STRATEGIC FACTORS INFLUENCE ON EFFECTIVE MONITORING AND EVALUATION (M&E) SYSTEMS IN KENYA: A CASE OF TURKANA COUNTY

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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

This work is dedicated to the interest of enhancing public service delivery within both the National and County Government structures in Kenya.

ACKNOWLEDGEMENTS

Special thanks goes to my supervisor Dr. Boscow Okumu for his invaluable input and guidance throughout the entire process. To my beautiful partner Paula, thank you for your incredible love and support all through. I also wish to sincerely appreciate in equal measure all other parties that made this research study a success, stay abundantly blessed.

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ABSTRACT

This study examined strategic factors influence on effective M&E. Objectives of the study were to determine the extent technical capacity, work experience and technology influence effective M&E. It was based on the following theories that resonated with the subject matter, namely the theory of change and diffusion theory. A descriptive research design was used to determine how the three set of variables influenced effective M&E. The research had a target population of 48 practitioners from which a sample size of 43 was derived. Purposive and random sampling procedures were used in the study. Data was collected using a structured questionnaire with a reliability statistic, Cronbach's Alfa of 0.801 and subsequently analyzed using SPSS. The study found out that technical capacity, work experience and technology had a positive strong correlation of 0.572, 0.413 and 0.473 respectively, with effective M&E. Regression analysis of the data established the coefficient of determination, $R^2 = 0.536$, accounting for 53.6% variance in effective M&E. The findings also revealed that both technical capacity and technology had a statistically significant relationship with effective M&E noting significance values of 0.001 and 0.009 (significance level 0.05) respectively. This was not the case for work experience as it did not have a statistically significant relationship with effective M&E, recording a significance value of 0.089 (significance level 0.05). The study therefore concluded that technical capacity and technology influenced effective M&E whereas work experience did not influence effective M&E. The study recommended that management should channel more effort in improving technical capacities of practitioners through regular on-job trainings, diversifying technology used in practice for digital integration and appropriating sufficient budget to cater for both acquisition of new technology and facilitation of on-job trainings. The study also recommended an investigation into other strategic factors not captured such as finance and good governance as an area of interest for further research on effective M&E.

DEFINITION OF TERMS

Effective M&E: Operationally defined, to include budget component, framework, CIMES structures, CIDP reporting indicators handbook, champion, communication strategy and policy.

M&E System: Operationally defined, all the indicators, tools and processes that are used to measure planned program implementation against the desired results.

Technical Capacity: Operationally defined, to include field of specialization, academic qualification, on-job trainings, exposure opportunities and budgetary allocation for trainings.

Technology: For the purposes of this study, adoption of new innovations, digital integration, benefits including improved accuracy, cost reduction and better data quality.

Work Experience: Operationally defined, to include years of practice, comprehension of M&E Systems, M&E assessment, learning opportunities, utilization of M&E data and professionalism of practitioners.

ABBREVIATIONS AND ACRONYMS

ASAL - Arid and Semi-Arid Land

CIDP - County Integrated Development Plan

CIMES - County Integrated Monitoring and Evaluation Systems

GIS - Geographic Information System

GPS - Global Positioning System

KNBS - Kenya National Bureau of Statistics

OECD - Organization for Economic Cooperation and Development

M&E - Monitoring & Evaluation

MoDP - Ministry of Devolution and Planning

NACOSTI - National Council for Science, Technology and Innovation

SPSS - Statistical Package for Social Science

CHAPTER ONE: INTRODUCTION AND BACKGROUND OF THE STUDY

1.1 Introduction

Monitoring can be defined as a continuous task that works towards providing management of an ongoing programme or project with early indications of progress or lack thereof in the achievement of results. On the other hand, Evaluation refers to a systematically selective process that attempts to assess progress towards the achievement of an outcome (UNDP, 2002).

1.2 Background of the Study

1.2.1 Effective M&E Systems

M&E practice plays an integral role in project management and learning (Ogbechi, 2005). As such, this research study sought to identify the linkages that existed between effective M&E, as the dependent variable and strategic factors that included practitioner's technical capacity, work experience and technology as the independent variables. In government structures, effective M&E is indicated and assessed based on the following factors, namely; availability of a budget component, M&E framework, CIMES structures, CIDP reporting indicators handbook, M&E champion, M&E communication strategy and M&E policy (MoDP, 2016). It has also been linked to better governance through accountability, transparency and inclusivity. As such, there is imminent need to institutionalize M&E and develop a culture on the same that will guide public investments and allocations so as to measure and quantify value of benefits where possible as a result of interventions made (MoDP, 2016). M&E Systems are inherently required to accommodate strengths and weaknesses in their diagnosis of M&E functions. They also offer a platform to rectify and reprioritize overlooked objectives that had not been considered in the course

of implementation. Thus, this level of dynamism works to improve efficiency of the system translating into successes of the same (Mackay, 2007).

Currently, the global practice in M&E is Resilience M&E (ReM&E). It is a relatively new focus area in the development of resilience-building projects/programs. This practice puts the case forward for M&E learning through learning by execution of functions thereby prioritizing the utilization of the M&E data gathered (World Bank, 2017). Some of the good global sectorial practices that characterize Resilience M&E Systems so far include; balancing indicator ambition with practicality, building multiple M&E approaches into the project design, embedding a strong resilience framing in the project design, undertaking evidence-based learning throughout the course of the project so to improve implementation, enhance results and accountability among others (World Bank, 2017).

In the United States, the federal government's M&E Systems are bundled under different institutions. The three key institutions are, namely; the Executive, Legislative and Judicial Branches (Mark & Pfeiffer, 2011). This level of diversification of such responsibilities compounds the effectiveness of the systems thereby allowing for each institution to meet its own distinct goals which are usually complimentary to each institution's legal mandate. According to Mark and Pfeiffer (2011), the success of M&E Systems is not only pegged on the existence of a clear set of objectives, the capacity to identify and measure indicators or carry evaluations but also on how often the information derived from the aforementioned processes is used so to improve performance. This therefore sets the stage for succinct factors that will guide any framework to be implemented. These factors are considered a requisite in the M&E process of the United States federal government. They include; identification of clear and specific missions, goals and outcomes, creation of performance measures, setting progress targets for accomplishing outcomes,

reporting performance information and using performance measurement data in managerial decisions to improve programs (Mark & Pfeiffer, 2011). They are also required to carry out government program evaluations and incorporate their evaluation findings to improve programs (Mark and Pfeiffer, 2011).

In Kenya, some of the successful projects undertaken so far include the Youth Enterprise Development Fund that achieved its objective of having an increased economic opportunity for the youth to participate in building of the nation (Kimando et al., 2012) and the Self Reliant Agricultural Project which also realized its goal of enabling through training, farming communities in Mnyenzeni to grow their own food as they had access to land but did not utilize it efficiently (Ward, 2010). On the other hand, failed projects have also been experienced in the country and these include; Lake Turkana Fish Processing Plant Project, Kibera Slum Upgrading Project, Anglo-Leasing ICT related Project, Modambogo Health Center in rain water harvesting in Mwatate, and Tumaini Women Self Help group project in Kisumu among others. (Kamau & Mohamed, 2015).

Kenya's Vision 2030, launched in 2008 sought to transform Kenya into a newly industrializing, globally competitive and middle-income country that provides a high quality of life to all its citizens by the year 2030 (Anyanzwa, 2016). In line with this agenda of development, Counties must then play their part in achieving this overall objective by ensuring that flagship projects are successfully implemented. Anyanzwa (2016) indicates that even though mega government projects are underway, economic growth still remains elusive for Kenya as the economy has but only grown at an average rate of 4% in 8 years against a planned 10%. According to the Kenya Vision 2030 Delivery Secretariat, challenges cited for this derailment included a lack of funding,

lengthy procurement processes and litigation on tender awards, land acquisition and compensation issues as well as high transaction costs (Anyanzwa, 2016).

Turkana County has an estimated 46% literacy levels and a poverty index of 79.4%. It also contributes about 1.3% to the national poverty statistics according to the Basic Well-Being Survey (KNBS, 2018). This has been mainly attributed to the radical marginalization from mainstream public service and general development by previous regimes of national government (CIC, 2015). Therefore, this research study offered an opportunity through the County government to better manage projects as it sought to establish areas for improvement in government-funded interventions so as to achieve better results in implementation of project activities in Turkana. It was also expected that the findings obtained would both guide M&E practice and improve the M&E System in the County.

1.2.2 Strategic Factors

These are key elements that are responsible for the outcomes of another element that have been inherently interlinked. The independent variables selected in the research study included, namely; technical capacity, work experience and technology. These variables were selected as key strategic factors that could help explain the relationship between themselves as a set and effective M&E. The findings of the relationship was of importance in the determination of informed recommendations to the entities that participated in the research study.

1.2.2.1 Technical Capacity

The technical capacity variable was determined in the study by the following indicators; field of specialization, academic qualification, on-job trainings, budgetary allocations and exposure opportunities for practitioners. The aim here was to determine the extent to which the technical

capacity of practitioners influenced effective M&E. In a study conducted by Mthethwa & Jili, (2016) on the challenges in M&E implementation in Mfolozi Municipality in South Africa, they defined technical capacity as the availability of skilled implementers of M&E Systems of which they established was lacking at the Municipality. Similarly, in a study conducted by Igbokwe & Chinyeaka, (2016) on the issues and challenges facing local government implementation of M&E, they also contextualized technical capacity as the availability of having skilled implementers undertaking M&E practice. Mwangi, (2005) also posited in his research on the efficiency of Kenya's Constituency Development Fund that skill and expertise mattered in the provision of management successes and this was linked to technical capacity of the implementers. Therefore, in the context of this study, technical capacity was identified as an integral cog in the implementation of M&E functions and was thereby assessed by the aforementioned indicators.

1.2.2.2 Work Experience

The work experience variable was determined by indicators that included the following; years of practice, comprehension of M&E Systems, M&E System assessment, learning opportunities, utilization of M&E data and professionalism of the practitioners. The purpose here was to establish the extent to which work experience influenced effective M&E. Institutionalization of M&E culture determines level of transparency and commitment to achieving results (Holsey, 2005). This was examined using the aforementioned indicators in the research study. It was also noted according to Kholi & Deb, (2008) that experience in performance monitoring aided in the determination of plans and associated quality of the same for further actions. Kenya Social Protection Sector Review (2012), posited from their research on social programmes in the country that assessed functionality of M&E Systems that comprehensive systems and utilization of M&E data by management are both instrumental in achieving results. Stakeholder relationships through

learning experiences also was noted as vital in participatory monitoring activities by the Local Authority Service Delivery Action Planning unit (Otieno et al., 2016). Work experience therefore, was regarded as a key element in the implementation of M&E functions in the study.

1.2.2.3 Technology

The technology variable was equally determined by a set of indicators that included the following aspects; adoption, digital integration, attributed improved accuracy, cost reduction and better data quality. The goal here was to investigate the extent to which technology influenced effective M&E. World Bank study on Guatemala's Conditional Cash Transfer Program, assessed technology envisaged through data collection instruments and the impacts it had on M&E processes. It thereby examined mobile data collection and it was established that it contributed to cost reduction of each survey undertaken by an average of 71% (Schuster & Brito, 2011). It could also be extended to include other forms of electronic data collection methods that unlike ordinary pen and paper collection method, these improved accuracy and substantially reduced data entry costs (Satterlee et al., 2015). Nanda, (2017) posited also that mobile platforms had opened up the possibilities of achieving detailed insights as data could be shared and be processed instantaneously on applications through visualization dashboards, geospatial mapping and analytics. Therefore, in the context of the study, technology was considered instrumental in implementation of M&E activities.

1.3 Statement of the Problem

M&E Systems, through numerous researches has been noted as a key driver for project successes in the country but still, cases of project failures pop up every so often than not. Government-funded development projects have experienced their fair share of both successes and failures yet the practice of M&E is anchored in the law as a requirement (Kamau & Mohamed, 2015).

This in itself raises the question of effectiveness of the monitoring and evaluation, capacity of the implementers and or incorrect approaches and methodologies employed in the M&E practice by the practitioners. There is also the aspect concerning the role of management too with regards to offering the requisite support through communication, leadership styles and staff motivation.

One of the drawbacks of the M&E practice in Kenya is the failure by management to implement recommendations from the M&E team (Kamau & Mohamed, 2015). This defeats the purpose of the learning process from the system thereby making the implementers susceptible to having a recurrence of similar mistakes in other project ventures.

Better defined and constructed M&E systems are known for being catalysts for efficiency and meeting project deliverables with relative ease. Institutionalization of the same systems work best to improve public sector management as noted by Mackay, 2007. This has been evident in Chile, Public Service Commission of South Africa, Canada and Mexico (Mackay, 2007).

Another startling observation noted was the fact that many projects fail despite the requisite requirement in law that they all undergo M&E processes. Most scholars concur that well-designed M&E processes lead to project success but there are still cases of project failure in Kenya despite the heavy presence of M&E activities (Kamau & Mohamed, 2015).

1.4 Purpose of the Study

The purpose of this study was to establish as to whether technical capacity, work experience and technology as a set influences effective M&E practice. It was also meant to better understand the M&E System in place and propose possible solutions to challenges emanating from the study.

1.5 Objectives of the Study

The following were the objectives of this research;

i. To determine the extent technical capacity influences effective M&E.
ii. To establish the extent work experience influences effective M&E.
iii. To investigate the extent technology influences effective M&E.

1.6 Hypothesis

The study tested the following hypothesis;

i. H_0 Technical capacity has no significant influence on effective M&E.
ii. H_0 Work experience has no significant influence on effective M&E.
iii. H_0 Technology has no significant influence on effective M&E.

1.7 Significance of the Study

The findings of this study would inform the County government of Turkana on the grappling challenges experienced in the implementation of M&E systems for development interventions. These insights would work towards streamlining the system and building the capacity of M&E practitioners in the County. The lack of specialized M&E practitioners, at the time the study was carried out exemplified the need for having an effective system. That need was imperative as it would enable practitioners capture the factual intended purpose of the program, outcome and

results in the long run, for incorporation into the decision-making process with regards to development interventions undertaken within the County.

1.8 Scope of the Study

The research study targeted M&E practitioners from the County Government, County Assembly, National Government Departments and Parastatals (implementing non-devolved functions) in Turkana County.

1.9 Delimitation of the Study

This research study sought to engage all Ministries in Turkana County Government that were involved with key, flagship projects that integrated the M&E aspect in various stages of project implementation. The Ministry of Finance, Economic Planning Section was the focal department on this as it offered a coordinating role on M&E exercises in the County with liaisons with the County Assembly working in an oversight capacity on the same, as the legislative arm of government. This exercise was largely be delimited to major development programmes such as road works, construction of classrooms, water pans, drilling of boreholes among other “tangible” or structural development projects.

1.10 Limitations of the Study

The limitations during this research study included time constraints and the unavailability of the key informant respondents. Resource constraints with regards to finances and mobility were anticipated and minimized by the use of digitized questionnaire forms that were emailed to the respondents.

1.11 Assumptions of the Study

The research study made the following assumptions that, all respondents involved in the study would be transparent, forthcoming with information and truthful with their responses. They would also not be apprehensive about the research with regards to their participation in it.

1.12 Theoretical Framework

Multiple theories and models have been put forth to guide monitoring and evaluation practice by scholars. These include the theory of change, program, decision, outcome, complex self-organizing systems, causality (Holsey, 2005) and diffusion of innovation (Rogers, 2003).

The theory of change applied to this study as it is a process-specific methodology that is used in planning activities to promote social change. It defines long-term goals and subsequently maps them in reverse to establish the vital prerequisites in the process that will enable achievement of the overall goal or objective. It can also be refined further through engagements with relevant stakeholders and analyzing data during evaluations, assessing what has worked and what has not thereby giving room for in-depth target development intervention (Stein & Valters, 2012).

The outcomes in every theory of change need to have clearly defined indicators that are specific, measurable, achievable/attributable, relevant/realistic and time-bound (SMART) that can easily be linked to them in a logical sequence. This factor does greatly determine the success of the system (Funnell & Rogers, 2011) and as such, this gelled well with the objectives that the study set out to establish.

This study will also be based on this theory as it looks at how new innovation, ideas and technology are assimilated and adopted in functional social systems (Rogers, 2003). The process of diffusion is human capital intensive and as such is driven by the following elements, namely; innovation,

adopters, communication channels, time and social systems. For adoption of new innovation and ideas to transpire, the process is predicated upon the following five stages; knowledge acquisition, persuasion, decision making, implementation and confirmation of adoption of the innovation (Rogers, 2003).

Other M&E models relevant to this study also included Kirkpatrick and the Brinkerhoff models, where the former is widely used in evaluating training programs on basis of results exhibited (Kirkpatrick, 2009) and the latter argues that organizations need to be evaluated in lieu of the training so as to fully establish the impact of the training (Brinkerhoff, 2005). Both models are valuable in the designing of tools to aid in evaluation processes, indicating when, why and whom to involve in the evaluations (Bates, 2004).

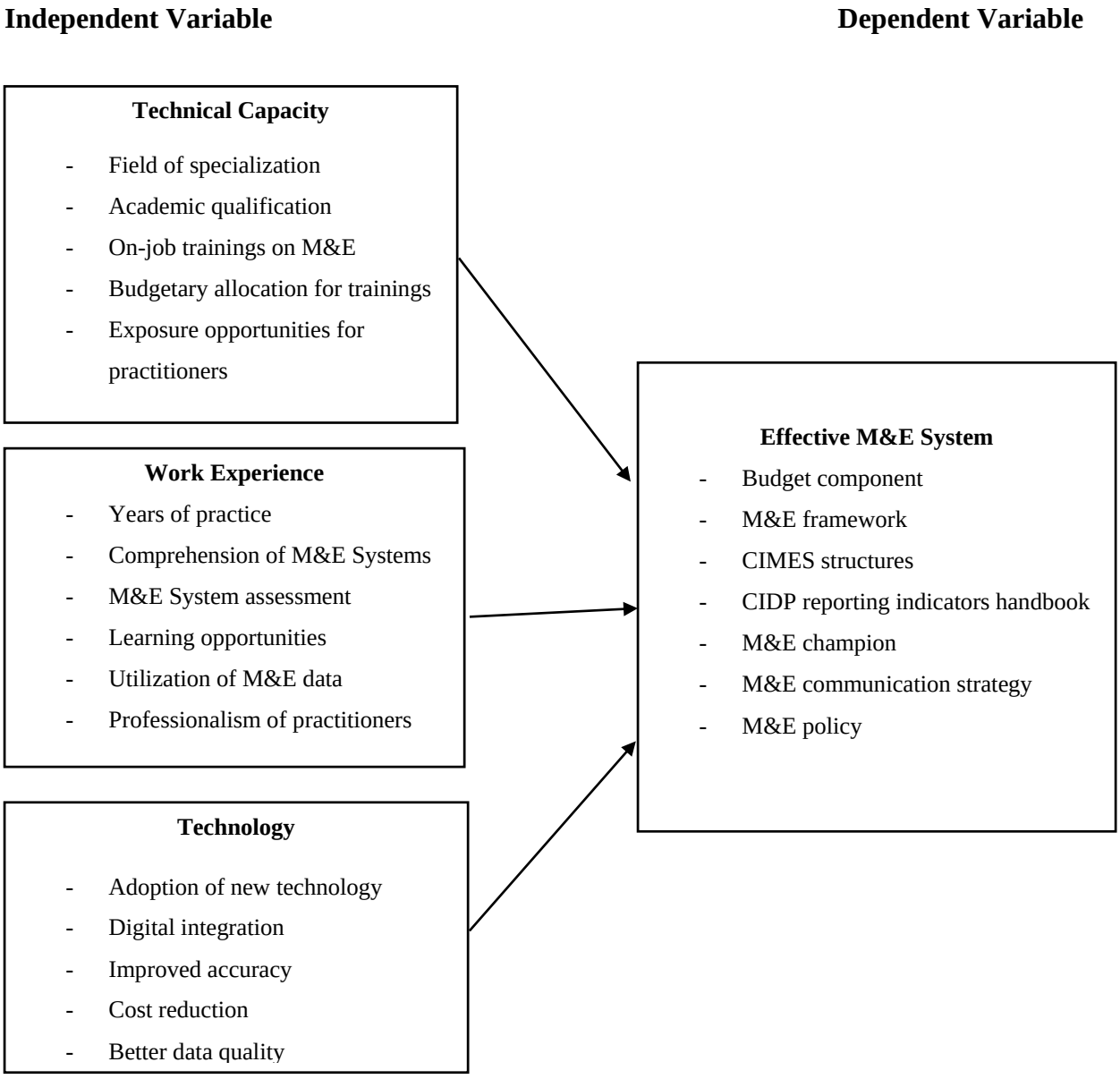
1.13 Conceptual Framework

This was used to guide the research study as it attempted to achieve the aforementioned objectives. It indicated a logical sequence of processes that are interlinked by both the independent and the dependent variables under investigation. Technical capacity, work experience and technology were the independent variables and effective M&E was the dependent variable.

Technical capacity in the study referred to skillfulness of the practitioners. This was then determined by the following indicators; field of specialization, academic qualification, on-job trainings, budgetary allocations and exposure opportunities for practitioners. Work experience was assessed based on the following indicators that included; years of practice, comprehension of M&E Systems, M&E System assessment, learning opportunities, utilization of M&E data and professionalism of the practitioners. The technology variable was described and determined by the following indicators, namely; adoption, digital integration, attributed improved accuracy, cost reduction and better data quality.

Effective M&E System as the dependent variable was assessed in terms of functionality across all departments. This was determined by the presence or absence of the following indicators, namely; budget component, M&E framework, CIMES structures, CIDP reporting indicators handbook, M&E champion, M&E communication strategy and M&E policy.

Figure 1.1: Conceptual Framework



Source: Author (2021)

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section presents and discusses in great length empirical literature of this research study. The knowledge gap that the study will help address is also highlighted and documented here.

2.2 Review of Literature

In government structures, effective M&E is indicated and assessed based on the following factors, namely; availability of a budget, M&E framework, CIMES structures, CIDP reporting indicators handbook, M&E champion, M&E communication strategy and M&E policy (MoDP, 2016). Budgetary component serves to ensure that there is finances set aside for M&E activities. An existing M&E policy and framework is instrumental as it affirms the legality of the process as it is robustly anchored in law. Appropriate CIMES structures ensures that within the practice itself, there are checks and balances for different assigned roles and functions to guide the implementation of M&E activities. The CIDP indicators handbook is key as it identifies the measures for assessment of status and subsequent level of implementation of M&E activities within the County. The availability of an M&E champion within the County is also vital as it campaigns for the need for institutionalization of the M&E process. A well-designed communication strategy of great importance as it provides a feedback mechanism between the government as the project implementers and the recipients.

2.2.1 Technical Capacity and Effective M&E

The human resource aspect is a major factor that influences practitioner efficiency and hence effectiveness of the M&E system both in terms of quantity and capacity (World Bank, 2012). In a study set to highlight the challenges in M&E implementation in Mfolozi Municipality in South

Africa, it was established that the municipality lacked a comprehensive M&E system to facilitate continuous assessment of integrated development plans, service delivery outcomes and operational plans. This was coupled with a shortage of skilled implementers and financial constraints that caused ineffectiveness of the M&E system (Mthethwa & Jili, 2016).

Similarly, on issues and challenges in local government project monitoring and evaluation in Nigeria, it was established that the system had been riddled with short-comings ranging from; exclusion of community members as primary stakeholders, corruption, ineptly skilled implementers, lack of discipline in implementing projects, financial constraints and a slow and or no adoption at all of globally accepted practices (Igbokwe & Chinyeaka, 2016). The prevalence of corruption too as highlighted as a function of lack of professionalism has aided in crippling the M&E system thereby increasing susceptibility to mismanagement by cartels and massive failures in delivering project goals and objectives of local government tenders. This has been further enabled by existing flawed tendering processes (Lawal & Onohaebi, 2010).

In a study conducted by Mwangi, (2005) on the Efficiency and Efficacy of Kenya's Constituency Development Fund, it was established there was need of having clearly defined roles and functions for practitioners based on their respective skill and expertise. Skill development is key for any effective M&E practice (Awiti, 2008). Additionally, it is also imperative that practitioners with inadequacy in both skill and expertise be capacity built to improve performance in the organization (Nyaguthii & Oyugi, 2013). This can be achieved through new frontier practices such as resilience M&E, a relatively new focus area that offers a lot of promise with regards to highlighting best practice in the field, which is learning by doing (World Bank, 2017). Three pilot projects examined in the practice included the following; Kenya Climate-Smart Agriculture Project, Mozambique PROIRRI and the Mekong Delta Integrated Climate Resilience and Sustainable Livelihoods

projects. Communicated successes included; strengthening of project design, engagement of relevant stakeholders, clear definitions of indicators, multiple approaches into the project design, balancing indicator ambition with practicality and most importantly, undertaking evidence-based learning throughout the course of the project (World Bank, 2017).

2.2.2 Work Experience and Effective M&E

Institutionalization of M&E culture in an organization determines the level of transparency and commitment to success for any development intervention (Hosley, 2005). In discussion of efforts at organizational change in government, Kim (2002) posited that changing the culture in an organization is a vital factor that is closely linked to the successful implementation of major improvement strategies. The key to building more effective results management and evaluation approaches should be driven by the need to develop and maintain an evaluative culture across organizations as this inculcates the culture and subsequent success in implementation of interventions (Mayne, 2008). Culture does convey a sense of identity within the organization and generates the unsaid drive to achieve and operate in particularly defined mannerisms that are synonymous with what the organization stands for (Perrin, 2002).

Experience in performance monitoring also helps in determining the level of quality and acceptance for the plans and actions to be implemented (Kholi & Deb, 2008). Effective participatory approaches in M&E of community development programs and interventions can therefore act as an impetus to improve on management, accountability, participation, trust, learning and efficiency and development impacts (Otieno et al., 2016). A participatory approach would therefore create project acceptance and ownership. In cases where the participatory aspect does not exist, emphasis needs to be made on enforcement during project implementation (Ward et al., 2016).

During the Kenya Social Protection Sector Review (2012), a research was done that mainly focused on social programmes in the country and the impact of M&E activities on the same and it yielded shocking results. Through a series of literature reviews, landscape surveys and in-depth interviews with project implementers, it indicated that about 40% of programmes implemented did not have a functional M&E System. From the programmes reviewed, 96% had developed indicator frameworks, 91% conducted monitoring activities, 61% had a planned or ongoing impact evaluation and 39% had no M&E reports for public consumption (Kenya Social Protection Sector Review, 2012). It established, among other factors, that the practitioners had an incomprehensible system and data gathered rarely influenced the decision-making process by management. This in itself validates the need to have an effective participatory M&E approach that would integrate stakeholder feedback mechanisms to the system, a link between project implementers and the beneficiaries.

Otieno et al., (2016) investigated the effects of participatory monitoring and evaluation on stakeholder relationships and project quality in the Local Authority Service Delivery Action Planning (LASDAP). It was established that participatory monitoring and evaluation contributed to the improvement of stakeholder relationships and quality of project outputs in the LASDAP process. There was also an observable improvement on infrastructure in education, water, roads, health and market, largely to the benefit of intense community participation in the process of monitoring and evaluation (Otieno et al., 2016). Stakeholder relationships had also improved significantly in the implementation of LASDAP projects and this had a direct impact with a resulting increment on allocations by the central government, on reward-based project appraisals.

In order to sustain a strong evaluation culture through self-reflection, an open yet inclusive dialogue is usually encouraged across the board (Shapiro, 2011). Engagement in evidence-based

learning gives the practitioners time to learn from mistakes and weak performance execution through experiences and also encourages knowledge transfer based on the same (Smutylo, 2005). Great leadership would also need to inform on the demand for results, commitment to results management and evaluation (Kim, 2002). It should also offer organizational structural support through incentives, supportive practices, procedures and learning-focused M&E (Mayne, 2008).

2.2.3 Technology and Effective M&E

In a study conducted by the World Bank on Guatemala's Conditional Cash Transfer Program, it was established that mobile data collection contributed to reduction in cost for each survey undertaken by an average of 71% (Schuster & Brito, 2011). Electronic data collection thus reduces data entry costs and also improves on quick access to information. There is also improved accuracy on the data collected as compared to pen and paper collection method which subjects data to manipulation risk or loss (Satterlee et al., 2015).

Nanda, (2017) posits that technology presents a new area of interest to practitioners especially with emphasis on real-time feedback and results. Integration of new technology in the M&E process has also proven to be beneficial in achieving cost reduction, increased accuracy, obtaining data rich in quality and for overall better insight into understanding the workings of a project.

Data collection in multiple formats has opened up different avenues for achieving detailed insights in M&E practice (Nanda, 2017). These may include; GPS, GIS and multimedia data among others. Communicating project lessons and results has been improved through mobile technology. Managing and monitoring of projects can also be done remotely and in real-time. Better insights into projects can also be realized through technological platforms that provide for an elaborate

learning process from project activities on applications in visualization dashboards, geospatial mappings and analytics (Nanda, 2017).

2.3 Summary and Research Gap

The literature discussed in this section evidently stresses the need of having a functional M&E System built upon by requisite factors that includes; practitioner's professional capacity, professional work experiences and the capacity to adopt new and diffuse new technological innovations in the practice among others. The potential technological integration offers in Monitoring and Evaluation is immense especially when considering the upsides that includes; cost reduction, improved accuracy, richer data, greater outreach and better insights for the practice in general (Satterlee et al., 2015). Lack of skilled implementers in the practice is also a monumental challenge as it hinders productivity and efficiency in the long run (Mthethwa & Jili, 2016). The lack of an inclusivity approach in Monitoring and Evaluation also serves to derail effectiveness of the systems under implementation by not generating a sense of project ownership and subsequent acceptance (Otieno et al., 2016). Institutionalization of the Monitoring & Evaluation culture in government is thus key as it determines the levels of transparency, accountability and certainly, commitment to success for any development intervention (Holsey, 2005). It is also imperative that practitioners have a functional and comprehensible that promotes the utilization of M&E data into key decision-making processes by management. To the best knowledge of the researcher, there was no research as of then that had tackled technical capacity, work experience and technology, as a set of strategic factors that influences effective M&E.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter focuses on how the research is conducted. It outlines the design, target population, sampling strategy, data collection tool and technique and data analysis methodology used in the research study.

3.2 Research Design

The research study used a descriptive research design that allowed for a determination of how practitioner's technical capacity, work experience and technological integration and adoption contributed to the effectiveness of the M&E system. Descriptive designs require that descriptive data be collected by either or a combination of these tools, namely; questionnaires, interviews, observations, rating scales, checklists and instruments for measuring physiological variables (Polit and Hungler, 1991). This was a descriptive correlational study as one dependent variable (effectiveness of M&E systems) was examined on how it related and was associated to other independent variables (practitioner's professional capacity, practitioner's professional work experience and technological integration and adoption).

3.3 Research Site

The research was conducted in Turkana County. It was set out to draw practitioners from three government entities, that is, the County government ministries, County Assembly and parastatal bodies identified specifically for the study. The rationale here was to assess M&E practice from the three different aforementioned tiers.

3.4 Target Population

The target population was 48 practitioners, constituted of County Government M&E practitioners, practitioners from members of the sub-sectors under the national government agencies that

implemented non-devolved functions and those drawn from the County Assembly of Turkana. The target population will be sampled from Lodwar town, which serves as the headquarters for both County and sub-sector operations.

3.5 Study Sample

3.5.1 Study Sample Size

From the target population of 48 M&E practitioners, a sample size of 43 was attained through computation using the Yamane formula, which determined the sample size of the study.

Yamane Formula;

$$n = \frac{N}{1 + N(e)2}$$

Where: *n*=Sample size, N= Population, e=Margin error of 5%

$$n = \frac{48}{1 + 48(0.05)2}$$

$$n = \frac{48}{1 + 0.12}$$

$$n = 42.8571429$$

$$n = 43$$

3.5.2 Sampling Procedures

Through a purposive sampling technique, the study identified practitioners from County Government Ministries, National Government Agencies and the County Assembly of Turkana. Purposive sampling methodology procedure provided an avenue for the samples collected to target specific groups of experts based on a deliberate selection strategy (Kothari, 2004). Random

sampling technique was thereafter used to select 4 practitioners to be involved in the study from each of the specified entities.

3.6 Data Collection

3.6.1 Data Collection Instruments

A researcher based administered structured questionnaire was used for collection of data for the study. It contained both open and close-ended type of questions and as such, enabled the respondents to give in-depth input whenever they could.

The structured questionnaire included a section on the three independent variables under study, namely; the practitioner's professional capacity, work experience and technological integration and adoption. It also included a section on the dependent variable, effectiveness of M&E system. Coupled with a simplistic design (Kothari, 2004), the structured questionnaires administered were fairy comprehensive and were collected on site, upon submission of responses by the sampled practitioners.

3.6.2 Pilot Testing of Research Instruments

The tool for collection of information in the study, the structured questionnaire, was evaluated for validity and reliability. This was to establish if there were any in-built errors in their measurement attributes. A pilot testing of the structured questionnaire was undertaken to practitioners from the study sample so as to check on the reliability of the instrument. Those practitioners who were sampled in the pilot testing exercise were not included in the main study.

3.6.3 Instrument Reliability

In order to establish the reliability of the instrument, a pilot study to determine the reliability of the instrument, a function of the degree of consistency at which the research instrument measures

what it is intended to measure (Kothari, 2004) was undertaken. Cronbach's alpha coefficient index was calculated for research questions and established to be 0.801 (Appendix 5). The aforementioned was considered adequate for the structured questionnaire to be administered in the study. As observed by Salkind (2010), a coefficient greater than .7 is deemed acceptable in measuring consistency of the research instrument and as such this was considered.

3.6.4 Instrument Validity

To test the validity of the instrument, the structured questionnaire was subjected to critical judgment of the research supervisor. Kothari, (2004) also posited that the use of experts to determine how well the research instrument meets the threshold standards was fundamentally key in determining the research instrument's validity.

3.6.5 Data Collection Procedures

This involved obtaining a letter of authorization from the university, which was then used in the application for obtaining a research permit from NACOSTI. Data was collected through a researcher based administered questionnaire to the study sample.

3.7 Data Analysis

Data obtained from the study was analyzed using SPSS software. Descriptive statistics was also used in the study and practitioner's responses presented in tabulated formats, charts and graphs. Correlation analysis was undertaken to determine statistically significant and insignificant relationships between both the dependent and independent variables in the study. Regression analysis was later undertaken with data obtained from computation of independent variables that showed statistical significance, a percentage of variance in the aforementioned which can be attributed to the independent variable.

3.8 Legal and Ethical Considerations

A research permit was obtained from the Ministry of Education's National Council for Science, Technology and Innovation (NACOSTI) as is required and participants were not coerced but elected to participate in the study. They were also briefed on the purpose and intended use of the research study and its subsequent findings. Overall, their anonymity and privy consent prior to any engagement in the study was observed.

CHAPTER FOUR: DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter presents data analysis and findings of the research. The objective of the study was to investigate the impact of technical capacity, work experience and technology on effective M&E.

4.2 Characteristics of the Respondents

4.2.1 Response Rate

The study had a sample size of 43 respondents out of which 33 respondents filled in and submitted the administered structured questionnaires. This indicated a 77% response rate which is regarded as acceptable as posited by Mugenda and Mugenda (1999), that a response rate of 50% or more is acceptable for both data analysis and making inferences together with their subsequent conclusions.

4.2.2 Gender Distribution

25 of the respondents were males and 8 were females. Males therefore constituted a higher percentage of the M&E practitioners. This gave a distribution of females at 24.2% and males at 75.8% as shown in Figure 4.1, indicating clearly that the M&E field is male-dominated.

Table 4.1: Gender distribution

	Frequency	Percentage
Female	8	24.2
Male	25	75.8
Total	33	100.0

Source: Research data (2021)

4.2.3 Age Distribution

28 respondents were found to be in the 21-40 years bracket, 4 respondents were found to be in the 41-50 years bracket and 1 respondent was found to be in the over 51 years bracket. This gave a distribution of 84.8%, 12.1% and 3% respectively as shown in Table 4.2. The implication of this to performance was an expected robust and vibrant core in the execution of M&E activities in the County.

Table 4.2: Age distribution

	Frequency	Percentage
21-40 years	28	84.8
41-50 years	4	12.1
Over 51 years	1	3.0
Total	33	100.0

Source: Research data (2021)

4.2.4 Academic Qualification

From the data obtained, a majority of M&E practitioners had attained Undergraduate qualification as indicated in Table 4.3. Certificate, diploma and graduate qualifications were distributed as follows; 3%, 18.2% and 33.3% respectively. This implied an expected technical comprehension on ease of learning of M&E System among the practitioners.

Table 4.3: Academic qualification

	Frequency	Percentage
Certificate	1	3.0
Diploma	6	18.2
Undergraduate	15	45.5
Graduate	11	33.3
Total	33	100.0

Source: Research data (2021)

4.2.5 Years of Practice

M&E practitioners in the study indicated the following number of years in professional working capacities in the following categories; less than 1 year, 2-3 years, 4-5 years,6-7 years and more than 8 years. This was distributed in terms of percentages as; 9.1%, 24.2%, 33.3%, 15.2% and 18.2% respectively as shown in Table 4.3. The implication of this was expected substantive wealth of knowhow in the execution of M&E roles and functions.

Table 4.4: Years of practice

	Frequency	Percentage
Less than 1 year	3	9.1
2-3 years	8	24.2
4-5 years	11	33.3
6-7 years	5	33.3
More than 8 years	6	18.2
Total	33	100.0

Source: Research data (2021)

4.2.6 Field of Specialization

The respondents in the study indicated their field of specialization as outlined in Table 4.5. It was surmised that none of the practitioners had an academic background specifically in M&E but 84.8% had it in related technical fields namely; Accounting, Applied Statistics, Business Management, Commerce, Economics, Project Management, Procurement and Social work and Administration. This therefore implied the existence of qualified technical practitioners even though none had a specific background in M&E as it was from related fields only.

Table 4.5: Field of specialization

	Frequency	Percentage
Accounting	8	24.2
Applied Statistics	2	6.1
Business Management	1	3.0
Commerce	1	3.0
Economics	3	9.1
Environmental Management	3	9.1
International Relations	1	3.0
Meteorology	1	3.0
Procurement	11	33.3
Project Management	1	3.0
Social work and Administration	1	3.0
Total	33	100.0

Source: Research data (2021)

4.2.7 On-job M&E Training

17 respondents indicated that they had undergone an on-job M&E training and 16 still have not. This gave a distribution of 51.5% and 48.5% respectively as shown in Table 4.6. This implied that less than half of the practitioners would be impacted negatively on their productivity in the implementation of M&E roles and functions.

Table 4.6: On-job training on M&E System

	Frequency	Percentage
Yes	17	51.5
No	16	48.5
Total	33	100.0

Source: Research data (2021)

4.3 Presentation of Research Analysis, Findings and Interpretation

4.3.1 Technical Capacity and Effective M&E

As indicated in Table 4.7, the r value of 0.572 implied the existence of a strong correlation between technical capacity and effective M&E. The relationship between the two variables also had a significance value (p) of 0.001 indicating that the relationship was of statistical significance as it was greater than 0.01 (correlation significant at 0.01 level (2-tailed)).

Table 4.7: Correlation between technical capacity and effective M&E

		Technical Capacity	Effective M&E
Technical Capacity	Pearson Correlation	1	.572**
	Sig. (2-tailed)		.001
	N	33	33
Effective M&E	Pearson Correlation	.572**	1
	Sig. (2-tailed)	.001	
	N	33	33

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Research data (2021)

4.3.2 Work Experience and Effective M&E

Table 4.8 presents the correlation analysis between professional working experience of practitioners and effective M&E. From the data observed, the r value with regards to work experience was 0.413, indicating a strong correlation with an excellent statistical significance as the value of p obtained was 0.017 (correlation significant at 0.05 level (2-tailed)).

Table 4.8: Correlation between work experience and effective M&E

		Work experience	Effective M&E
Work experience	Pearson Correlation	1	.413**
	Sig. (2-tailed)		.017
	N	33	33
Effective M&E	Pearson Correlation	.413**	1
	Sig. (2-tailed)	.017	
	N	33	33

**. Correlation is significant at the 0.05 level (2-tailed).

Source: Research data (2021)

4.3.3 Technology and Effective M&E

Table 4.9 presents the correlation analysis between the technology and effective M&E. From the data observed, the r value with regards to the use of technology in M&E practice in the County was 0.473, indicating a strong correlation also with an excellent statistical significance as the value of p obtained was 0.005 (correlation significant at 0.01 level (2-tailed)).

Table 4.9: Correlation between technology and effective M&E

		Technology	Effective M&E
Technology	Pearson Correlation	1	.473**
	Sig. (2-tailed)		.005
	N	33	33
Effective M&E	Pearson Correlation	.473**	1
	Sig. (2-tailed)	.005	
	N	33	33

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Research data (2021)

4.3.4 Regression Analysis

Table 4.10 indicates as whether the correlation coefficient was significant and also determined the extent to which the independent variables influenced the dependent variable through the coefficient of determination.

Deductions made from Table 4.10 implied that with a Coefficient of determination of (R^2 = .536), which is inherently a measure of the strength of variable association between the dependent and predictor variables, 53.6% of variance in effective M&E can be attributed to technical capacity, work experience and technology variables as set.

Table 4.10: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
.732[a]	.536	.488	.19746	.536	11.183	3	29	.000

a. Predictors: (Constant), Technology, Technical Capacity, Experience

Source: Research data (2021)

Analysis of variance (ANOVA) test was also undertaken to determine as to whether the model was significant. It was established as indicated in Table 4.11 that the overall regression model was significant, F (3, 29) = 11.183, p<.001, R^2 =.536.

Table 4.11: ANOVA[a]

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.308	3	.436	11.183	.000[a]
Residual	1.131	29	.039		
Total	2.439	32			

a. Predictors: (Constant), Technology, Technical Capacity, Experience

b. Dependent Variable: Effective M&E

Source: Research data (2021)

The findings at 0.05 significance level in Table 4.12 established that technical capacity had a unique variance that is significant on effective M&E (β_1=-0.366, p value=0.001). Technology also

had a unique variance that was statistically significant on effective M&E (β_3=-0.505, p value=0.009). However, work experience variable had no unique variance and was statistically insignificant on effective M&E in the County (β_2=-0.252, p value=0.089).

Table 4.12: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	-.812	.832		-.977	.337
Technical Capacity	.366	.101	.471	3.613	.001
Experience	.252	.143	.232	1.758	.089
Technology	.505	.181	.362	2.791	.009

a. Dependent Variable: Effective M&E

Source: Research data (2021)

Regression equation used was as follows;

$$\mathbf{Y=-0.812+0.366X_1+0.252X_2+0.505X_3+\varepsilon}$$

4.4 Hypothesis Testing

H_0 there is no significant influence between technical capacity and effective M&E was substantiated to be untrue, as the value of p obtained was 0.001 (significance level 0.05). H_1 was therefore accepted. H_0 there is no significant influence between work experience and effective M&E was determined as true, as the value of p obtained was 0.089 (significance level 0.05). H_0 was therefore accepted. H_0 there is no significant influence between technology and effective M&E

was established to be false, as the p value obtained was 0.009 (significance level 0.05). H_1 was therefore accepted.

CHAPTER FIVE: DISCUSSIONS, CONCLUSIONS AND RECOMMENDATION

5.1 Introduction

This chapter presents summary of findings, conclusions, recommendations and suggestions for further research.

5.2 Discussions

5.2.1 Technical Capacity and Effective M&E

This objective sought to determine the extent technical capacity influences effective M&E. The study established that there was a strong correlation 0.572 between the two variables and it was statistically significant. This was affirmed by regression analysis that determined it at 0.001 (significance level 0.05). This finding was in line with Igbokwe & Chinyeaka (2016) on the lack of skilled implementers affecting how effective M&E activities are carried out. It was also in concurrence with Mthethwa & Jili (2016) on the case of Mfolozi Municipality in South Africa on challenges faced in execution of M&E activities that included a shortage of skilled implementers. From this research findings, it was noted that more than half of the practitioners had undergone on-job trainings thereby boosting their technical capacity in implementing M&E roles and functions in an effective manner.

5.2.2 Work Experience and Effective M&E

This objective set out to determine the extent work experience influences effective M&E. It was established that there existed also a strong correlation of 0.413 between the two variables but with no statistical significance. Regression analysis determined the significance at 0.089 (significance level 0.05). This finding differs with Kholi & Deb (2008) on work experiences playing a pivotal role in the determination of quality and accepted actions to be executed.

5.2.3 Technology and Effective M&E

This objective sought to determine the extent technology influences effective M&E. The study established that there existed a strong correlation 0.473 between the two variables and it was statistically significant. Regression analysis determined the significance at 0.009 (significance level 0.05). This finding was in concurrence with Nanda (2017) on that technology offers the benefit of cost reduction, increased accuracy and rich data quality thereby increasing efficacy of M&E. It was also in line with Schuster & Brito (2011) on Guatemala's Conditional Cash Transfer Program that established mobile data mobile data collection contributed to reduction in cost for each survey undertaken by an average of 71%. The finding was similarly in concurrence with Satterlee et al., (2015) on that electronic data collection reduces cost, improves accuracy and does not necessarily subject data to manipulation risk or loss. Widely adopted form of technology as established from the findings was the extensive use of GPS in M&E activities.

5.3 Summary of Main Findings

The study findings are presented according to the objectives. The study sought to find out whether technical capacity of practitioners influenced effective M&E. Pearson correlation analysis established a strong positive correlation between technical capacity and effective M&E and subsequent regression coefficient analysis established that there existed an excellent statistical significance between the two variables.

The second objective examined whether work experience influenced effective M&E. Pearson correlation analysis found out that there existed a strong positive correlation between the two variables. Upon regression analysis of this relationship, it was established that it was of no statistical significance.

The third objective sought to determine whether technology influenced effective M&E. Pearson correlation analysis established that there was a strong positive relation between the two variables. Regression analysis was undertaken and it established that the relationship was of statistical significance.

5.4 Conclusions of the Study

Technical capacity, work experience and technology variables as a set, exhibited a strong relationship with effective M&E as shown by the coefficient of determination (R^2 =.536). This measure of the strength of association between the dependent and predictor variables accounted for 53.6% variance in effective M&E. Technical capacity and technology variables offered unique variance as the relationship with effective M&E was of statistical significance. Work experience variable on the other hand did not offer a unique variance as the relationship with effective M&E was not of any statistical significance.

5.5 Recommendations

The research study established that both technical capacity and technology variables influenced effective M&E in the County whereas work experience did not. As a result of these findings, management should channel more effort in ensuring that the technical capacity among practitioners is improved and investment is also made in the field of technology adoption.

Regular capacity building trainings should be undertaken so as to better equip the practitioners with up to date information on the practice. There is also need of having to engage practitioners particularly from M&E field and or related disciplines as this will improve on professionalism in execution of roles and functions. Budgetary allocation should also be sufficient to cater for acquisition and adoption of new technologies for the practice and also for utilization for on-job trainings. Diversification of technologies is also needed as this will usher in digital integration

whereby different technologies will be used to complement each other thereby increasing efficacy and enriching the data for varied use that includes decision-making responsibilities.

5.6 Areas of Further Research

This study focused on technical capacity, work experience and technology variables as a set and how they influenced effective M&E. Further research could be undertaken, examining other strategic factors not investigated in this study such as finance and good governance. A replication of this study could also be carried out in different Counties to establish the same while employing a different research design, instruments and analysis techniques.

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APPENDICES

Appendix 1: Questionnaire

My name is Mbotela William, a Masters student at Africa Nazarene University conducting a Graduate research study on "STRATEGIC FACTORS INFLUENCE ON EFFECTIVE M&E SYSTEMS IN KENYA: A CASE OF TURKANA COUNTY" under the supervision of Boscow Okumu (PhD), who can be reached through kodhis2000@gmail.com for any further technical information or comments concerning this study. This questionnaire is thus meant to collect information on Monitoring and Evaluation Systems in Government institutions in Turkana. The responses collected from this instrument will be treated with utmost confidentiality and will also be used for academic purposes. Your support and cooperation is highly welcomed. Kindly take a moment of your time to fill in as accurately as possible. Thank you.

SECTION A: BACKGROUND INFORMATION

1. Gender
    - ☐ Female
    - ☐ Male
2. Age
    - ☐ Less than 20 years
    - ☐ 21-40 years
    - ☐ 41-50 years
    - ☐ Over 51 years
3. Entity represented
    - ☐ Turkana County Government
    - ☐ Turkana County Assembly

☐ National Government Department/Parastatal in Turkana County

4. Highest academic qualification

   ☐ Certificate

   ☐ Diploma

   ☐ Undergraduate

   ☐ Graduate

5. Number of years in M&E practice

   ☐ Less than 1 year

   ☐ 2-3 years

   ☐ 4-5 years

   ☐ 6-7 years

   ☐ More than 8 years

6. Field of specialization based on academic certifications

   ……

SECTION B: TECHNICAL CAPACITY

7. Indicate to what extent you agree with the following statements on the impact of technical capacity on M&E Systems.

Technical capacity	SD	D	N	A	SA
Relevant field of specialization is vital in M&E practice					
Level of education attained is a factor in implementation of M&E					
On-job trainings are key in improving M&E skills					

Capacity building of M&E practitioners is undertaken regularly					
Budget is allocated for capacity building trainings					
Benchmarking opportunities accorded to M&E practitioners					

8. Have you received any on-job training on M&E systems?

   ☐ Yes

   ☐ No

   If **yes**, indicate to what extent you agree with the following statements on the relevance of the training on M&E Systems.

Relevance of training aspects	SD	D	N	A	SA
Giving detailed information and insights on M&E practice					
Development of quality M&E reports					
Boosting technical expertise of practitioners					
Highlighting implementation challenges and managerial strategies					
Strengthening the existing M&E System					
Introducing new concepts in M&E practice					

SECTION C: WORK EXPERIENCE

9. Indicate to what extent you agree with the following statements on the impact of work experience on M&E Systems.

Work experience	SD	D	N	A	SA
Years put in practice is key in implementation of M&E					

Comprehension of the M&E system in place is vital					
Assessment of the M&E System is undertaken regularly					
Learning opportunities are derived from previous assignments					
Management utilizes M&E derived data in decision-making					
Professionalism is essential in undertaking of M&E functions					

Additional comment on your answers

……

……

…….....

SECTION D: TECHNOLOGY

10. Indicate to what extent you are in agreement with the following statements on the impact of technology on M&E Systems.

Technology	SD	D	N	A	SA
Current technologies have been adopted in M&E practice					
Digital integration has been widely adopted in M&E practice					
Technology adopted has helped achieve cost reduction					
Technology adopted has improved accuracy of data obtained					
Technology adopted is responsible for better data quality					
Technology adopted is determined by cost implications					

11. Which of the following forms of technology has been widely adopted in M&E practice?

Technological Innovation	Tick where appropriate
Global Positioning System (GPS)	
Geographic Information Systems (GIS)	
Project Management Software	
Survey tools (tablets, smartphone apps)	

SECTION E: EFFECTIVE M&E SYSTEM

12. Indicate to what extent you are in agreement with the availability of the following indicator statements provided by the MoDP on effective M&E System in government institutions.

Effective M&E System	SD	D	N	A	SA
Well-formulated M&E policy and budget component is available					
Well-designed M&E framework is set					
Well established CIMES structures are set					
Well-defined CIDP reporting indicators handbook is available					
Well established M&E champion is available					
Well-designed M&E communication strategy is available					

End

Thank you for your invaluable input and insight

Appendix 2: Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **901421**

Date of Issue: **20/February/2020**

RESEARCH LICENSE



This is to Certify that Mr.. William Mbotela of Africa Nazarene University, has been licensed to conduct research in Turkana on the topic: FACTORS INFLUENCING EFFECTIVENESS OF M&E SYSTEMS IN KENYA: CASE OF TURKANA COUNTY GOVERNMENT for the period ending : 20/February/2021.

License No: **NACOSTI/P/20/3953**

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Appendix 3: Research Approval and Letter

Date 7th February, 2020

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

monitoringandevaluation@anu.ac.ke

Tel. 0202711213

Our Ref: **16J03DMME011**
The Director.
National Commission for Science,
Technology and Innovation (NACOSTI),
P. O. Box 30623, 00100
Nairobi. Kenya

Dear Sir/Madam:

RE: RESEARCH AUTHORIZATION FOR: WILLIAM OCHIENG MBOTELA

William Ochieng Mbotela is a postgraduate student of Africa Nazarene University in the Master of Arts in Monitoring and Evaluation (MME) Program; School of Business Studies. In order to complete his program, Mbotela is conducting a research entitled: "***FACTORS INFLUENCING EFFECTIVENESS OF M&E SYSTEMS IN KENYA: CASE OF TURKANA COUNTY GOVERNMENT.***"
Any assistance offered to him will be highly appreciated.

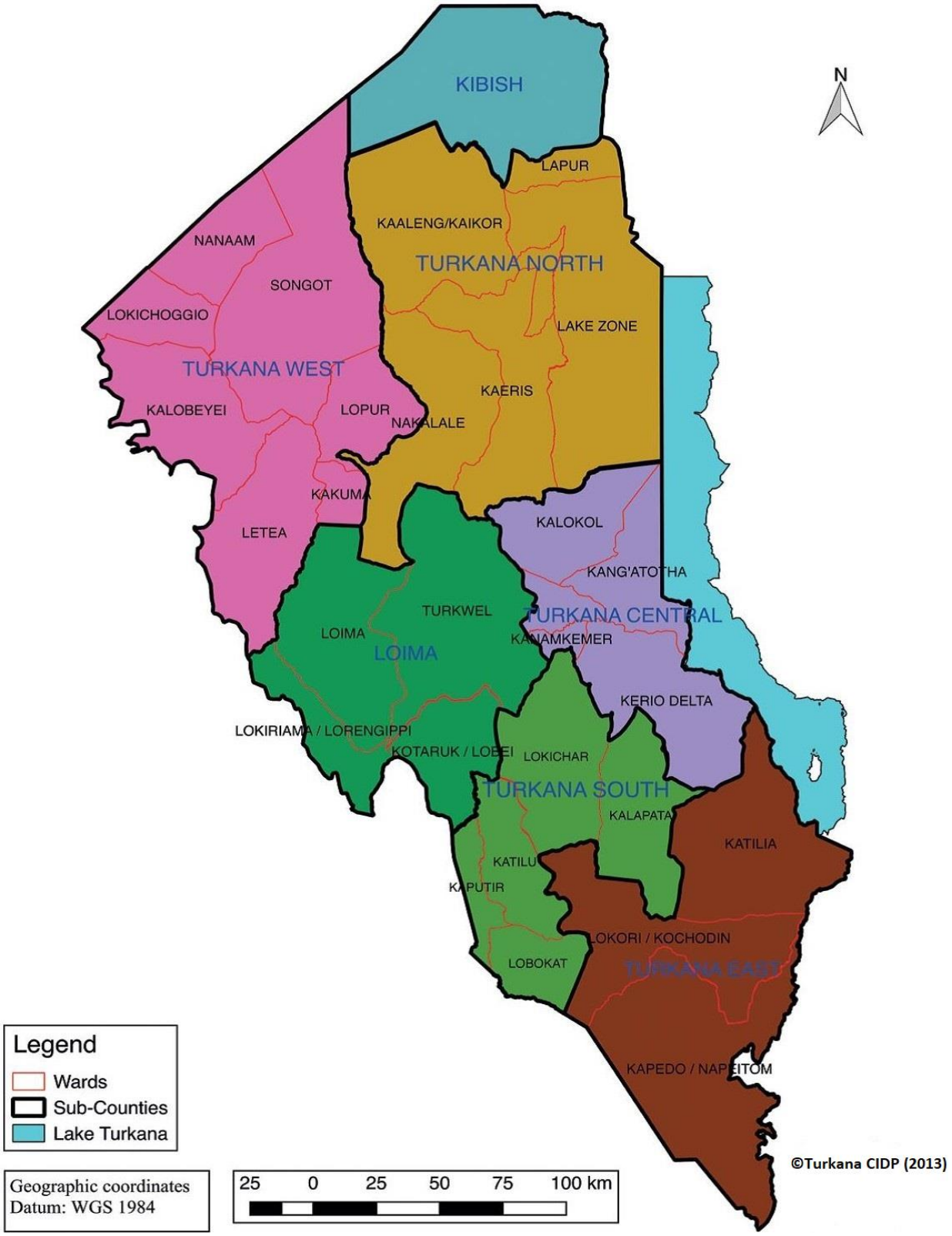
Yours Faithfully,

Dr. Wanjiru Nderitu

MME, Coordinator, School of Business,

Africa Nazarene University.

Appendix 4: Map of Study Area



Appendix 5: Reliability Statistics

Cronbach's Alpha	N of items
.801	24