, and without changing the corporate culture. (Kerzner, 2017). This is also supported by the PMI (2017) which states that metrics for project success are time, cost, scope, quality, and achieving project objectives. A successful project is one that meets or exceeds the expectations of the stakeholders (Watt, 2019).

However, some literature has tried to make the distinction between project success and project management success. There is no question that successful project management makes for successful projects though a project can still be successful notwithstanding poor project management (Salykova & Abylova, 2019) which is a sentiment that was initially shared by Munns and Bjeirmi (1996) when they stated that "a project can be a success despite a poor project management performance". Successful project management is described as meeting a continual stream of project objectives on schedule, on budget, at the required performance/technology level, while effectively and efficiently employing the allocated resources, and having the outcomes agreed by the customer and/or stakeholders (Kerzner, 2017). Project management success is focused on achieving the intended objectives within the specified time and budget, whereas project success is focused on the project delivering the business objectives. There is a cross-section between project success and project management success and it is often difficult to distinguish between the two in the context of an organization. What is agreed upon though is that the actions, knowledge, skills and competencies of the project manager contribute to project success (Salykova & Abylova, 2019).

The indicators of project success for a project are completion on time, completion within budget, meets the set objectives/performance levels, acceptance by customers/clients, and fits within the vision and mission of the organization (in this case the Religious Institute).

1.2.5 Religious Institutes of the Catholic Church in Kenya

A Religious Institute of the Catholic Church is a type of organization/body of consecrated life. Its members pronounce public vows, either perpetual or temporary, and lead a life in community with fellow members as brothers or sisters in common

(Coriden, Green, Heintschel, Canon, & Catholic, 1985). Every religious institute has a unique purpose and aim. They minister, evangelize and transform the world. In their bid to minister, evangelize and transform the world, these religious institutes undertake projects that have specific objectives in line with their unique purpose and aim.

The Catholic Church in Kenya is composed of 4 ecclesiastical provinces and 20 suffragan dioceses for total of 24 dioceses and archdioceses. These encompass the entire geographical region of Kenya. There are about 230 religious institutes found within these 24 dioceses and archdioceses. This will form the target population.

1.3 Statement of the Problem

Religious Institutes in the Catholic Church in Kenya have many projects they run. These projects are initiated to meet the needs and objectives of the Church and the community; and fulfil the success factors of being within budget, on time, meeting the performance objectives of the project, acceptance by the clients, and fitting within the vision and mission of the Religious Institute. Project managers need to have the necessary project management knowledge of general management skills, project management skills and industry skills that they will use to ensure project success.

The focus of project management and project success studies has primarily been in the commercial and corporate world especially in the construction and ICT industries. There is a lack of studies on the factors that lead to project success within the context of religious institutes of the Catholic Church. This includes whether project knowledge is contributing to project success. Within community and church-based projects in Africa, an estimated 35% fail. This can be attributed to technical, financial, institutional, economic, and social factors (Mbugua, Nyiva, & Gathano, 2017). It is estimated that 31.1% of all projects are cancelled before completion and 52.7% of projects will go over their budgets by an average of 189%. Only 32% of projects are

taken to be successful. (The Standish Group, 2009). These studies have been done on Africa but not specifically to Kenya or the Religious Institutes of the Catholic Church in Kenya.

Religious Institutes of the Catholic Church should be concerned that they are not repeating the same errors and having similar failure rates stated above. There is therefore a need to conduct a study that will investigate projects run within the context of the Religious Institutes of the Catholic Church in Kenya with a focus on examining the association and influence of project knowledge and project success. This will enable the Religious Institutes of the Catholic Church understand the role of project management knowledge and take the necessary curative steps to mitigate against any failures of projects occasioned by disparities in the project management knowledge of their project managers.

1.4 Purpose of the Study

The purpose of this study was to explore the relationship between project management knowledge and project success in the Religious Institutes of the Catholic Church in Kenya.

1.5 Objectives of the Study

The study had one general objective and three specific objectives.

1.5.1 General Objectives of the Study

To investigate the role of project management knowledge on project success in Religious Institutes of the Catholic Church.

1.5.2 Specific Objectives of the Study

The specific objectives were:

I. To examine the role of general management skills on project success in Religious Institutes of the Catholic Church.

II. To determine the role of technical project management skills on project success in Religious Institutes of the Catholic Church.

III. To establish the role of industry skills on project success in Religious Institutes of the Catholic Church.

1.6 Hypotheses

The study tested the following hypotheses:

H_{01}: There is no significant relationship between General Management Skills and Project Success.

H_{02}: There is no significant relationship between Technical Project Management Skills and Project Success.

H_{03}: There is no significant relationship between Industry Skills and Project Success.

1.7 Significance of the Study

The findings of this study aided the religious institutes in determining if the project management knowledge their project teams possess will ensure project success. It will also aid in identifying any gaps and shortcomings in the project management knowledge needed to ensure project success for the Religious Institutes. The findings will also seek to further augment the already existing descriptions of the relationship between project management knowledge and project success.

It aimed to supplement existing knowledge on the relationship between project management knowledge and project success by examining this relationship within the context of the Religious Institutes of the Catholic Church in Kenya.

1.8 Scope of the Study

The aim of this study was to explore the relationship between project management knowledge and project success in religious institutes of the Catholic Church in Kenya. The Catholic Church in Kenya is composed of 4 ecclesiastical

provinces and 20 suffragan dioceses for total of 24 dioceses and archdioceses. These encompass the entire geographical region of Kenya. The survey was carried out in the Archdiocese of Nairobi. The Archdiocese of Nairobi formed a target population that had similar characteristics as those in other dioceses and the Catholic Church in Kenya.

The scope was limited by time and budgetary constraints. Carrying out such a study in all the dioceses of Kenya would have be expensive and require a vast amount of time and resources. There is also a limitation of reach with the researcher based in Nairobi.

1.9 Delimitations of the Study

This study was an applied research with view to improve how the Religious Institutes in Kenya value and use project management knowledge to ensure project success. The data was collected using an online survey questionnaire to get the perceptions of those involved projects in the religious institutes. These were project managers, coordinators and the people directly running the projects. The data was analysed using SPSS. The sample size has been determined by time, geography, and financial constraints. From a population of 230 respondents, a sample of 145 respondents found in one Archdiocese was selected.

1.10 Limitations of the Study

This study was carried out in the context of religious institutes in the Catholic Church in Kenya. The findings are therefore applicable only to the Religious Institutes. While the findings may be extrapolated to generalize on the relationship of project management knowledge to project success there may be need for further research to make any other generalizations.

The Religious Institutes of the Catholic Church in Kenya are unique as they have and take vows that compel their members to be assigned to any task, role or

activity regardless of their knowledge, skills or competencies. This unique aspect may have an impact on how project management knowledge is viewed by the members of the religious institutes and thus their responses in the study.

The perspective of how projects are viewed by the Religious Institutes also had an impact on the study. The Religious Institutes view projects as subordinate to their calling and purpose. They undertake projects to fulfil a higher mission and may not measure project success on the traditional parameters as espoused by what they would view as secularism.

There was also a lack of information and research on projects within the Catholic Church in Kenya and Religious Institutes to be found in the public domain. This presented a challenge in the empirical review of the success of projects in the context of the Catholic Church in Kenya.

1.11 Assumptions of the Study

It was taken that the persons involved in the projects had a basic understanding of what a project is and the objectives of the projects they are involved in.

It was assumed that the project managers have some form of experience or skills owing to their years in the Religious Institute. This experience and skills will be of some use to the projects they are managing and involved in.

It was presumed that the projects initiated by the Religious Institutes fell within the framework of fulfilling the unique purpose for which they exist and this in turn drove the success indicators of the projects.

1.12 Theoretical Framework

The theoretical framework of this study was anchored on two theories: the theory of constraints and the human capital theory. These theories were related to the

three objectives of the study which were the role of general management skills, project management skills and industry skills on project success.

1.12.1 The Theory of Constraints

The theory of constraints was conceived and developed by Dr. Eliyahu Goldratt in the year 1984. It espouses that every system was created and built for a purpose. Every task, activity and action undertaken by the system and organization must serve the overall purpose of the system. Thus, the system must have a defined overall goal and measurement criteria to judge if any decisions and actions taken are meeting the overall goal. Within any system there will be limitations that hinder the system from attaining higher performance and its goals. These limitations are what are termed as constraints (Goldratt, 1990).

A constraint is any factor that limits the execution and completion of a project or process within the project. These can be both internal or external and are normally listed in the project scope document and project charter (Project Management Institute, 2013). A small number of constraints can prevent a system or project from meeting its main objective or more of its goals. There is always at least one constraint in a project or system. It should be noted that a constraint is a limiting factor and not a problem that occurs in a project or organization. A constraint is a factor that is preventing you from generating more output or meeting your goal even if everything else is fine (Landau, 2018).

One of the underlying assumptions of the Theory of constraints is that projects and systems can only have a maximum of one or two constraints. Anything beyond that would make the system or project unmanageable (Goldratt, 1997). The theory also assumes that projects can be measured and controlled through variations of time, scope, and performance (Kerzner, 2017).

Projects traditionally focused on what was called the triple constraints of time, scope, and performance where a limiting factor of one of the three had to be mitigated through making changes to the other two. However, there can be multiple constraints on a project and the focus should be on competing constraints (Kerzner, 2017). A large body of research suggests that the triple constraints or iron triangle does not tell the entire story of project success. Yet, the criteria of on time, under budget, and to a defined quality remain paramount in our understanding of whether a project was completed as intended (Pollack, Helm, & Adler, 2018). Constraints can be external or internal. Within the internal constraints, one of the major constraints that a project will face will be that of the people in the project team and the project manager. This can manifest itself by lack of skills, personnel and behavioural issues (Landau, 2018). While all constraints may not be removed, any that is removed provides a clearer path to success.

Thus, projects will need to ensure that they mitigate against the possibility of people becoming a constraint by ensuring they have the requisite general management skills, technical project management skills, and industry skills that are required by the project. A lack of these skills will be a severe constraint that will hinder the successful completion of a project. Thus, the theory of constraints informs the variables on general management skills, technical project management skills, and industry in relation to their becoming a constraint to project success if they are not present in the project manager or project team. Further, it informs the hypotheses H_{01}, H_{02} and H_{03} as it supports the notion that ensuring project managers are properly equipped leads to the project managers not acting as an impediment to project success.

1.12.2 Human Capital Theory

The modern view of the human capital theory was espoused by Gary Becker in 1964 (Becker, 1994). He argued that human capital was a means and factor of production and that organizations should invest in human capital by way of education, training, and medical treatment. Any additional investment in human capital yielded additional economic benefit, value and profitability to the organization and society. Unlike the other factors of production (land, labour, or fixed capital), human capital is not transferable but is substitutable.

Human Capital are the skills an individual or person in the labour force possesses. These skills are viewed as an asset or a resource that can be used to increase productivity, competitive advantage, attain goals and for growth (Goldin, 2018). It is the collection of knowledge, skills, competencies and attributes within individuals that facilitate the creation of personal, social and economic well-being. It also includes education, training, intelligence, skills, health, and other things employers value such as loyalty and punctuality (Organization for Economic Co-operation and Development (OECD), 2007 and Kenton, 2018). The value of human capital can no longer be disputed and the way organizations handle their people will impact the performance of the organization. Human capital is the key to competitive advantage and an organization's success (Mullins, 2005). The skills must be usable to the organization and the project for their benefit, profit, and to meet the goals and activities associated with the organization and the project.

The Human Capital Theory assumes that experience equates to the development of knowledge and skills. This is not necessarily true. Duration and length of experience does not always translate into expertise (Frese & Rauch, 2001).

Project managers and project management teams need to possess the necessary skills, competencies, and knowledge to handle a project or the organization has provided a way of them attaining these skills by way of education and training or by substitution of the people in the teams. By supporting and investing in their employees and people, organizations and projects can improve the quality and productivity of their human capital through education and training which will ultimately increase profitability (Kenton, 2018). While there are many factors that drive the effectiveness and success of an organization, the factor that is most likely to bring and drive competitive advantage for an organization is human resource (human capital) and how that resource is deployed (Fisher, Schoenfeldt, & Shaw, 2006).

It is therefore imperative that projects have project managers and project teams that have the necessary knowledge in terms of general management skills, project management skills, and industry skills to carry out all the tasks and activities with view to meet the project objectives and ensure project success. They can do this by either procuring human capital with the necessary knowledge and skills or by providing the necessary education and training for the skills that are required to successfully manage and complete a project. Human capital theory is thus the support for the theory of constraints. It endeavours to inform the variables of general management skills, technical project management skills, and industry skills in the form of emphasizing that the project managers need to be trained in these if the project is to be successful. The alternative is to recruit persons with the said skills and knowledge. This theory also informs the hypotheses H_{01}, H_{02} and H_{03}. It supports the notion that the development of skills and knowledge will lead to desired outcomes. In this case, the knowledge is general management skills, technical project management skills, and industry skills and the outcome is project success.

1.13 Conceptual Framework

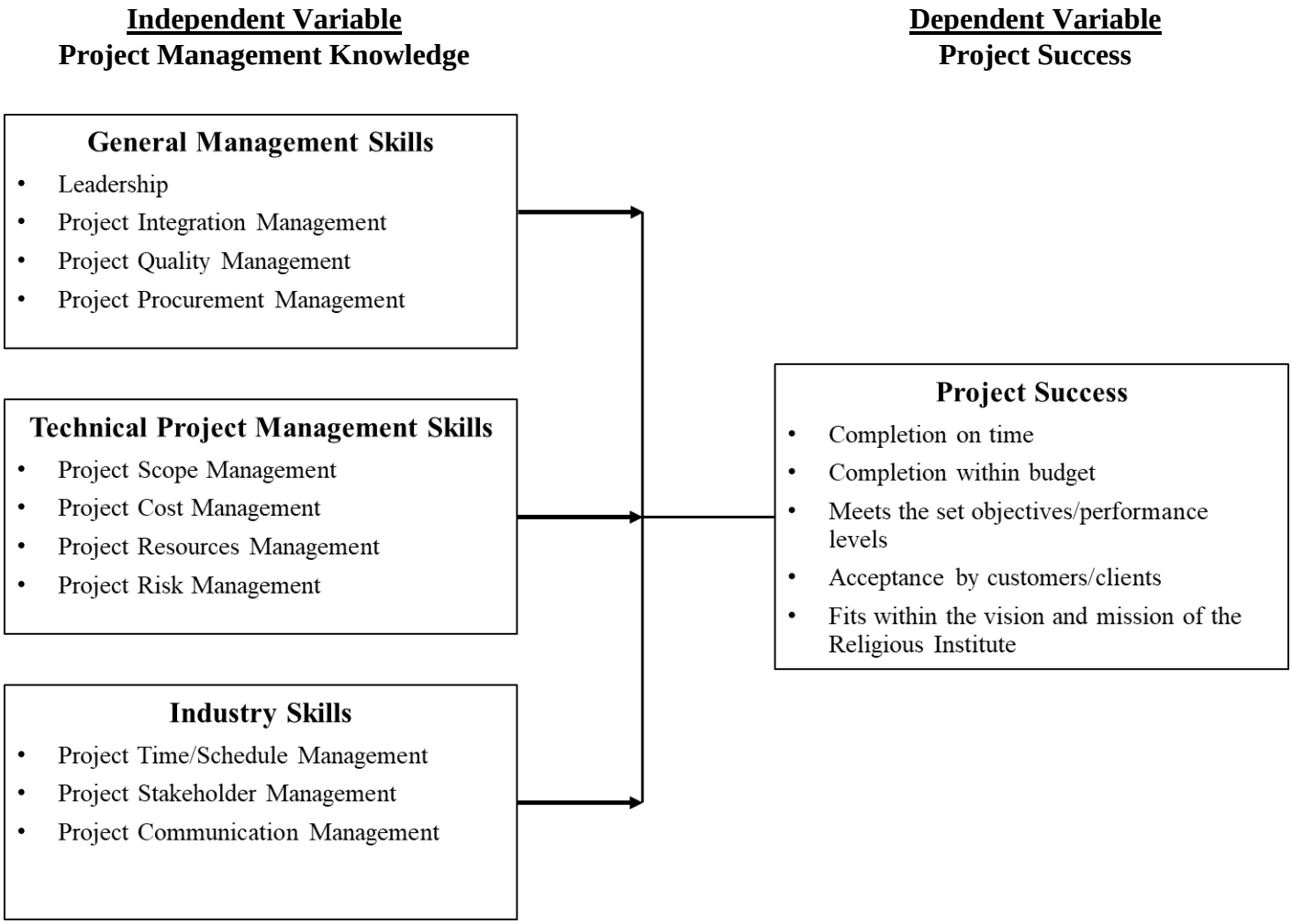


Figure 1.1: Conceptual Framework (Source: This Research, 2022)

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter covers the literature review of project management knowledge and project success, and the summary and research gap that is identified from the review of the literature.

2.2 Project Management Knowledge

There exist numerous project management institutes, associations, experts and organizations. Some of the institutes and associations include The Project Management Institute (PMI), International Project Management Association (IPMA), Project Management Association (PMA), The Australian Institute for Project Management (AIPM) and The Project Management Professionals Certification Centre (PMCC). There are many more regional and local institutes and associations. What they have in common, is the realization and conclusion that project managers need to have certain knowledge, skills, abilities and competencies if they are to consistently achieve project success. What constitutes this knowledge, skills, abilities and competencies is what differs. This is further compounded by the fact that project management is a 'relatively new' domain of study and still subject to debate and revision.

The very fundamental definition of project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements (Project Management Institute, 2017). Project management differentiates between knowledge, skills and competencies though they are interrelated and required by any project manager who is to complete a project successfully. Competence is the capability to apply knowledge, skills, and abilities to accomplish desired outcomes (International Project Management Association, 2015). Competency is achieved by a

mix of knowledge gained through training, skills obtained through experience, and application of that knowledge (Hwang & Ng, 2013). Knowledge is information and experiences an individual possesses, skills are specific technical capabilities that enable an individual perform a task, and ability is the effective delivery of knowledge and skills in a given context. These three factors are connected. Having a skill assumes some relevant knowledge, and having ability implies relevant skill and knowledge, but also adds the capacity to put those skills and knowledge into effect, in the correct fashion, and at the right time (International Project Management Association, 2015). Competence is the linking of knowledge, skills, and abilities to effectively achieve intended outcomes (Figure 2.1).

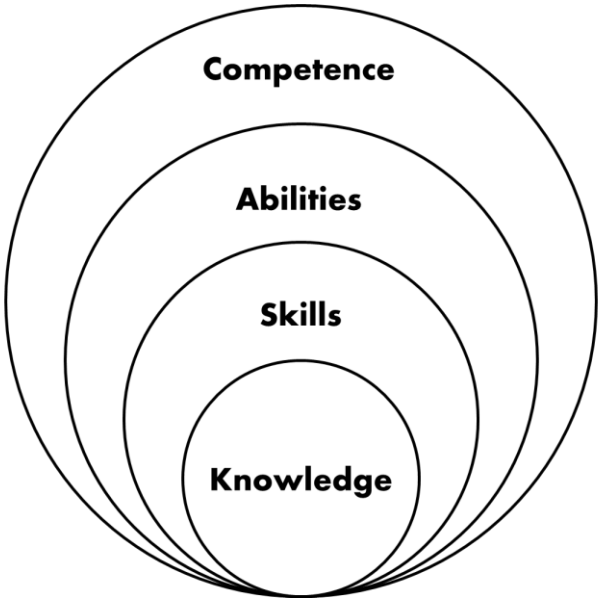


Figure 2.1: Competence (Source: Author, 2022)

The basis for any skill, ability or competence is rooted in knowledge. Any reference to a skill, ability, or competence in project management is based on the knowledge required for that skill, ability, or competence. It should be noted that this relationship is multidimensional and cyclic. More competence leads to more knowledge, skills and abilities. An increase in any of these components will often lead to an increase in the other components.

PMI (2017) research has indicated that project managers need more than technical project management skills if they are to be effective in today's competitive and global world. They would need skills in leadership and business intelligence. This has led to the project management competency development framework which recognises three key skills essential to a project manager referred to as the PMI Talent Triangle. These are technical project management, leadership, and business and strategic management. In each of these, the PMI highlights the importance of knowledge, skills, behaviour, and expertise required. Of particular recurrence in these three skills is the knowledge aspect.

Udo and Koppensteiner (2004) recognized the importance of the knowledge component in project management and broke up this knowledge domain of project management into three pillars: general management skills, project management skills, and industry management skills. Leadership, negotiation, communication, team building, and other human resource management skills are essential in every management role and form the general management skills pillar. The tools utilized in areas such as project scope management, project time management, and project cost management are all part of project management skills pillar. Knowledge of lifecycle management and product development processes are elements of the industry-specific management skills pillar.

While examining project management knowledge and skills for green construction, Hwang and Ng (2013) quoted Edum-Fotwe and McCaffer (2000) who observed that construction project managers gained two sorts of skills. The first were specific skills that were directly and exclusively connected to construction projects and, more specifically, the areas that represented their specialisation. The second category was general skills, which may be applied outside of the building industry. The

framework for acquiring project management skill is provided in the general skills. They are frequently required for the project manager to work effectively with subject matter experts.

Organizational and technical knowledge are both important in project management roles, knowledge, and competencies. Organizational knowledge encompasses both organizational and people skills. It is necessary for the project manager to possess organizational skills, leadership abilities, a thorough understanding of the organization's policies, and the ability to obtain and effectively use top executive support. Technical knowledge includes project management standards and codes, comprehending environmental rules, project management knowledge domains, project manager characteristics, and project manager roles (Gomes, Yasin, & Small, 2012).

The is no doubt that knowledge is an important part of project management and particularly if a project manager is to be effective. The question then is what are the project management knowledge areas, are they unique and exclusive to project management, and how can they be classified and categorised? A Project management knowledge area (PMKA) is specific area of project management that is defined by its knowledge needs and articulated in terms of its procedures, practises, inputs, outputs, tools, and techniques (Project Management Institute, 2017). These PMKAs have evolved over a number of years. This evolution has been brought about by experiences of project managers and by the realization that the theory and practice of project management can ‘borrow heavily’ from other related fields and domains such as management, organizational development, organizational behaviour, developmental studies, construction, ICT, defence and sustainability studies. Historically, the areas of civil construction, engineering, and defence have contributed heavily to the foundations

of project management especially the study of applying planning, organizing, and controlling projects in these industries (Cleland & Gareis, 2006).

Hawng and Ng (2013) identified 39 knowledge and skill areas that a project manager needed. The IPMA has 29 elements for competencies required by a project manager grouped into three areas of people, practice and perspectives competencies (International Project Management Association, 2015). Meanwhile, the PMI has defined ten project management knowledge areas. These knowledge areas by the PMI are the prolific in their use in project management and often stand out when project management knowledge is spoken of. They are project integration management, project scope management, project time management, project cost management, project quality management, project human resources management, project communication management, project risk management, project procurement management and project stakeholder management (Project Management Institute, 2017).

While these have been categorised by the PMI as distinct and separate domains and areas, they can also be classified with the framework as envisioned by Udo and Koppensteiner (2004) and Gomes, Yasin and Small (2012) which are general management skills, technical project management skills and industry skills.

2.3 General Management Skills and Project Success

General management and organizational knowledge are the skills required by project managers, project teams and any manager to work and thrive within the context of an organization. Organization should be viewed as the larger institution from whence the project originates as well as the project itself as an organization. The PMI (2017) recognises that every project operating inside an organisational system is affected and impacted by a variety of elements from within the organisation. The management element is one of these. Furthermore, it emphasises the necessity for business and

strategic skills that give perspective for the project on the organisation in order to guarantee that the project's decisions and actions promote strategic alignment and innovation. Finance, marketing, and operations are some of the skills and functions covered. Modern project management practice requires general and management knowledge, in addition to skills that extend beyond the technical aspects of an industry (Hwang & Ng, 2013). Project managers must realise that project management is about more than just getting the work done, and that the process necessitates general management abilities that allow a project to be completed with efficiency and control (Watt, 2019). Project manager needs to understand how the organization works so as make decisions that are beneficial to the organization and organizational performance (Black, et al., 2019) and provide for project success.

The general management knowledge and skills required are leadership, project integration management, project quality management, and project procurement management.

Leadership is the capacity to lead, motivate, and steer a group. Negotiation, resilience, communication, problem solving, critical thinking, and interpersonal skills are among the important abilities needed for leadership. People are a common denominator in all endeavours and projects. With more and more firms implementing their strategy through projects, projects are becoming increasingly complicated (Project Management Institute, 2017). Leadership means providing direction and guidance to individuals and groups. It entails the capacity to select and use suitable management approaches and styles in a variety of settings. Apart from leading his or her team, the individual must also be viewed as a leader while representing the project to senior management and other stakeholders (International Project Management Association, 2015). The emphasis of leadership is defining a vision and encouraging other people to

help make that vision a reality, focusing on people, and facilitating change. The success of a project is determined by the project manager's ability to provide leadership (PM4DEV, 2018). Project managers must exhibit the necessary leadership qualities and competences in addition to management skills if they are to efficiently attain business and project results (Riaz, Tahir, & Noor, 2013). Interpersonal skills have a positive relationship with the success factor of time and have an influence on the success factors of cost/budget and quality of the project (Sunindijo, 2015). However, in the area of project management, there is a scarcity of research on project manager leadership. It is critical to learn and implement leadership abilities and competencies so as deal with current project hurdles that determine the success or failure of a project (Riaz, Tahir, & Noor, 2013). Further, Leadership is a useful instrument that the project manager may employ to moderately affect project outcomes; alternatively, a lack of leadership abilities is linked to project failure (Riaz, Tahir, & Noor, 2013).

Project integration management is the coordination of all elements of a project. Tasks, resources, stakeholders, and any other project aspects must all be coordinated. The project manager is in charge of coordinating and integrating operations from several departments (Kerzner, 2017). Resource allocation, balancing conflicting demands, investigating any alternative approaches, adapting activities to suit project objectives, and managing interdependencies within project management knowledge domains are all part of project integration management (Project Management Institute, 2017). It is during project integration management that a charter is developed, a project plan developed, the project work and project knowledge are managed, monitoring and control is carried out, and change control is performed (Project Management Institute, 2017). Project integration management is the responsibility of the project manager and cannot be delegated. Projects are integrated in nature and the knowledge area are

interdependent with each feeding from the other. Project integration also ensure the alignment of the project team, stakeholder needs and the organization from whence it originates (Watt, 2019). Thomas Desalegn (2018) in his study of the Berhan bank data centre project postulated that project integration management has an effect on project success.

Project quality management is ensuring the project meets the expectations of the stakeholders by way of matching the organizations' quality policies and processes at all levels of the project (Project Management Institute, 2017). It is concerned with quality processes which is about how the project is organised as well as ensuring the quality of the outcomes and outputs of the project through quality control, quality assurance and quality management (International Project Management Association, 2015). Any processes, procedures and products that emanate from the project must be of the same standards as those found in the organization from whence the project originated. There must be clear expectations and specifications of the end product and deliverables upon the completion of the project. The two components of quality management are performing quality assurance, and quality control. The end product or service deliverables that represent the project's goal are the focus of project quality. The project manager is in charge of devising a project execution strategy that ensures that all project deliverables and quality specifications are well understood (Watt, 2019).

Procurement is the process of acquiring products and/or services from outside sources. It encompasses the whole purchasing process, from strategy to execution through contract management. Procurement acquires resources that are not accessible within the parent organisation since it focuses on suppliers outside the parent organisation. It entails selecting and pursuing the optimal procurement channels, which should meet the client's as well as the organization's long-term goals (International

Project Management Association, 2015). Procurement strategies and frameworks should provide the means by which an organisation and project attain their objectives (Kerzner, 2017). The management and control processes necessary to establish and administer agreements such as contracts, purchase orders, memorandums of agreements (MOAs), or internal service level agreements (SLAs) are included in project procurement management (Project Management Institute, 2017). The goal of project procurement management is to get the best value from the selected suppliers or partners and provide that value to the buyer, the organisation, and the project (International Project Management Association, 2015). Projects require a constant supply of a range of resources, including human, financial, and service resources, among others, and an erroneous absence of these resources at critical times can choke and lead to project failure (Ehsan, Alam, Mirza, & Ishaque, 2010). Gomes, Carvalho, and Romão (2012) differed in their study which found that procurement management has a significant negative effect on project success.

2.4 Technical Project Management Skills and Project Success

Technical project management skills are defined as the skills to effectively apply project management knowledge to deliver the desired outcomes for programs or projects (Project Management Institute, 2017). They are the abilities and capabilities required of a project manager and project team to effectively apply specific project management knowledge in order to achieve and attain the project, programme, or portfolio's goals, objectives, or expected outcomes. They are skills and knowledge that are specific to Project Management. A project manager thus needs to have the knowledge and skills necessary to manage these elements. The term ‘triple constraints’ is often used to indicate the three elements a project manager and project team must balance if they are to complete a project and complete it successfully. These are the

primary elements and constraints that a project manager must be aware of. These elements are represented in a triangle of time, scope, and cost. These three elements also have an impact on the quality outcomes of the project. Project management is designed to manage or control company resources on a given activity, within time, within cost, and within performance (Kerzner, 2017). All project managers and project teams must have the requisite project management knowledge and skills to deliver the product/service within schedule, cost, scope, and quality requirements (Watt, 2019). There is a relationship between these elements such that if one is changed then it is likely to affect one or more of the other elements (Project Management Institute, 2013). Take for instance if the scope of the project is changed then it is likely the cost and the schedule will change. If the cost/budget is changed then the scope and performance/quality of the project will change. Thus, it can be deduced that the technical project management skills required for project management are project scope management, project time/schedule management, project cost management, and these will in turn have an impact on project quality management.

It should be noted, however, that project management and project success are not necessarily synonymous. The goal of project management is to keep time, cost, and scope under control; however, they should not be used as indicators of project success. It is true that project management might be successful while the project is a failure, and vice versa (Munns & Bjeirmi, 1996).

Citing the PMBOK of 2000, Gomes, Yasin and Small (2012) list integration management, scope management, cost management, and risk management as four of the basic and critical project management knowledge areas. The PMI reiterates this by stating that a Project Manager should focus on and manage the technical project management elements of schedule, cost, resources, and risks (Project Management

Institute, 2017). The Project Manager and Team must understand and use the tools for project management which includes project scope management, project time management, and project cost management (Udo and Koppensteiner 2004).

The technical project management skills required are project scope management, project cost management, project resources management, and project risk management.

The scope is the total of all the deliverables that must be completed by a project. The work that must be performed in order to reach the project's final scope is referred to as project scope (Kerzner, 2017). Project scope management has to do with detailing what goes into the project; that is the work and processes that will go into completing a project successfully (Project Management Institute, 2017). It specifies the project's uniqueness and content. It outlines the outputs, outcomes, and benefits, as well as the effort involved in achieving them. It also addresses the counterpart, which describes what is not included in or is part of the project (International Project Management Association, 2015). It has to be specific enough to detail only the work that will go into the project. This detail of work and processes will define the reason and purpose of the project (Barron & Barron, 2009). It will delineate the parameters and the boundaries of a project and the expected deliverables. The scope will also include the features and functions that will characterize the end result or outcomes of the project or the product (Richman, 2012). Poor scope definition has been linked to project failure. Inadequate or poor scope definition negatively correlates to project performance. If boundaries are not appointed, final project costs tend to be higher (Mirza, Pourzolfaghar, & Shahnazari, 2013).

Project cost management are the skills necessary to prepare a budget for the project, find the necessary funds, and control the costs so as to ensure the project is

completed within the allotted budget. The accuracy of the budget will be dependent on the amount of relevant information the team has on the scope and the schedule. However, it should be noted that the budget can deviate from the projections as the project proceeds owing to changes in the market that were not anticipated (Watt, 2019). There are three components of cost management which are estimating the costs, determining the budget, and controlling the costs (Project Management Institute, 2017).

Every project requires resources. Once the requirements and scope of a project have been determined, then the project will need resources if it is to meet the set outcomes and objectives. People, expertise, facilities, equipment, materials, infrastructure, tools, and other assets are all needed to complete the activities consistent with the objectives (International Project Management Association, 2015). The methods for identifying, acquiring, and managing the resources required for a project's successful completion are referred to as project resource management. These procedures guarantee that the project manager and project team have access to the appropriate resources at the appropriate time and location (Project Management Institute, 2017). A project manager should be concerned with acquiring both physical and human resources. Physical resources include equipment, materials, facilities, and infrastructure. Team resources or personnel refer to the human resources (Project Management Institute, 2017). Having non-personnel resources accessible when and where they're needed, and according to requirements, is an important element of efficient project management (Portny, 2017).

On any project, there is a risk. The project management team's job is to identify the types and severity of risks on the project, then create and implement risk-mitigation strategies (Watt, 2019). Risk is a measure of the probability and consequence of not achieving a defined project goal (Kerzner, 2017). Risk management assists decision-

makers in making informed decisions, prioritising activities, and distinguishing between different options. It is a continuous process that occurs throughout the project's lifespan (International Project Management Association, 2015). The goals of project risk management are to raise the likelihood and/or effect of positive risks while lowering the likelihood and/or impact of negative risks in order to maximise project success (Project Management Institute, 2017).

2.5 Industry Skills and Project Success

The competencies required for an organisation, project, or individual to perform inside a given sector, industry, or domain are known as industry specific skills. Every industry has its own distinct set of technical skills, competences, products, knowledge, and functions. Within that industry/domain, there is a certain context, tools, and techniques that are associated with working in and solving challenges of that industry (Becerra-Fernandez & Sabherwal, 2010). The needs of a specific project may require one or more additional Knowledge Areas, for example, construction may require financial management or safety and health management (Project Management Institute, 2017). The basis of effective project management are technical credibility and ability (Gillard, 2009). A project manager must first have a thorough understanding of the technical characteristics of the industry so that he or she can build and deliver the product or service within the industry of the project (Hwang & Ng, 2013). However, Watt (2019) argues that the domain, area, specialized or expert skills are not necessarily required of the project manager but they have to be found within the make-up of the project team to ensure the project is well versed in that area/domain. This expertise will particularly be useful in defining the tasks and activities that will be involved in the project. This supported by Gillard (2009) who say that typically, subject matter experts from various divisions and departments within an organisation will be temporarily

assigned to the project and become members of the project team. It is critical for the project manager to have a thorough understanding of the technology, markets, and business environment. The manager cannot anticipate the effects of local actions on the whole project, possible expansion repercussions, or linkages to other possibilities without this insight. To analyse technical concepts and solutions, communicate effectively in technical terms with the project team, assess risks, and make trade-offs between cost, time, and technical difficulties, more technical expertise is required (Kerzner, 2017).

The industry knowledge and skills required are project stakeholder management, project time/schedule management, and project communication management.

Project time/schedule management are the skills and competencies required to ensure the project is completed within a given timeframe. It enables a person define, sequence, optimise, monitor and control all components necessary to delivering the outcomes and objectives of a project (International Project Management Association, 2015). One of the primary responsibilities of a project manager and project team is to develop a schedule that lists all the activities, tasks, deliverables and work while relating them to amount of time it will take to complete each and the sequence in which they will be tackled. The project schedule needs to be a realistic plan that is guided by the project scope and deliverables as well as any other information that is available to the project team on stakeholders and suppliers (Watt, 2019). Project schedule management has six components which are define the activities, sequence the activities, estimate the activity resources, estimate the activity durations, develop the schedule, and control the schedule (Project Management Institute, 2013). Project managers and project teams should be able to create all possible scenarios and paths to completing a project and this

will aid in any changes that may occur in the course of implementation. The project manager must also know how to accelerate a schedule to compensate for unanticipated events that delay critical activities as well as how to reduce scheduling conflicts while still meeting the quality and cost constraints of the project (Watt, 2019).

Individuals, corporations, and organisations that may be impacted by the project's outcome or management are referred to as stakeholders (Kerzner, 2017). People and organisations can be associated in the project in a variety of ways. Most of these links may be divided into two categories: those who will be impacted by the project and those who will have an impact on the project (Watt, 2019). Thus, stakeholders are any individuals, groups, or organisations involved in, affecting, being affected by, or interested in the project's execution or outcome. Stakeholder engagement entails continually revising, monitoring, and acting on the project's interests and influence. Building strategic alliances that create organisational capacities and capabilities where both risks and rewards are shared is an example of stakeholder engagement. To engage stakeholders and effectively manage their expectations, a project manager must manage stakeholder interests, influence, and expectations (International Project Management Association, 2015). Stakeholder management's goal is to effectively engage stakeholders in project decisions, as well as the planning and execution of project work (Project Management Institute, 2017).

Effective project communications guarantee that the correct information is delivered to the appropriate person at the right time and at a reasonable cost. A project's success hinges on effective communication (Kerzner, 2017). Communication entails sending the right messages to the right people at the right time, and this information must be provided reliably and consistently to all parties involved (International Project Management Association, 2015; Portny, 2017). The goal of project communication

management is to guarantee that the project's and stakeholders' information expectations are fulfilled through the creation of artefacts and the implementation of actions that promote successful information sharing (Project Management Institute, 2017). Because a project manager must deal with suppliers, subcontractors, and team members, communication is essential if they are to communicate their expectations on project requirements and practises (Hwang & Ng, 2013).

2.6 Summary and Research Gap

Project management knowledge is the foundation for project management and project managers' skills, abilities, and competencies. These are closely intertwined, interdependent and interrelated. These skills, knowledge, abilities, and competencies are necessary if a project is to be completed successfully. Project management has borrowed heavily from other disciplines and fields especially those of engineering, construction, ICT, defence and management to create its basis for the knowledge, skills, abilities, competencies, and processes that are needed in projects for success, regardless of the industry. Various project management experts, institutes and associations have proposed a variation of knowledge, skills and competencies that are required if a project is to be completed successfully and these can be grouped into the three areas of general management skills, technical project management skills and industry specific skills. These areas then comprise 12 elements of leadership, project human resources management, project communication management, project quality management, project integration management, project scope management, project time/schedule management, project cost management, project risk management, Project stakeholder management, and industry specific skills.

However, while there have been tremendous improvements in project management procedures, tools, and systems, there has been no corresponding

improvement in project success. (Mir & Pinnington, 2014). While most scholars and practitioners agree that the project manager's competencies determine whether a project succeeds or fails, there is disagreement on which elements are the most significant indicators of a successful project manager (Gillard, 2009). Cost, time, and scope management practices for project success are the most well-established even though other criteria like attaining organizational goals and objectives and end-customers and project team satisfaction are important and attained through project knowledge (Gomes, Carvalho, & Romão, 2021).

Further, studies in project management and project success have been developed in the corporate, NGO, and CBO context but have not been developed or associated with the context of Religious Institutes in the Catholic Church in Kenya. There is need to examine if the people who are responsible for projects within the Religious Institutes of the Catholic Church in Kenya are aware what knowledge, skills, abilities, and competencies they need and whether they are taking the necessary steps to equip themselves with the said. The Religious Institutes of the Catholic Church in Kenya need to ensure that the people in the projects have the necessary knowledge and competencies that are usable and benefit the organization and the project so as to meet the goals and activities associated with the organization and the project.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter covers the research design, research site, target population, sampling design, sampling procedure, sample size, data collection, data collection instruments, instrument reliability, instrument validity, pilot testing the research instrument, data collection procedures, data analysis and presentation, and the legal and ethical considerations.

3.2 Research Design

The research was quantitative in nature. This enabled the study measure the statistical and inferential relationship between project management knowledge possessed by a project manager and project team, and the success of a project within the Religious Institutes of the Catholic Church in Kenya.

The research design was a descriptive cross-sectional survey as the study aimed to further describe the relationship between project management knowledge and project success with more precision and accuracy particularly in the context of the Religious Institutes of the Catholic Church in Kenya. It also aimed to determine the extent of the relationship between project management knowledge and project success. The variables found within project management knowledge are general management skills, project management skills and industry skills. The cross-sectional research design provided insights as to how these variables are related to project success and helped to describe this relationship further. This determined the level of impact of project management knowledge on project success especially in the context of the Religious Institutes of the Catholic Church in Kenya.

The research design was in the same spirit of the research carried out by William Wo Seng Lei and Martin Skitmore (2004) on the project management competencies of project managers in South East Queensland, and Farzana Asad Mir and Ashly H. Pinnington (2014) on linking project management performance and project success.

3.3 Research Site

The study was carried out in the Catholic Archdiocese of Nairobi. The Archdiocese of Nairobi has a representative population of the other dioceses and archdioceses. It was also easily accessible for the collection of data for the research. The Archdiocese covers an area of 3,271 square kilometres encompassing the administrative counties of Nairobi and Kiambu. There are 150 religious institutes and congregations for women and 80 religious institutes and congregations for men (The Archdiocese of Nairobi, 2020) for a total of 230 Religious Institutes. As at 2015, there were 156 community based projects in the Archdiocese of Nairobi (Mbugua, Nyiva, & Gathano, 2017).

The Religious Institutes of the Catholic Church in Kenya have organized themselves into two associations that provide for collaboration between the various institutes. These are the Association of Sisterhoods in Kenya (AOSK) for the female religious and the Religious Superiors' Conference of Kenya (RSCK) for the male religious. These two associations are headquartered in the Archdiocese of Nairobi. The AOSK states that they have completed at least 90 projects as at 2020 (AOSK-Association of Sisterhoods in Kenya, 2020). In addition, the AOSK has recently set up a data centre in Nairobi with a view of consolidating the data that is available on what the female Religious Institutes are accomplishing.

3.4 Target Population

The target population was the 230 Religious Institutes found in the Catholic Archdiocese of Nairobi. The Catholic Archdiocese of Nairobi encompasses the geographic counties of Nairobi and Kiambu. The study targeted the project managers/leaders within the projects of the Religious Institutes as units of observation. It was assumed that every Religious Institute must have at least one project hence there will be at least 230 elements in the target population. These elements are the project managers/leaders. Thus, the target population was the 230 project managers from the Religious Institutes.

It should be noted that a project manager within the context of the Religious Institutes does not necessarily bear the title of project manager. Thus, for purposes of this study, a project manager has been defined as anyone who manages, coordinates, leads, or runs a project within the Religious Institute regardless of the job title or other responsibilities they may have. For the purpose of this section we shall refer to them as project leaders.

Table 3.1 Target Population

Category	**Number**
Project Leaders	230
Total	**230**

This target population had the same characteristics as those found in the population. From this target population of 230 respondents from the Religious Institutes in the Archdiocese of Nairobi, a sample was drawn for the survey which bore the characteristics of the target population and in turn the entire population.

The findings of the study are therefore applicable to all project managers, coordinators or leads and projects of Religious Institutes of the Catholic Church found in Kenya.

3.5 Sampling Design

The sampling design consisted of the sampling procedure, and sample size.

3.5.1 Sampling Procedure

The sample size was determined using the standard formula. Sampling was done using a simple random method. This is because the target population was not large and was known; that is the 230 Religious Institutes. This technique gave every Religious Institute an equal chance to be selected in the sample. The Religious Institute was the unit that was selected and not the specific project manager. Once the Religious Institute was selected then it provided the project manager as the element of the sample.

The data and information on the Religious Institutes found in the Archdiocese of Nairobi was gathered from the Religious Superiors Conference of Kenya (RSCK) and the Association of Sisterhoods in Kenya (AOSK). These two organizations provided the information on all the Religious Institutes in the Archdiocese of Nairobi in the form of a list. This list of Religious Institutes was in the form of a word document which was then exported into excel.

Excel was used to generate and assign a random number to each of the Religious Institutes from 1 through to 230. This list was then sorted from the lowest number (1) to the highest number (230). Once the sample size was calculated (145) then the first 145 Religious Institutes were selected as the sample size. Through the AOSK and RSCK, these selected Religious Institutes were then asked to provide the contact information, including email address, of their project managers. This technique gave

every Religious Institute and their project manager an equal chance to be selected in the sample.

3.5.2 Sample Size

The sample was drawn from the study population of 230 respondents in the Archdiocese of Nairobi. As the study population was small, then a margin of error of +/- 5% was taken into account. The confidence interval was 95%. To ensure minimal variation in the mean of the study a standard deviation of 0.5 (zero point five) was used. The Z score at 95% confidence is 1.96.

The standard formula (Survey Monkey, 2021) below was then used to calculate the desired sample.

$$\text{Sample size} = \frac{\frac{z^2 \times p\,(1-p)}{e^2}}{1 + \left(\frac{z^2 \times p\,(1-p)}{e^2 N}\right)}$$

Where N = population size, z = z-score, e = margin of error, p = standard of deviation.

Therefore, our N = 230, z = 1.96, e = 5% and p = 0.5

Sample size = $((1.96^2 \text{ X } 0.5(1 - 0.5))/0.05^2)/(1 + ((1.96^2 \text{ X } 0.5(1\text{-}0.5))/(0.05^2)(230)))$

This gave a sample size of 145 respondents.

Table 3.2 Sample Size

Category	**Number**
Project Leaders	145
Total	**145**

3.6 Data Collection

Data collection covers the data collection instruments, instrument reliability, instrument validity, pilot testing the research instrument, and data collection procedures.

3.6.1 Data Collection Instruments

As the study was a survey, a standardized data collecting instrument in the form of a questionnaire was administered to the respondents. This comprised of an online questionnaire that was sent by email, and hard copy questionnaires that were hand delivered to the respondents. The online questionnaire was developed using google forms as this is easily accessible online, can be sent by email or by link to the respondents.

A questionnaire was the most efficient way to reach the greatest number of the intended respondents. The reason for both soft and hard copy questionnaires was to increase the response rate from respondents who did not respond to the online form. The respondents were all likely to be ICT literate and have access to internet. The respondents found it easy to access and fill out the form.

An online questionnaire provided for quick receiving of results from the respondents. Results were received immediately upon submission and data transfer was easier and accurate as opposed to having to key in data from hard copies.

A questionnaire also provided the means to do statistical analysis of the data provided. As the study was measuring the views and perception of project management knowledge on project success, the instrument needed to have measurement scales on the variables. A questionnaire was therefore suitable to provide the necessary scale and make it easier to do a proper statistical analysis.

The study was conceived and primarily carried out in the midst of a pandemic (COVID-19). Thus, it was in the best interests of everyone to maintain minimal physical contact. A questionnaire particularly an online questionnaire was best suited to reach a maximum number of respondents with minimal physical contact as required by the guidelines on social distancing.

3.6.2 Pilot Testing of Research Instruments

The research instrument was piloted on 17 respondents who were not part of the main study but are project practitioners in Religious Institutes. These respondents were from the Kitui Diocese. This was to aid in determining instrument reliability and validity. It also gave an idea on the ease of the questionnaire getting to the respondents, if the sampling frame and technique used was effective, and in determining the reliability and validity of the research instrument (questionnaire).

The results of the Cronbach's Alpha test from the pilot test as shown in table 3.3 below indicated that the instrument had internal consistency and was thus reliable. The respondents also indicated that the instrument was easy to use and could be easily understood. Therefore, there was no need to adjust the instrument.

Table 3.3 Cronbach's Alpha Test Results for Pilot Test

Variable	Cronbach's Alpha	N of Items
General Management Skills	0.91	4
Technical Project Management Skills	0.68	4
Industry Skills	0.87	3
Project Success	0.87	6

3.6.3 Instrument Reliability

An instrument reliability test was undertaken to ensure the research instrument yielded consistent results under the same conditions and circumstances. The reliability of the instrument was tested using the Cronbach's Alpha test on all the items that were on the Likert scale. Cronbach's alpha is a reliability test of internal consistency, or how closely a group of items is connected to one another. It's regarded as a scale-reliability measure (UCLA: Statistical Consulting Group, n.d.). This test will give a result between 0 and 1. Any result below 0.60 is unacceptable, between 0.60 and 0.65 is undesirable,

between 0.65 and 0.70 is minimally acceptable, between 0.70 and 0.80 is respectable, between 0.80 and 0.90 and above is very good, and anything above 0.90 is excellent (Ursachi, Horodnic, & Zait, 2015).

A total of 17 items in the instrument were on the Likert Scale. The results of the Cronbach's Alpha test were as follows:

Table 3.3: Cronbach's Alpha Test Results

Variable	Cronbach's Alpha	N of Items
General Management Skills	0.925	4
Technical Project Management Skills	0.880	4
Industry Skills	0.837	3
Project Success	0.917	6

There were three independent variables with 11 items. These were general management skills, technical project management skills and industry skills. There was one dependent variable with six items. This was project success.

All variables in the study had an Alpha result of above 0.80 which is a very good result. Some variables even had a result of above 0.90. This indicates that the research instrument would yield consistent results.

3.6.4 Instrument Validity

Face validity of the instrument (questionnaire) was carried out by the supervisors to ensure that it adequately captures the objectives of the study and the topic under investigation. The questionnaire was also reviewed by a lecturer of research methods in the Masters' and Doctorate programmes of Tangaza University College to get his input on the questionnaire construction and check the questionnaire for common errors like double-barrelled, confusing, and leading questions.

A pilot of the instrument (questionnaire) was carried out to show if the instrument would measure the relationship between general management skills, project

management skills, industry skills, and project success. Initial frequencies and correlations indicated that the instrument tested the relationships as intended and would measure the research questions and objectives of the study correctly. The questions were easy to understand and the questionnaire was filled out easily.

3.6.5 Data Collection Procedures

The data was primarily collected by the use of a questionnaire; an online google form. A hard copy questionnaire also had to be distributed to specific Religious Institutes to evoke a response as they were not responding to the online questionnaire. This was based on the advice of the Chair of Religious Superiors Conference of Kenya. He cautioned that male religious institutes were not consistent in responding to online questionnaire. Physical presence with a physical questionnaire was recommended. In light of COVID-19 pandemic, preference was given to the online questionnaire.

A list of the Religious Institutes was compiled with the aid of the Secretary General of the Association of Sisterhoods in Kenya (AOSK) and the Secretary of the Religious Superiors Conference of Kenya (RSCK). It was populated with practitioners of project management, the heads/Superiors of the Religious Institutes, e-mail addresses their physical locations (where needed). This was to enable the researcher to reach out to all the practitioners/respondents depending on what is convenient to them.

The questionnaire consisted of five sections. The first section covered a general overview of the respondents; their job title, numbers of years in project management, number of projects worked on, if they had formal training in project management and the duration it took to acquire such a training. The second section was how they rate their own ability, proficiency and competence in general management skills in relation to project success. The third section was how they rate their own ability, proficiency and competence in technical project management skills in relation to project success.

The fourth section was how they rate their own ability, proficiency and competence in industry skills in relation to project success. The fifth section was how they rate project success indicators.

The researcher did not use any assistants to administer the questionnaire and receive the responses. All questionnaire and responses were delivered, sent and received directly by the researcher himself.

3.7 Data Analysis and Presentation

The data was analysed using a mixture of SPSS 21 and Microsoft Excel software. The data is primarily be presented as charts and tables. This will show the different categorizations and correlations between the different data sets. As the study will have measurement scales for the data sets, charts and table were best placed to present the findings. However, text is used to explain the findings.

Descriptive statistics were used to characterize the data based on its properties. These included measures of frequency encompassing frequencies and percentages; and measures of central tendency encompassing mean, median, and mode.

Inferential statistics was used to determine the relationship between the study variables. The Pearson correlation was used to determine if project knowledge had any significant relation with project success. Multiple linear regression analysis was used to measure what the effect of change project knowledge on project success in the Religious Institutes of the Catholic Church and for hypothesis testing.

3.8 Legal and Ethical Considerations

The research and study was duly registered and approved by the Business School and Post-Graduate Board of Africa Nazarene University. The study did not need ethical clearance from a recognized ethical committee. Thereafter, a research permit

from the National Commission for Research, Technology, and Innovation (NACOSTI) was sought and received; License No: NACOSTI/P/21/14338.

The privacy, confidentiality and dignity of the respondents was respected at all times. Personal information of the respondents was not revealed. The study sought the full consent of the respondents and answered any questions on the consent and use of the data. The data collected from the respondents was used for this study and their anonymity and privacy was respected. There was no exaggeration or deception of the aims of the study. The data and findings are communicated honestly and transparently to a true representation of the data and findings, avoiding misleading information and any bias.

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter covers two areas. The first covers the characteristics of the respondents and the second covers the presentation of research analysis, findings, and interpretation.

4.2 Demographics

The respondents were made up of the project managers/leaders in the Religious Institute. Ninety-one responses (N=91) were received from a sample size of 145. This represents a 62.8% response rate.

4.2.1 Job Title

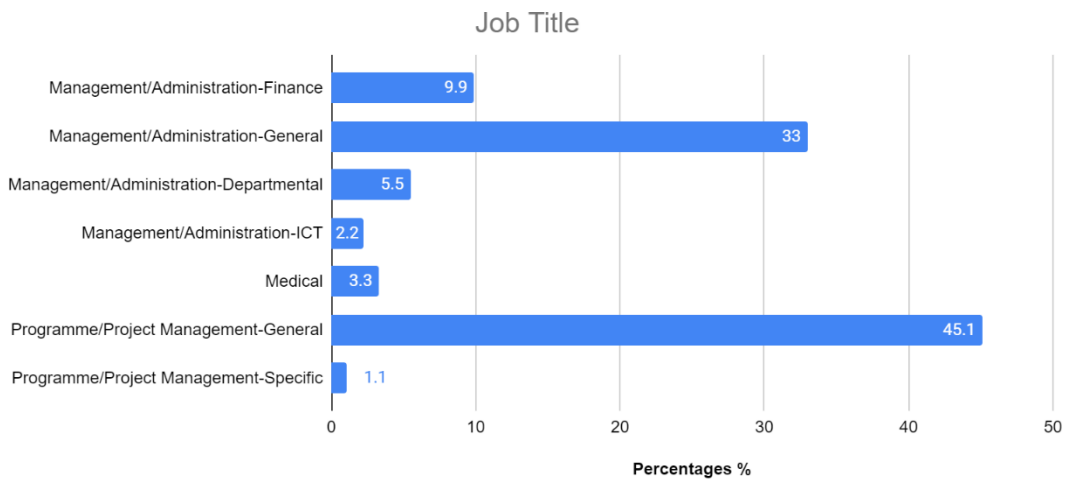


Figure 4.1: Graph of Job Title

The respondents provided their job titles, and these were classified into groups depending on the title provided. The groupings were management/administration, medical, programme/project management. Management/Administration (Finance, General, Departmental, ICT) were those who listed their jobs within the greater scope of the congregation but had a role in projects as well. Medical was for those in healthcare. Programme/Project Management (General, Specific) was for those clearly

delegated to project or programme management in their job title. 50.6% of the respondents listed their Job Titles as falling within Management/Administration. 46.2% listed them as falling with Programme/Project Management with 3.3% within Medical.

For those in management/administration, 33% were from the general function, 9.9% from Finance, 5.5% from departments and 2.2% from ICT. For those in programme/project management, 45.1% were from general programme/project management and 1.1% were in specific programmes/projects.

4.2.2 Number of Years in Project Management

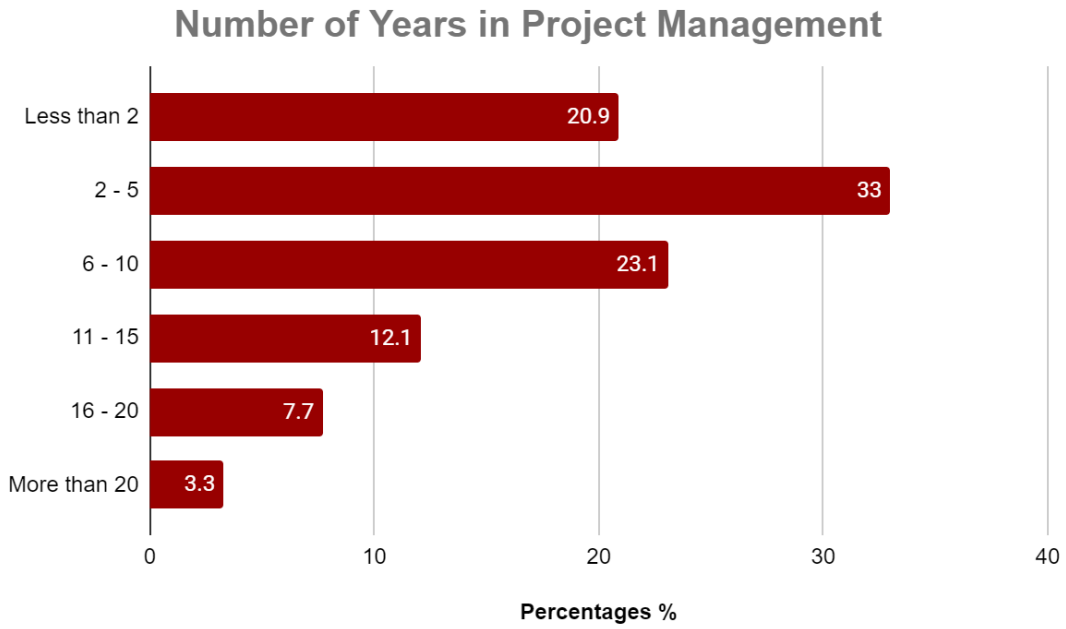


Figure 4.2: Graph of number of years in project management

53.9% of the respondents had 5 years or less in project management and 77% had 10 years or less in project management. Only 23% had over 10 years in project management with majority of these falling between 11 and 15 years (12.1%). The single largest group was those who had been in project management for between 2 and 5 years (33%).

The mean number of years in project management is about 6.96 years. The mean is greater than the median (3.5) and mode (3.5) which means the distribution is skewed

to the right (positively skewed). This indicated that most of the respondents would tend toward the lower number of years from the mean (below 6.96 years) of being in project management. The median and mode are equal at 3.5. This falls in the range of 2-5 years with 33% of the respondents which was the group with the greatest number of respondents.

4.2.3 Number of Projects Worked On

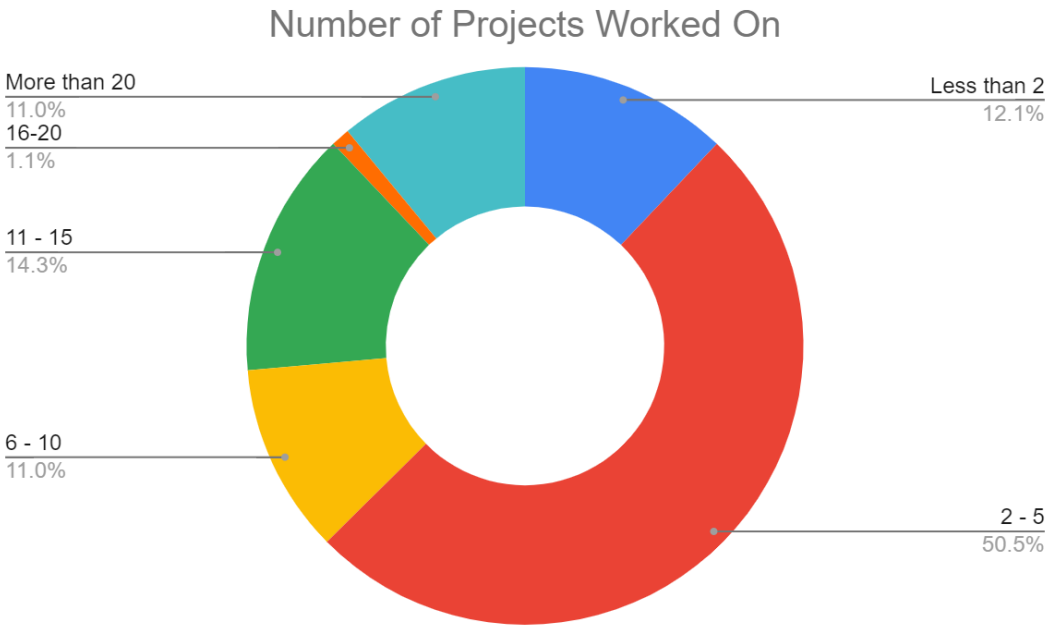


Figure 4.3: Pie chart of number of projects worked on

62.6% of the respondents had worked on 5 projects or less with 50.5% having worked on between 2 and 5 projects. 73.6% of the respondents had worked on 10 projects or less with 11% having worked on 6 to 10 projects. 26.4% had worked on more than 10 projects.

The mean number of projects worked on was 7.19. The mean is greater than the median (3.5) and mode (3.5) which means the distribution in skewed to the right (positively skewed). That means majority of the respondents are on the lower values from the mean (7.19) when it comes to number of projects worked on. With the median and mode at 3.5 (between 2-5) then the middle respondent and the greatest number of

respondents will be found between 2 to 5. The 2-5 group has the greatest number of respondents at 50.5%.

4.2.4 Formal Training in Project Management

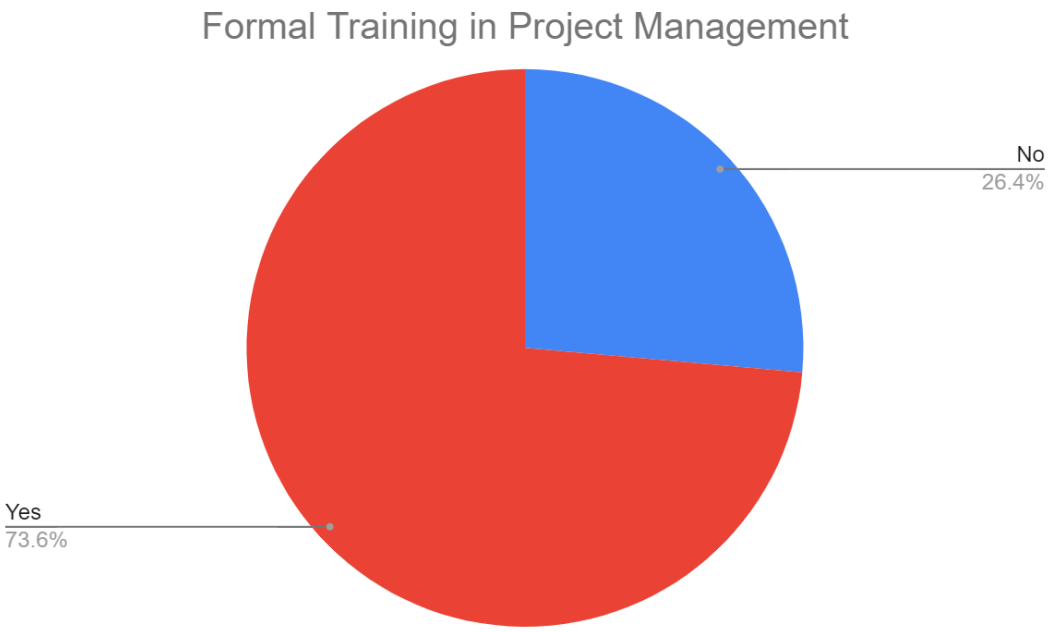


Figure 4.4: Pie chart of having formal training in project management

73.6% have formal training in Project Management while 26.4% do not have training any formal training.

4.2.5 Duration to Acquire Formal Training in Project Management

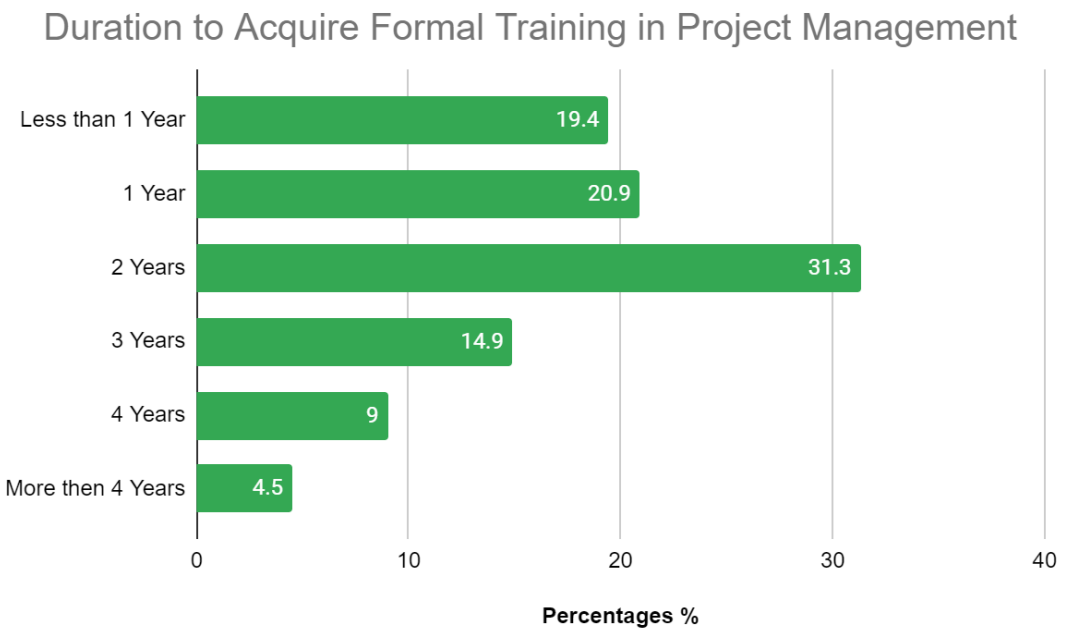


Figure 4.5: Graph of duration to acquire formal training in project management

71.6% of the respondents with formal training in project management acquired the training in 2 years or less. 28.4% of the respondents acquired the training in 3 years or more.

With a mean of 1.866 years, it indicates that the average time taken to acquire a formal training in Project Management is less than two years. The median Mode are both 2.000 indicating that majority of the respondents actually fall within that 2 year or less category.

4.3 Descriptive Statistics

This section covers the frequencies, and percentages of general management skills, technical project management skills, industry skills, and project success.

4.3.1 General Management Skills and Project Success

The general management skills are leadership, project integration management, project quality management, and project procurement management.

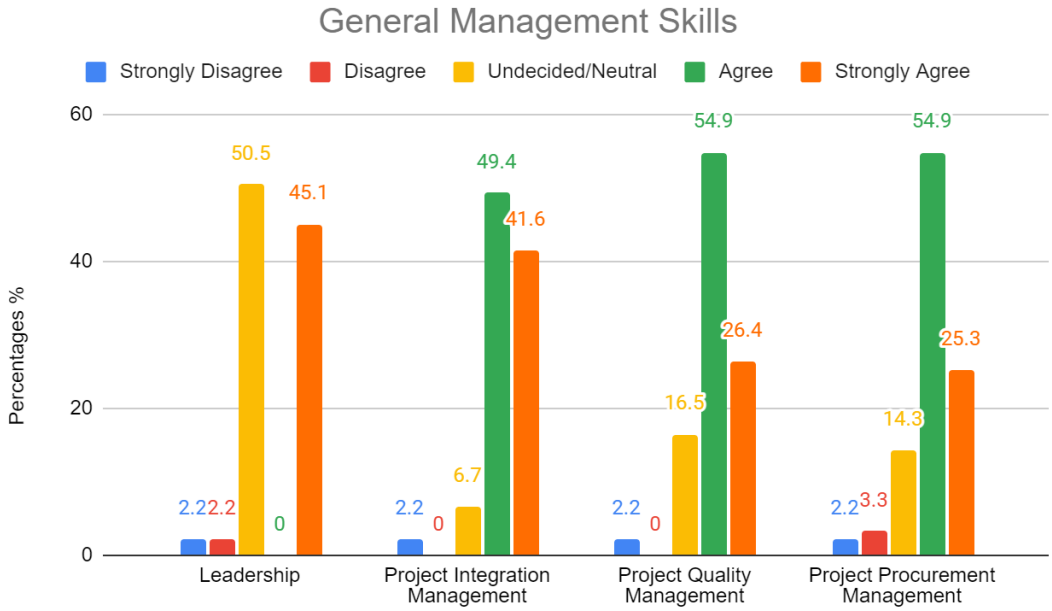


Figure 4.6: Graph of rating of general management skills

45.1% of respondents strongly agreed that they had the necessary leadership skills. 50.5% were undecided/neutral while 4.4% disagreed and strongly disagreed.

An overwhelming majority of the respondents (91%) agreed and strongly agreed that they had the necessary project integration skills. Those that agreed and strongly agreed were almost evenly matched at 49.4% and 41.6% respectively. 8.9% disagreed and strongly disagreed.

81.3% of the respondents agreed and strongly agreed that they had the necessary skills to manage the quality of a project. 16.5% were undecided/neutral and 2.2% strongly disagreed. More than double (54.9%) agreed compared to those who strongly agreed (26.4%).

80.2% of the respondents agreed and strongly agreed that they had the necessary skills to manage the procurement processes of a project. 14.3% were undecided/neutral while 5.5% disagreed or strongly disagreed. More than double (54.9%) agreed compared to those who strongly agreed (25.3%).

4.3.2 Technical Project Management Skills and Project Success

Technical project management skills are project scope management, project cost management, project resource management, and project risk management.

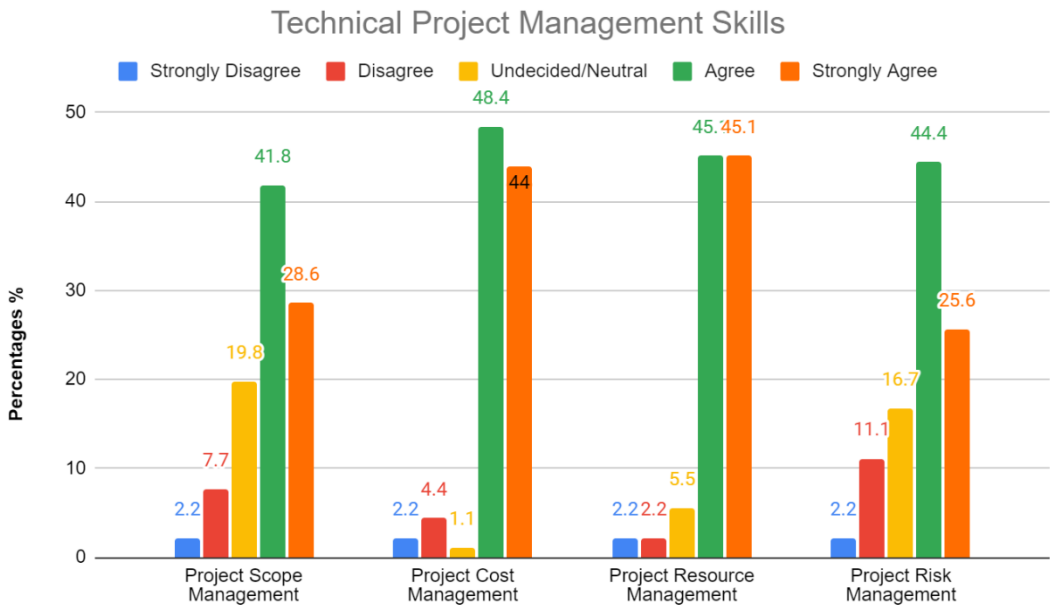


Figure 4.7: Graph of rating of technical project management skills

70.4% of the respondents agreed and strongly agreed that they had the necessary skills to define the scope of a project. Those who agreed (41.8%) were significantly more than those who strongly agreed (28.6%). 19.8% were undecided/neutral and 9.9% disagreed or strongly disagreed.

A large majority (92.4%) agreed and strongly agreed that they could manage the costs of a project. Those who agreed (48.4%) were almost matched by those who strongly agreed (44%). A total of 7.7% were undecided/neutral, disagreed and strongly disagreed.

4.3.3 Industry Skills and Project Success

Industry specific skills are project time/schedule management, project stakeholder management, project communication management.

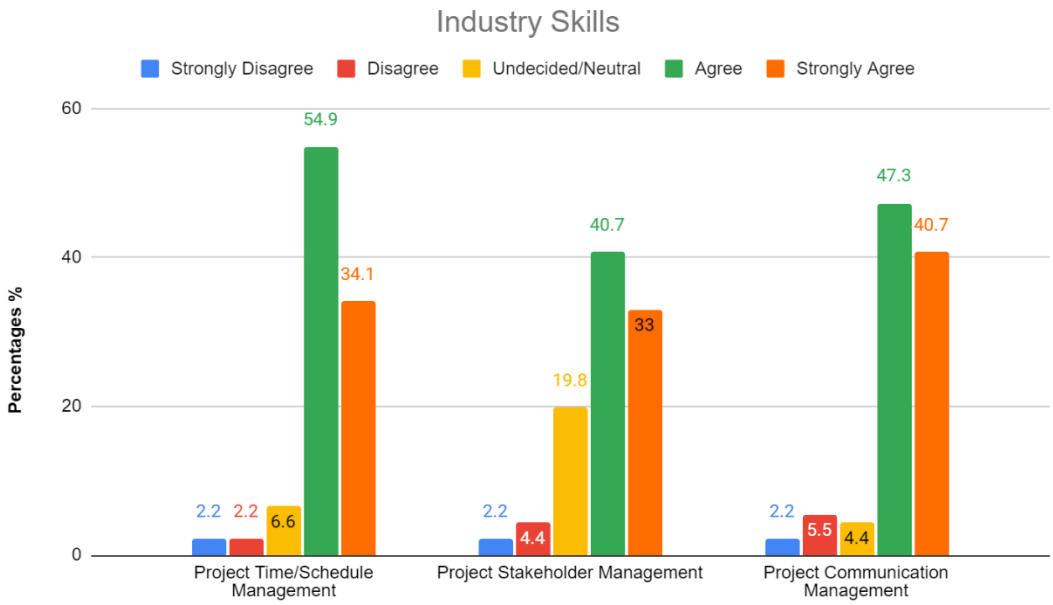


Figure 4.8: Graph of rating of industry skills

89% of respondents agreed and strongly agreed that they had the skills required to manage the time/schedule of a project. 11% were undecided, disagreed or strongly disagreed.

73.7% agreed and strongly agreed that they could effectively manage the stakeholders of a project. 19.8% were undecided/neutral while 6.6% disagreed or strongly disagreed.

88% claimed (agreed and strongly agreed) that they could effectively manage the communicate communication process in a project. 12.1% were undecided, disagreed or strongly disagreed.

4.3.4 Project Success

The indicators of project success are completion on time, completion within budget, meeting the performance objectives of the project, acceptance by clients, contributing to the charism of the religious institute, and impacting the future of the religious institute.

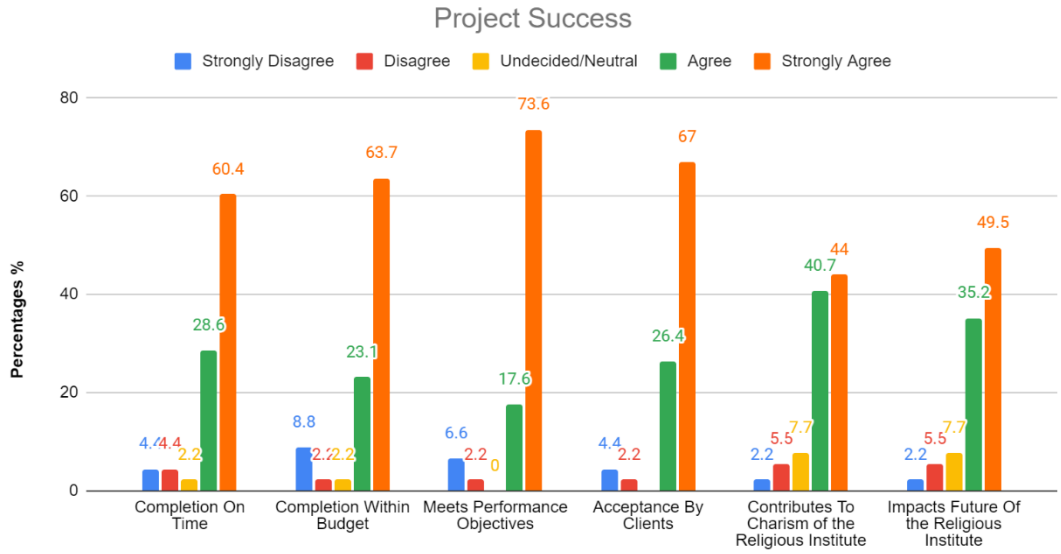


Figure 4.9: Graph of rating of project success indicators

89% of the respondents felt that completion on time was a key factor in project success. Of these, 60.4% strongly agreed. 11% were undecided or did not think it was a key factor in project success.

86.8% felt that completion within budget was key factor in project success while 13.2% were undecided or did not think it was a key factor. 63.7% strongly agreed that it was a key factor.

91.2% felt that a project has to meet its objectives and performance levels to be considered successful. Of these, 73.6% strongly agreed. 8.8% were undecided or did not think so.

84.7% of the respondents felt that contribution to the charism of the Religious Institute was a key success factor with 15.4% undecided or did not agree. 84.7% of the respondents felt that a successful project should impact the future of the Religious Institute while 15.4% were undecided or did not agree. These two indicators were the measures of if a project fits into the vision and mission of the organization/Religious Institute.

4.3.5 Variable Statistics

The indicators of the variables were combined to provide one single combined mean, median and mode for each. This yielded the following data:

Table 4.1: Variables Statistics

		General Management Skills	Technical Project Management Skills	Industry Skills	Project Success
N	Valid	91	91	91	91
	Missing	0	0	0	0
Mean		4.1026	4.0714	4.0824	4.3480
Median		4.0000	4.0000	4.0000	4.6667
Mode		4.00	4.00	4.00	4.67

Using the mean, the three independent variables were recoded to give a yes or no value on whether the respondents had the necessary project management knowledge. The mean of general management skills was 4.1; therefore, any respondent with a combined mean of less than 4.1 was deemed not to possess the requisite skills. The mean of technical project management skills was 4.1; therefore, any respondent with a combined mean of less than 4.1 was deemed not to possess the requisite skills. The mean of industry skills was 4.1; therefore, any respondent with a combined mean of less than 4.1 was deemed not to possess the requisite skills. This offered the following categorical data in regard to project management knowledge:

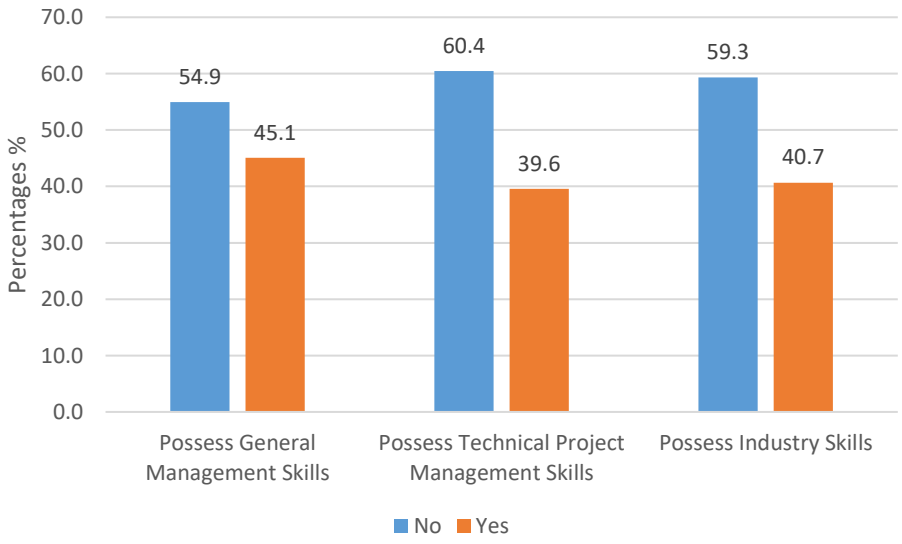


Figure 4.10: Project Management Knowledge

The data indicated that 54.9% of the respondents did not have general management skills while 45.1% did; 60.4% did not have technical project management skills while 39.6% did; 59.3% did not have industry skills and 40.7% did.

Using the mean, the dependent variables was recoded to give a yes or no value on whether the respondents thought the six factors of project success were important to the Religious Institute. The mean for project success was 4.3; therefore, any respondent with a combined mean of less than 4.3 was deemed to think that project success was not important. This yielded the following categorical data:

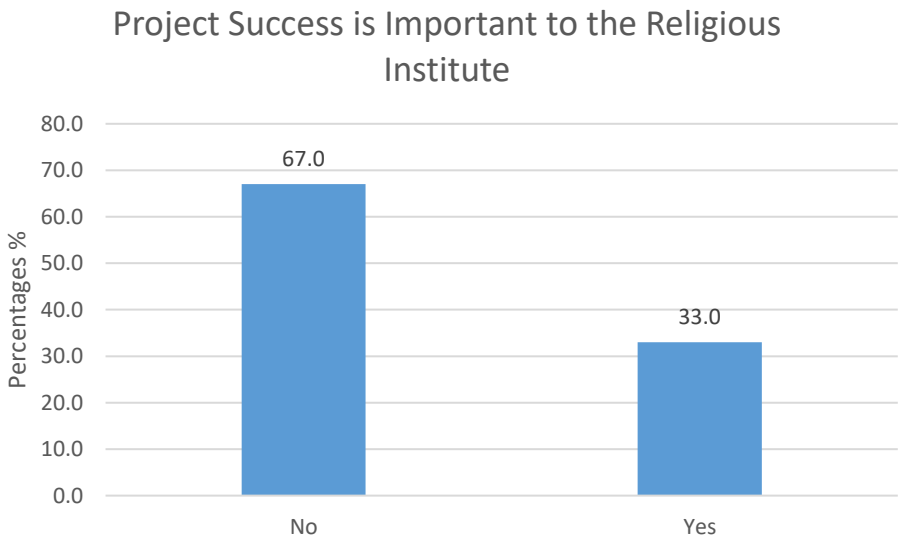


Figure 4.11 Project Success

The data indicated that for 67.0% of the respondents, project success was not important to the Religious Institute while for 33.0% it was.

4.4 Inferential Statistics

This section covers the test for normality, correlation, model summary and regression of general management skills, technical project management skills, industry skills, and their influence on project success.

4.4.1 Test for Normality

A test for normality was done to establish if the data was normally distributed.

Table 4.2: Test for normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
General Management Skills	.182	91	.000	.852	91	.000
Technical Project Management Skills	.212	91	.000	.846	91	.000
Industry Skills	.252	91	.000	.818	91	.000
Project Success	.239	91	.000	.694	91	.000

The test for normality used the Kolmogorov-Smirnova and Shapiro-Wilk tests. In this case, the data is not normally distributed as the significance is less than 0.05 for general management skills ($p<0.05$), technical project management skills ($p<0.05$), industry skills ($p<0.05$) and for project success ($p<0.05$).

4.4.2 Pearson Correlation Coefficient

The Pearson correlation coefficient, also referred to as Pearson's r, the Pearson product-moment correlation coefficient (PPMCC), or the bivariate correlation, is a statistic that measures linear correlation between two variables X and Y (Kent State Universites Library, 2022). It has a value between +1 and −1. A value of +1 is total positive linear correlation, 0 is no linear correlation, and −1 is total negative linear correlation. The correlation can either be single tailed or two tailed. Singled tailed correlation measures the likelihood of a relation in one direction (positive or negative) while two tailed correlation measures the likelihood of relation in both direction (positive and negative) (Kent State Universites Library, 2022). Correlation is measured within a level of significance. This level of significance is often 95% (0.05) or 99% (0.01).

A correlation was conducted between the independent variables of the respondents possessing general management skills, technical project management skills and industry skills, and the dependent variable of the respondents view on the importance of project success.

Table 4.3: Pearson Correlation Coefficient

		Possess General Management Skills	Possess Technical Project Management Skills	Possess Industry Skills	Project Success is Important to the Religious Institute
Possess General Management Skills	Pearson Correlation	1	0.779	0.771	0.509
	Sig. (2-tailed)		0.000	0.000	0.000
	N	91	91	91	91
Possess Technical Project Management Skills	Pearson Correlation	0.779	1	0.732	0.566
	Sig. (2-tailed)	0.000		0.000	0.000
	N	91	91	91	91
Possess Industry Skills	Pearson Correlation	0.771	0.732	1	0.602
	Sig. (2-tailed)	0.000	0.000		0.000
	N	91	91	91	91
Project Success is Important to the Religious Institute	Pearson Correlation	0.509	0.566	0.602	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	91	91	91	91

The correlation analysis table revealed that the independent variables of general management skills ($r=0.509$, $p<0.01$), technical project management skills ($r=0.566$, $p<0.01$) and industry skills ($r=0.602$, $p<0.01$) are significantly and positively correlated with the dependent variable project success. The highest significant relationship is between industry skills ($r=0.602$, $p<0.01$) and project success.

4.4.3 Regression Analysis

A multiple linear regression was employed to determine the influence of general management skills, technical project management skills, and industry skills on project success. This is because there were three independent variables and one dependent variable.

The model summary yielded the following information:

Table 4.4: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.623[a]	.688	.647	.17710

The R square indicates that 62.3% of the variants in the dependent variable (project success) is explained by the independent variables. It also indicates that the independent variables contribute to 62.3% of project success in Religious Institutes of the Catholic Church. Further, we can deduce that 62.3% of variations in project success

can be explained by the dimensions of project management knowledge while other factors will explain the remaining 35.3%.

Table 4.5: ANOVA Analysis

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.624	3	3.875	4.367	0.000
	Residual	77.190	87	0.887		
	Total	88.814	90			

The ANOVA analysis shows that the model is significant as $p<0.01$.

Table 4.5: Regression Coefficient Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.161	.301		10.516	.000
Possess General Management Skills	.129	.380	.103	0.340	.008
Possess Technical Project Management Skills	.304	.284	.305	1.069	.013
Possess Industry Skills	.671	.216	.379	3.106	.003

The regression result in the table above indicates that General Management Skills has an influence on Project Success for Religious Institutes of the Catholic Church ($\beta=.103$, $p<0.01$).

The regression result in the table above indicates that Technical Project Management Skills has an influence on Project Success for Religious Institutes of the Catholic Church ($\beta=.305$, $p<0.05$).

The regression result in the table above indicates that Industry Skills has an influence on Project Success for Religious Institutes of the Catholic Church ($\beta=.379$, $p<0.01$).

4.5 Hypothesis Testing

The Pearson correlation coefficient and regression coefficient were used to determine whether to reject or accept the hypotheses.

4.5.1 H_{01}: There is no significant relationship between General Management Skills and Project Success

The Pearson r ($r=0.509$, $p<0.01$) showed there was an association between general management skills and project success in the Religious Institutes of the Catholic Church. The regression result indicated that General Management Skills has an influence on Project Success for Religious Institutes of the Catholic Church. Further, the beta value ($\beta=.103$) of the regression analysis implies that one unit increase in general management skills will lead to a 0.103 subsequent increase in project success within the Religious Institutes of the Catholic Church in Kenya. This indicates that there is a significant relationship between general management skills and project success.

Based on the findings of this study the hypothesis H_{01} is rejected and the alternative hypothesis accepted: There is a significant relationship between General Management Skills and Project Success.

4.5.2 H_{02}: There is no significant relationship between Technical Project Management Skills and Project Success

The Pearson r ($r=0.566$, $p<0.01$) showed there was an association between technical project management skills and project success in the Religious Institutes of the Catholic Church. The regression result indicated that technical project management skills has an influence on Project Success for Religious Institutes of the Catholic Church. Further, the beta value ($\beta=.305$) of the regression analysis implies that one unit increase in technical project management skills will lead to a 0.305 subsequent increase in project success within the Religious Institutes of the Catholic Church in Kenya. This indicates that there is a significant relationship between technical project management skills and project success.

Based on the findings of this study the hypothesis H_{02} is rejected and the alternative hypothesis accepted: There is a significant relationship between Technical Project Management Skills and Project Success.

4.5.3 H_{03}: There is no significant relationship between Industry Skills and Project Success

The Pearson r ($r=0.602$, $p<0.01$) showed there was an association between industry skills and project success in the Religious Institutes of the Catholic Church. The regression result indicated that industry skills has an influence on Project Success for Religious Institutes of the Catholic Church. Further, the beta value ($\beta=.379$) of the regression analysis implies that one unit increase in industry skills will lead to a 0.379 subsequent increase in project success within the Religious Institutes of the Catholic Church in Kenya. This indicates that there is a significant relationship between industry skills and project success.

Based on the findings of this study the hypothesis H_{03} is rejected and the alternative hypothesis accepted: There is a significant relationship between Industry Skills and Project Success.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter covers the discussions, conclusions and recommendations on the respondents, the role of general management skills on project success in Religious Institutes of the Catholic Church, the role of technical project management skills on project success in Religious Institutes of the Catholic Church, and the role of industry skills on project success in Religious Institutes of the Catholic Church.

5.2 Discussion

Each discussion subtopic encompasses a discussion of the findings for each objective and an interpretation of the Pearson correlation based on the hypotheses. These are then compared and informed by the literature reviewed to reach a conclusion or make a recommendation.

5.2.1 Demographics

A project manager within the context of the Religious Institutes is anyone who manages, runs, coordinates, or leads a project or projects. Thus, they do not necessarily have the title of project manager. In many instances, project management is one among other responsibilities they have. Only 46.2% of the respondents primarily dealt with projects and project management as an exclusive job title and definition. This was exceeded by those who held the primary responsibility within management of the Religious Institute (50.6%) but were also responsible for running projects. If you examine this with the paradigm that 73.6% of the respondents had formal training in project management; then it is an indication that the Religious Institutes have an inclination on the importance of equipping their project managers with the necessary tools to run projects. However, they are not effectively deployed to solely as project

managers. This might be an indication of a lack of qualified individuals to handle other jobs or that the HR practices within the Religious Institutes may not be effectively deploying their trained resources.

Further, more than half (53.3%) of the respondents had been in project management for less than five years and 62.6% had worked on 5 projects or less. This further begs the question on the effective use of the personnel trained to run projects. It took an average of about two years (1.86 years) to acquire the formal training in project management. By all accounts, it would indicate that within five years, majority of the trained people will no longer be involved in projects, and they will likely have handled five projects or less. How sustainable is it to have this turnover in regard to project managers? What is its effect on project success?

The Religious Institutes seem not to be using their trained personnel effectively bearing in mind that there is a two-year investment, at minimum, on their training. While it is clearly that a large majority are well equipped in project management, they are mostly deployed in other areas as their primary responsibility when they are running projects and it is likely that within five years, they will no longer be handling projects.

5.2.2 General Management Skills and Project Success in Religious Institutes of the Catholic Church

Majority (54.9%) of the respondents were not confident in their leadership skills when it came to project management. Leadership seems to be a soft spot within the Religious Institutes as this had the lowest rating amongst the general management skills at less than 50%. This is in contrast to Riaz, Tahir, & Noor (2013) who stated that leadership will moderately affect project outcomes. It also contrasts PM4DEV (2018) who state that the success of a project is determined by the project manager's ability to provide leadership and Sunindijo (2015) who found interpersonal skills have an

influence on time, cost/budget and quality of the project. However, as other studies have indicated that leadership is valuable to project outcomes and success, it is therefore imperative that the Religious Institutes of the Catholic Church train their project managers, leads and coordinators in leadership if they are to get maximum benefit from them. It would be interesting to explore why the respondents felt this way about their leadership skills.

More than 80% of the respondents felt that they were skilled in Project integration management, project quality management and project procurement management. In most cases they rated themselves as adequately competent against very competent. This points to these three areas as strong points in project management knowledge amongst Religious Institutes. This was supported by Desalegn (2018) in his research on project integration management and project success which found a positive and significant. This however differed with Gomes, Carvalho, & Romão (2021) who found that project quality management did not have a significant influence on project and project procurement management had a significant negative effect on project success. Eshan et al (2010) also postulated on the value of project procurement where they noted absence of these resources at critical times can choke and lead to project failure.

When the mean of the respondents was computed and used to determine if the project managers, leads and coordinators had the requisite general management skills, a different reality emerged. The data indicated that compared to their peers, 54.9% did not have general management skills while 45.1% did.

The Pearson Correlation and regression analysis showed an association and influence of general management skills to project success. The effect of general management skills on project success was not very high with a beta value of 0.103.

What this implied is that other factors contributed to project success significantly more than general management skills. The Religious Institutes should look into what these other factors are, make changes to them if they want improve project success. General management skills had the lowest beta value and should thus be given the lowest priority when it comes to making changes to project management knowledge for project success.

5.2.3 Technical Project Management Skills and Project Success in Religious Institutes of the Catholic Church

70.4% of the respondents were confident that they had the capability to define the scope of a project and 70% that they were capable of managing the risks associated with a project. While this is a large majority, it pales in comparison to the 92.4% who were confident that they could manage the costs of a project and the 90.2% who claimed to be well versed in project resource management. Project cost management and project resource management have a 20% lead on scope management and risk management. This was corroborated by Gomes, Carvalho and Romão (2021), who determined that cost, and time management practices are among the most well-established.

When the mean of the respondents was computed and used to determine if the project managers, leads and coordinators had the requisite technical project management skills, a different reality emerged. The data indicated that compared to their peers, 60.4% did not have technical project management skills while 39.6% did.

The Pearson Correlation and regression analysis showed an association and influence of technical project management skills to project success. The effect of technical project management skills on project success had a beta value of 0.305 which is higher than that of general management. What this implied is that other factors contributed to project success significantly more than technical project management

skills. The Religious Institutes should look into what these other factors are, make changes to them if they want improve project success. Technical project management skills should be given a higher priority to general management skills when it comes to making changes to project management knowledge for project success.

5.2.4 Industry Skills and Project Success in Religious Institutes of the Catholic Church

The respondents rated themselves very highly when it came to industry skills. 73.7% felt that they could effectively manage the stakeholders of a project, 88% that they could effectively manage the communicate communication process in a project, and 89% that they could effectively manage the time/schedule of a project.

Gomes, Carvalho and Romão (2021) determined that time management practices is among one of the most well-established. Gomes, Carvalho and Romão (2021) also determined that project stakeholder management has marginally significant negative effect on project success while project communication management does not significantly influence on project success.

When the mean of the respondents was computed and used to determine if the project managers, leads and coordinators had the requisite industry skills, a different reality emerged. The data indicated that compared to their peers, 59.3% did not have industry skills while 40.7% did.

The Pearson Correlation and regression analysis showed an association and influence of industry skills to project success. The effect of industry skills on project success had a beta value of 0.379 which is higher than that of general management and technical project management skills. What this implied is that other factors contributed to project success significantly more than industry skills. The Religious Institutes should look into what these other factors are, make changes to them if they want

improve project success. Industry skills should be given the highest priority when it comes to making changes to project management knowledge for project success as it had the highest beta value.

5.3 Summary of Main Findings

Only 46.2% of the respondents primarily dealt with projects and project management as an exclusive job title and definition. 73.6% of the respondents had formal training in project management. However, they are not effectively deployed to work solely as project managers. More than half (53.3%) of the respondents had been in project management for less than five years and 62.6% had worked on 5 projects or less. The Religious Institutes seem not to be using their trained personnel effectively bearing in mind that there is a two-year investment, at minimum, on their training.

Leadership seems to be a soft spot within the Religious Institutes as this had the lowest rating amongst the general management skills at less than 50%. More than 80% of the respondents felt that they were skilled in Project integration management, project quality management and project procurement management. Using the mean to determine if respondents had the same level of general management skills as their peers yielded that only 45.1% had the said skills against 54.9% who did not. General management skills have an association and an influence on project success in the Religious Institutes of the Catholic Church.

70.4% of the respondents were confident that they had the capability to define the scope of a project and 70% that they were capable of managing the risks associated with a project. 92.4% were confident that they could manage the costs of a project and 90.2% claimed to be well versed in project resource management. Project cost management and project resource management have a 20% lead on scope management and risk management. Using the mean to determine if respondents had the same level

of technical project management skills as their peers yielded that only 39.6% had the said skills against 60.4% who did not. Technical project management skills have an association and an influence on project success in the Religious Institutes of the Catholic Church.

73.7% felt that they could effectively manage the stakeholders of a project, 88% that they could effectively manage the communication process in a project, and 89% that they could effectively manage the time/schedule of a project. Using the mean to determine if respondents had the same level of industry skills as their peers yielded that only 40.7% had the said skills against 59.3% who did not. Industry skills have an association and an influence on project success in the Religious Institutes of the Catholic Church.

There was 2.2% who strongly disagreed with having any of the skills required for project management. These likely the same respondents and they likely feel that they lack any project management skills but have been pushed into a project management role.

The order of priority or ranking when it came to applying or changing the project management knowledge for project success was to start with industry skills, then technical project management skills, and finally general management skills.

5.4 Conclusion

This study finds that general management skills is correlated to project success. There is a significant relation between general management skills and project success which indicates general management skills influence project success.

This study finds that technical project management skills is correlated to project success. There is a significant relation between technical project management skills and

project success which indicates technical project management skills influence project success.

This study finds that industry skills is correlated to project success. There is a significant relation between industry skills and project success which indicates industry skills influence project success.

When it comes to effecting change within project management knowledge for project success, industry skills should be prioritised, followed by technical project management skills and finally general management skills.

This study also supports the theory of constraints which indicates that human resource can be an impediment to successfully completing a project. The correlation analysis is an indication that project management knowledge and project success are associated. This shows that project managers without project knowledge can be an impediment to project success. Further, the regression analysis indicates a support for the human capital theory. The human capital theory espouses that the development of skills of the human resource leads to positive outcomes. The regression analysis indicates that an increase in general management skills, technical project management skills, and industry skills will lead to improved project success. Thus, a further development of these skills will lead to positive outcomes in project success.

5.5 Recommendations

Religious Institutes need to examine their HR policies on deploying project managers. These are highly skilled and trained people. They need to ensure that the personnel are deployed in the right positions matching their skills. Industry skills should be given priority when recruiting and deploying project managers as they play the biggest role in regard to project success. The purpose of training a project manager is

so that they can run projects effectively. This cannot be achieved if they are placed in other jobs that do not just focus on project management.

Leadership is an important aspect of projects and project management. All project managers, leads and coordinators need to be equipped with the necessary leadership skills if they are to lead a project. Leadership is a soft spot in regard to the project managers, yet it is an important skill. Project managers, leads and coordinators should all undertake a leadership course even before being assigned as a lead, coordinator, or manager.

5.6 Areas of Further Research

Leadership within the Religious Institutes in Kenya is an area of further exploration. It would be interesting to discover why project managers, leads and coordinators do not feel adequately skilled in leadership. Is this inadequacy only limited to the project managers or does it permeate through the entirety of Religious Institutes? Is it a global issue or is it limited to the context of Kenya? It would also be of interest to explore what solutions can be offered to address the issue of leadership in projects within the Religious Institutes of the Catholic Church in Kenya.

Skills for project success as opposed to skills for project management is another area of research that should further explored. Project management process can be followed successfully but this does not necessarily mean that projects will be successful. The focus of most research is on project management processes. More attention should be paid to what actually makes a project successful and how this will be attained consistently. This would be further to Farzana Asad Mir and Ashly H. Pinnington (2014) on linking project management performance and project success. This is also supported by the regression analysis which indicates that other factors

contribute more significantly to project success than project management knowledge. These factors should be investigated further.

The project management practices for cost, time, and scope (performance objectives) management are the most well-established. The two areas that need more attention are contributing to the vision and mission of the organization and impacting the future of the organization. These have a long-term effect on any organization or Religious Institute and would be a considerable determining factor in choosing what project to undertake.

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APPENDIXES

Appendix 1-Questionnaire

THE ROLE OF PROJECT MANAGEMENT KNOWLEDGE ON PROJECT SUCCESS AMONG RELIGIOUS INSTITUTES OF THE CATHOLIC CHURCH

My name is Ngure Githinji and I am carrying out a study to investigate the role of project management knowledge (general management skills, technical project management skills and industry skills) in achieving project success within the Religious Institutes/Orders/Congregations of the Catholic Church in Kenya. Kindly fill the questionnaire below to provide your views and input. This questionnaire is confidential. No individual Institute/Order/Congregation or names will be mentioned in the final report. Personal information received from you will not be passed on to any third party.

SECTION 1: BACKGROUND

1. What is your job title? _____

2. How many years have you been in project management?

☐ Less Than 2 ☐ 2 – 5 ☐ 6 – 10 ☐ 10 – 15 ☐ 16 – 20 ☐ More than 20

3. How many projects have you worked on?

☐ Less Than 2 ☐ 2 – 5 ☐ 6 – 10 ☐ 10 – 15 ☐ 16 – 20 ☐ More than 20

4. Do you have any formal training or qualification in Project Management? ☐ Yes ☐ No

5. If you have answered yes to the above question, how long did it take to acquire the training or qualification?

☐ Less 1 Year ☐ 1 Year ☐ 2 Years ☐ 3 Years ☐ 4 Years ☐ More than 4 Years

SECTION 2: GENERAL MANAGEMENT SKILLS

On a scale of 1 to 5 where 1 is strongly disagree and 5 is strongly agree, rate how much you agree or disagree with the following statements in regard to your ability, proficiency and competence in these skills.

	1 Strongly Disagree	**2 Disagree**	**3 Undecided**	**4 Agree**	**5 Strongly Agree**
6. I have the necessary skills to get people to work toward a common goal for the successful completion of a project	☐	☐	☐	☐	☐
7. I have the necessary skills to coordinate all the elements of a	☐	☐	☐	☐	☐

project for the successful completion of a project					
8. I have the necessary skills to maintain the quality requirements and standards of a project for the successful completion of a project	☐	☐	☐	☐	☐
9. I have the necessary skills to purchase or acquire products, services, or results needed from outside the project	☐	☐	☐	☐	☐

SECTION 3: TECHNICAL PROJECT MANAGEMENT SKILLS

On a scale of 1 to 5 where 1 is strongly disagree and 5 is strongly agree, rate how much you agree or disagree with the following statements in regard to your ability, proficiency and competence in these skills.

	1 Strongly Disagree	**2 Disagree**	**3 Undecided**	**4 Agree**	**5 Strongly Agree**
10. I have the necessary skills to ensure only the work that is required for project goes into the project charter	☐	☐	☐	☐	☐
11. I have the necessary skills to manage the budget of a project for successful completion of a project	☐	☐	☐	☐	☐
12. I have the necessary skills to manage the resources needed for the successful completion of a project.	☐	☐	☐	☐	☐
13. I have the necessary skills to mitigate against any possible risks in a project for the successful completion of a project	☐	☐	☐	☐	☐

SECTION 4: INDUSTRY SKILLS

On a scale of 1 to 5 where 1 is strongly disagree and 5 is strongly agree, rate how much you agree or disagree with the following statements in regard to your ability, proficiency and competence in these skills.

	1 Strongly Disagree	**2 Disagree**	**3 Undecided**	**4 Agree**	**5 Strongly Agree**
14. I have the necessary skills to manage the timelines and schedule of a project for the successful completion of a project	☐	☐	☐	☐	☐

15. I have the necessary skills to identify the people, groups, or organizations that could impact or be impacted by a decision, activity, or outcome of a project	☐	☐	☐	☐	☐
16. I have the necessary skills to generate and disseminate information to my team and stakeholders in a timely fashion for the successful completion of a project	☐	☐	☐	☐	☐

SECTION 4: PROJECT SUCCESS

On a scale of 1 to 5 where 1 is strongly disagree and 5 is strongly agree, rate how much you agree or disagree with the following statements in regard to the indicators of project success.

	1 Strongly Disagree	**2 Disagree**	**3 Undecided**	**4 Agree**	**5 Strongly Agree**
17. Completion on time is an important indicator of project success	☐	☐	☐	☐	☐
18. Completion within budget is an important indicator of project success	☐	☐	☐	☐	☐
19. Meeting the objectives of the project is an important indicator of project success	☐	☐	☐	☐	☐
20. Acceptance by the clients, customers, and users is an important indicator or project Success	☐	☐	☐	☐	☐
21. Contributing to the charism of the Religious Institute is an important indicator of project success	☐	☐	☐	☐	☐
22. Making an impact on the future and sustainability of the Religious Institute is an important indicator of project success	☐	☐	☐	☐	☐

Appendix 2-Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **464605**

Date of Issue: **15/November/2021**

RESEARCH LICENSE



This is to Certify that Mr.. Ngure Githinji of Africa Nazarene University, has been licensed to conduct research in Nairobi on the topic: The Role of Project Management Knowledge in Project Success among Religious Institutes within the Catholic Church in Kenya: A Case of Nairobi Archdiocese for the period ending : 15/November/2022.

License No: **NACOSTI/P/21/14338**

464605

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

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Appendix 3- Research Approvals and Letters

10th, November, 2021

E-mail: researchwriting.mba.anu@gmail.com

Tel. 0202711213\

Our Ref: 19S01DMBA002

The Director.
National Commission for Science,
Technology and Innovation (NACOSTI),
P. O. Box 30623, 00100
Nairobi. Kenya

Dear Sir/Madam:

RE: RESEARCH AUTHORIZATION FOR: NGURE GITHINJI

Mr. Githinji is a postgraduate student of Africa Nazarene University in the Master of Business Administration (MBA) program.
In order to complete his program, Mr. Githinji is conducting a research entitled: **"The Role of Project Management Knowledge in Project Success among Religious Institutes within the Catholic Church in Kenya: A Case of Nairobi Archdiocese"**
Any assistance offered to him will be highly appreciated.

Yours Faithfully,

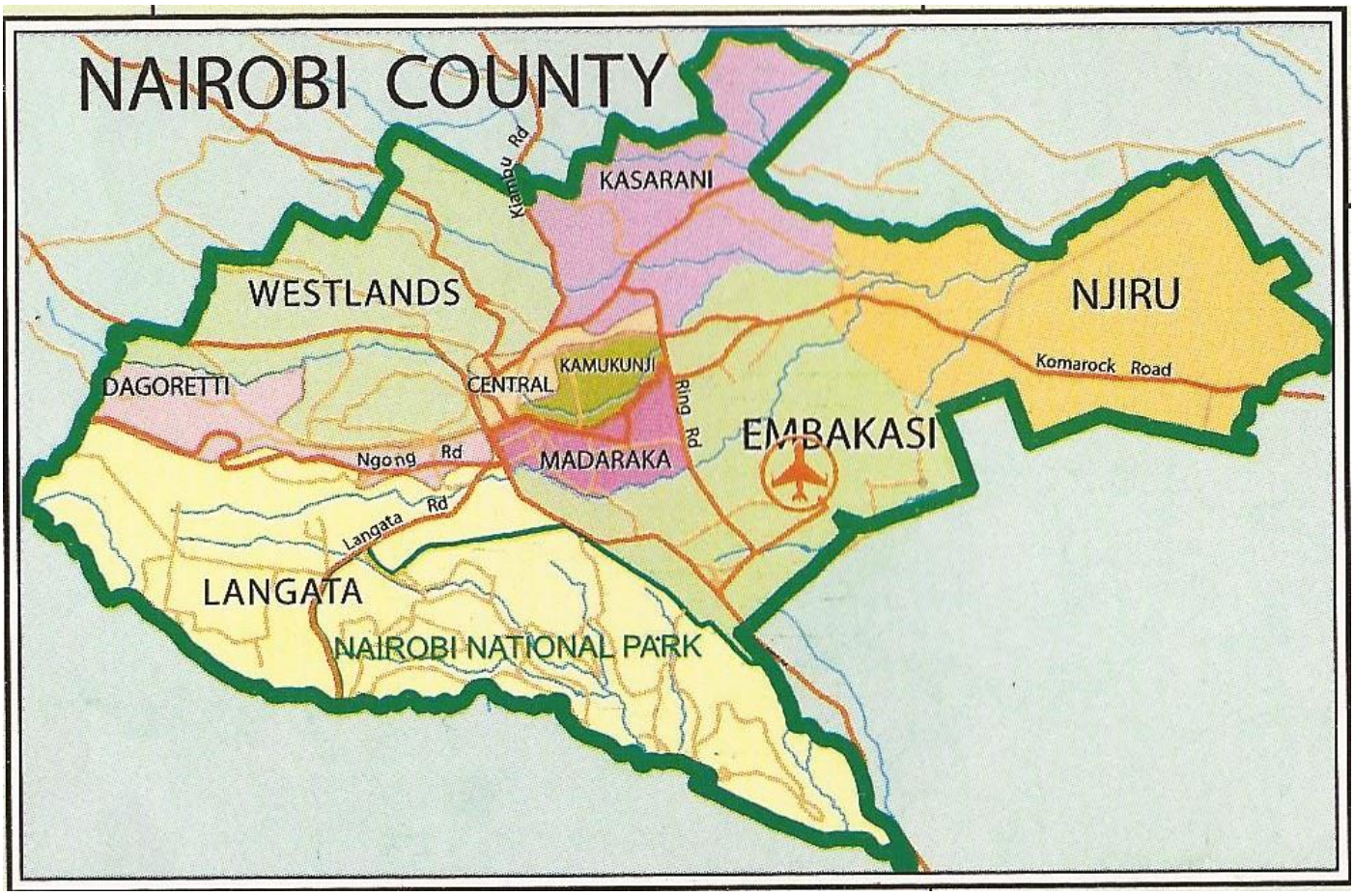
DR. Kimani Gichuhi,

MBA, Coordinator,

School of Business,

Africa Nazarene University.

Appendix 4- Map of Study Area



KIAMBU COUNTY

