UTILIZATION OF MONITORING AND EVALUATION SYSTEMS, ORGANIZATIONAL CULTURE, LEADERSHIP AND PERFORMANCE OF EDUCATIONAL BUILDING INFRASTRUCTURAL PROJECTS IN BUNGOMA COUNTY, KENYA

BY

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DECLARATION

This thesis is my original work and it has not been presented for any award in any university.

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DEDICATION

This Thesis is dedicated to my beloved children: Brian, Cyril, Faith, Charlene and Abigael for their unrelenting moral support towards the success of this process and to my academic pursuits.

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TABLE OF CONTENT

Page No.

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS AND ACRONYMS

BQs : Bills of Quantities

CBOs : Community Based-Organizations

CBS : Central Bureau of Statistics

CDE : Containers, Exchanges and Differences

CECM: County Executive Committee Member

CS: County Secretary

CSO: Civil Society-Organizations

CO: Chief Officer

DEO: District Education Office

DICECE: District Centers for Early Childhood Education

DQAS : Director Quality Assurance and Standards

DQASO: District Quality Assurance and Standards Officer

EU: European Union

FBO: Faith Based-Organizations

GWP: Growth Monitoring &Promotion

GoK: Government of Kenya

HRM: Human Resource Management

ICT: Information and Communication Technology

IEA: Institute of Economic Affairs

M&E: Monitoring and Evaluation

MCA: Member of County Assembly

MoH: Ministry of Health

NACECE: National Center for Early Childhood Education

NDPC: National Development Planning Commission

NGOs: Non-Governmental Organizations

NIMES: National Integrated Monitoring and Evaluation System

PC: Performance Contracting

PMBOK: Project Management Body of Knowledge

RBB: Results Based Budgeting

RBMES: Results Based Monitoring and Evaluation System

UNDP: United Nations Development Program

WLS: Weighted Least Squares

NG-CDF National Government Constituency Development Fund

ABSTRACT

Monitoring and evaluation (M&E) are at the center of sound governance arrangements globally, regionally, nationally and locally as well. They are necessary for the achievement of evidence-based policy making, budget decisions, management, and accountability. However, there is limited focus on utilization of M&E systems and performance of educational building infrastructural projects in Bungoma County. The purpose of this study was to examine utilization of monitoring and evaluation systems, organizational culture, leadership and performance of educational building infrastructural projects. To achieve this purpose, the study endeavored to determine the influence of data dissemination and use, assess the influence of M&E work plan , examine the influence of routine programme monitoring, examine the influence of combined M&E systems on performance of educational building infrastructural projects in Bungoma County. It also sought to assess how organizational culture and leadership moderate the relationship between utilization of M&E systems and performance of educational building infrastructural projects. The study was guided by pragmatism paradigm and used descriptive survey research design. The target population consisted of 20 implementation committee members at the county level, 126 NG-CDF implementation committee members, 6 implementation committee members from the national ministry of education making the target population of 152.The sample size consisted of 110 respondents sampled by sampling each of the targeted strata. The study used questionnaires and interview schedules as research instruments. Both qualitative and quantitative data was collected and analyzed. Quantitative data was analyzed using descriptive statistics, correlation and regression analysis. While qualitative data was analyzed by reviewing data and mentally processing it for themes exhibited. The research findings were that the performance of educational building infrastructural projects positively correlates with data dissemination and use ($r = 0.166$, $p< 0.05$), M & E work plan ($r = 0.137$, $p< 0.05$) and routine program monitoring ($r = 0.856$, $p< 0.05$). The data dissemination and use ($F = 1.94$, $p > 0.05$) and M & E work plan ($F = 2.38$, $p > 0.05$) do not determine the performance of the projects while routine program monitoring ($F = 320.41$, $p < 0.05$) significantly determines ($R^2 = 0.7334$) the performance of the projects with an effect size ($\beta_3= 0.856$, $p < 0.05$). Overall, the M & E systems combined is a significant determinant of the performance of the projects ($F = 99.35$, $p < 0.05$) with about 75% ($R^2 = 0.7488$) variance in the performance of the projects. The relationship between the M & E systems and performance of infrastructural projects is moderated by organizational culture ($F = 4.10$, $p < 0.05$) and leadership ($F = 6.50$, $p < 0.05$). The findings therefore fail to reject the H_{01} and H_{02}: while rejecting the $H_{03,}$ $H_{04,}$ H_{05} and H_{06} and concluded that data dissemination and use has no influence, M&E work plan has negative influence, while Routine programme monitoring and combined M&E systems influence performance of educational building infrastructural projects. Further, both organizational culture and leadership moderate the relationship between utilization of M&E systems and performance of educational projects. Based on the findings, the study recommends that, Data dissemination and use and M&E work plans to be emphasized to enhance performance of building infrastructural projects while Routine programme monitoring should be a priority component in any M&E system. It is suggested that further research be done in the area of assessment of utilization of M&E frame work, Data base at local and national level and Human capacity for M&E and performance of building infrastructural projects.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Monitoring and evaluation as a subject faces diverse understanding from different people and has been evolving progressively over the last quarter century. One of the early definitions for monitoring and evaluation was contained in the guiding principles for the design and use of M&E in rural development programs. At that time, M&E were seen primarily as project-related activities. Monitoring was defined as a continuous assessment of both the project activities and of the use of project inputs by community targeted to be empowered (Kontinen and Robinson, 2014).

Various trends have been observed in the evolution of M&E, for example, a departure from the focus on indicators to a more wholesome approach. Organizations have been seen to emphasis on indicators without considering the designing of M&E systems that measure outcomes associated with particular actions (Solomon,2007). This may be relevant at the administrative level as a source of baseline data. However, it does not allow the tracking of operational level interventions which are key in decision making (Williams, 2007). Monitoring and evaluation is progressively receiving awareness and appreciation globally due to its increasing role in ensuring transparency and accountability in governance and administration. Among such countries are Sri Lanka, Ghana and Kenya (Imam, 2007). Different countries favor different approaches to M & E

depending on their administrative needs. Some countries prefer an approach of performance indicators, while other countries emphasis on conducting evaluations (Wagner, 2005).

One major feature among different countries' monitoring and evaluation system in place, is the fact that they reflect country-based approach over donor-based M&E systems (Wagner, 2005). Most Latin America and Caribbean Countries(LAC)have increased their understanding of the importance of monitoring and evaluation (M & E) to enable both governments and donors understand which public interventions work well and which ones do not, and the justification (Troyey, 2010).

Monitoring and evaluating public projects and organizations can help increase their effectiveness, providing more accountability and transparency on how public resources are used, informing the process of making budgets and the allocation of public resources, and assessing their effectiveness in achieving their desired goals like enhancing welfare, alienating poverty or improving the quality of chances and opportunity (Parlmeck, 2011).

In Sri Lanka, the government embraced the concept of having a system of monitoring and evaluation after realizing the need for effective and efficient service delivery. Sri Lanka's experience outlines strengths of monitoring and evaluation design, and weaknesses in the implementation part. In terms of design, the system is operating with

fewer challenges. Discouragingly, these great strides are counter balanced by failures in implementation with everyday lapses (Turner, 2009). It has an effective M & E system which is web-based and comprehensive with the ability to capture progress in terms of implementation and results. The system provides stakeholders with on-line and real-time access to progress information. The system produces early warning signals and assists in troubleshooting of problem projects and projects behind schedule (Sivagnanasothy, 2007).

The system further identifies barriers, delays and constraints in project implementation and any additional needs of the executing agency. However, monitoring and evaluation institutions and the planning units seem to function in isolation and do not have an effective formalized feedback arrangement to integrate lessons into the planning and design of new projects. Furthermore, post evaluations are done late and are treated as a "post-mortem" exercise, therefore not contributing much in the ultimate decision-making (Sivagnanasothy, 2007).

The obvious lesson from Sri Lanka is that in Monitoring and Evaluation, design should be complemented with an effective implementation mechanism. Having an efficient system for monitoring and evaluation without a proper implementation plan will only dilute the power of the stronger component, thereby negatively affecting the smooth-functioning of the whole system (Solomon and Young, 2007).

In Africa, Ghana developed a commission known as the National Development Planning Commission(NDPC) with the sole purpose of regulating and assimilating a monitoring and evaluation culture in governance(Ogboune, 2013).The NDPC adopted the Results Based Monitoring and Evaluation System(RBMES) and Results-Based Budgeting (RBB) in its Monitoring and Evaluation activities to ensure cost effectiveness, institutional capacity strengthening, promotion of good governance and accountability as earlier indicated(Ogboune, 2013). The National Integrated Monitoring and Evaluation System (NIMES) was institutionalized in Kenya in the year 2004 and later launched during the London investment summit 2012.

The system is used to trace development at both National and County government level in the current devolved system of governance (GOK, 2013). Furthermore, to reverse unsatisfactory performance in the country, the Government of Kenya institutionalized Performance Contracting (PC) System in public sector in 2003 as a complimentary approach to Rapid Results Initiative (RRI) management approach (GOK, 2003). Although Kenya pursued Millennium Development Goals (MDG) 2015 as part of the RRI management strategy and formulated Kenya Vision 2030, Angote (2009) notes that indicators of unsatisfactory performance in the public sector such as socio-human problems like prevalence of HIV/AIDS, rampant drug and substance abuse, industrial action among public servants and proliferation of small arms that propagate crimes still prevail. Obong'o (2009) further argues that despite the implementation of the PC system in the public sector in Kenya in 2003, unsatisfactory performance in the public

sector in Kenya is evident in lack of basic social amenities, crime, poverty, tribalism, dilapidated infrastructure, poor governance, graft, rampant disease outbreaks, high levels of illiteracy and dysfunctional institutions characterized by poor service delivery and failure to be customer responsive (Obong'o, 2009).

An M & E system is made up of the following components: Human capacity for M & E, organizational structure with M & E functions, partnership and planning, coordination and management of M & E systems; M & E framework; M & E work plan and costs; routine program monitoring; surveillance and survey; communication, advocacy and an M & E culture; database at both national and local levels; support, supervision and data audit; evaluation and research and finally data dissemination and use (Solomon, 2007). However, it's important to note that there is no "best" model for M & E System for government. It's all dependent on the monitoring and evaluation needs and the main purpose of building such a system. This study focused on three critical components of M & E systems namely; data dissemination and use, M & E work plan and routine program monitoring on performance of educational building infrastructural projects. The reason for the choice of the three components lies in the fact that the three are the ones normally used in building infrastructural projects worldwide.

1.1.1 Data Dissemination and use

Dissemination is the transfer of information attained through statistics to the indented users. According to Williams (2007) data dissemination is the transmitting of statistical

data to end users. There are many ways organizations can release data to the public, i.e. electronic format, CD-ROM and paper publications such as PDF files based on aggregated data." Wilson(2010) defines dissemination as a planned process of considering target populations and their settings in which research findings are to be received and, where appropriate, communicating and interacting with wider policy and health service audiences in ways that will facilitate research uptake in decision-making (Wilson, 2010).In this study, data dissemination and use was measured by; Dissemination system in place, Information disseminated to key stakeholders, Timely distribution of information to stakeholders and stakeholder data dissemination and validation workshops.

1.1.2 Monitoring and Evaluation Work Plan

M&E plan is technically an annex to a Project Appraisal Document (PAD). Functionally it is a separable document that provides guidance to staff over the life of a project.

Charley (2011) defines a work plan as a detailed accounting of how an individual or group proposes going about accomplishing a specific task, approaching a project or pitching a new business concept. Sometimes referred to as a "statement of work," a work plan generally includes an introduction or overview of a project or job, a breakdown of how individual project-related tasks will be accomplished, a timeline for completion and cost projections for implementation.

"The work plan is a document that consulting firms use to organize a project. It outlines the plan by which the company plans to complete a quality project within a given amount of time and incompliance with a set budget". It is sometimes also referred to as a

performance monitoring or performance management plan, and is a systematic and objective approach or process for monitoring project performance toward its objectives overtime. The plan consists of indicators with baselines and targets, means for tracking critical assumptions, plans for managing the data collection process, and regular collection of data. Evaluations should be scheduled and carried out throughout the course of the program (Bertrand, 1996). Development of an M & E plan is integral to the planning of a program design. In fact, a rigorous M & E plan can be an effective tool for formulating a coherent and well- designed program proposal, both in revealing assumptions and exposing gaps in program planning.

As the implementer modifies its program design, it is important to incorporate those changes into the M&E plan and vice versa (Adamchak, 2010). M & E work plan was measured in terms of; adherence to organizational strategic plan, Implementation of activities outlined in the work plan, budgets allocated to work plans and decision making based on work plan.

1.1.3 Routine Programme Monitoring

Routine Program monitoring is defined as the periodic supervision of activities in progress to ensure they are on-course and on-schedule in meeting the objectives and performance targets (Sinchair, 2005). Routine program monitoring generally means,“ to be aware of the state of a system, to observe a situation for any changes which may occur overtime, using a monitor or measuring device of some sort (Zairi, 2005).

It is an essential process of organizational basic support system that could provide valuable information on the ongoing operations of the organization and on relevant program issues for the management, particularly the program development officers to make accurate and timely decisions (Khan, 2003). Normally, managers and program officers do carry out some monitoring activities as part of their overall work and from time to time evaluate their operations. Such reports make the basis for further review and research into specific areas by the M & E section and personnel. By synthesizing and collating information, the M & E section is expected to come up with analysis and conclusions for use in planning and quality decision-making by the organization.

In this study, routine program monitoring was measured by; Regular meetings follow up site visits, stakeholder participation in monitoring activities and program briefs.

1.1.4 Organizational Culture

Organizational culture encompasses values and behaviors that "contribute to the unique social and psychological environment of an organization" (Champy, 2013). Zairi and Sinclair (2005) define organizational culture as "the collective programming of the mind that distinguishes the members of one organization from another. This included shared beliefs, values and practices that distinguished one organization from another". Organizational culture is a determining factor in successful implementation (Davenport, 2013). Organizational culture influences the organization's ability to adapt to change. The existing culture contains beliefs and values that are often no longer appropriate or useful in the re-engineered environment.

Therefore, the organization must understand and conform to the new values, management processes, and the communication styles that are created by the newly-redesigned processes so that a culture which upholds the change is established effectively (Bruss and Roos, 2008). Organizational culture in this study was measured in terms of vision and mission, organizational values and employee attitudes.

1.1.5 Leadership

Leadership is defined by Beiner (2011) as the channels of exercising authority and have influence on the ultimate success of a project. Weiner (2010) highlights various factors that may lead to project success and describe leadership which includes: administrative goodwill, resource allocation, creating right teams; involving stakeholders; preparation of detailed project scope; influence on the stakeholders; information; managing expectations; communication; negotiation; and monitoring and evaluation. This therefore implies that supportive efforts like the administration goodwill and leadership are critical factors to project success.

Equally, several studies have been carried out focusing on the project success. For example, Raymond and Bergeron identified several indicators of project success identified in the literature including "reduction of the time required to complete a task, improved control of activity costs, better management of budgets, improved planning of activities, better monitoring of activities, more efficient resource allocation, and effective administrative and leadership support and goodwill". Project success is defined

by various scholars on the basis of delivery of all or most of what it said it would (the scope); delivery of scope on schedule and/or within the agreed budget; delivery to the expected quality standards; achievement of project objectives; and most importantly the creation of significant net value for the organization after the project completion (Raymond and Bergeron, 2015).

Mbeche (2010) adds to the list of critical success factors which includes financial viability and management, market analysis and management and the quality of project management which are kept supportive system factors. These factors are important during project preparation and project implementation.

According to PMBOK (2014) in order for the project managers to achieve project success, they need to monitor and control the processes of producing the products, services or results that the project was undertaken to produce.

Chan (2011) groups project success factors into five main categories which are "Project Management actions, project- related factors, project procedures, human-related factors and support system actors". These project success factors need to be monitored constantly for the project to achieve success in terms of value creation. The last phase of the Project Risk Management Loop of Control is monitoring as expressed by Burke (2011) is documenting monitoring risks in order to ensure proper action for prevention. Similarly, in project management documentation of monitoring risks is also critical in

the achievement of project success (Burke, 2011). Leadership in this study was measured by looking at the various leadership styles namely; Laissez faire, participative, Autocratic, Transactional and Transformative.

1.1.6. Performance of Educational Building Infrastructural Projects

The compound term of project management in the education sector is the application of knowledge, skills, tools and techniques to project activities in order to meet or exceed stakeholder needs and expectations from an educational project. This requires balancing of competing needs of scope, time, cost and quality, and also of stakeholders with differing needs and expectations. Educational Projects are carried out to meet a specific objective and they can be initiated by any entity ranging from individuals to institutions. Fundamental to this initiation is the resources aspect that determines the proponents of the project.

Since educational building projects are resource-intensive, governments are major project initiators as they usually have or can access resources required (Nokes and Kelly, 2007).

From the square of time, cost, quality, and satisfaction proposed by Baker(2011) project performance becomes a hexagon of time, cost, quality, and achievement of strategic objectives of the client organization that initiated the project, satisfaction of final users and satisfaction of other stakeholders (Baker,2011). Government-infrastructural projects

have a project cycle consisting of concept, design, tendering, initiation and implementation and commissioning stages.

Management of the projects is normally in a tri-party form with the government as the financier, a project manager to administer resources and activities, and the implementing entity inform of a contractor (Uher, 2009). Scope and quality specify what is to be achieved, the time aspect is established with specified start and end dates, whereas the cost element is in regard to the limited financial resources to be expended. These factors determine project performance. Although all these elements are interrelated, it is important to note that for building projects, delay has a major impact on a project's cost. The traditionally-accepted measure of project performance is the basic cost- quality-time triangle. However, there are differences between various types of projects in determination of performance since measurement is carried out against pre-determined success factors (Hendrickson, 2008). For building projects, there have been studies carried out and attempts made towards development of evaluation models aimed at determining performance factors. However, there is no universally accepted basis due to the differing complexity, inherent nature and unique characteristics of such projects and thus this study sought to mitigate this identified research gap.

In this study, performance of educational building infrastructural projects was measured by educational building infrastructure adhering to the specifications as outlined in the

schools' safety manual, the quality of materials used in the construction, building completion rates and the number of new buildings completed.

1.2 Statement of the Problem

There is a growing realization of the importance of utilization of Monitoring and Evaluation Systems in educational building infrastructural projects across the globe (Williams, 2007). This arises from widespread displeasure with the performance of educational infrastructural projects in Kenya, Africa and the world at large with the evidence of increasing poverty levels. In Bungoma County for example, the expected delivery of various educational infrastructural projects and programs has not been attained. Even those educational building infrastructural projects with the right technologies and adequate resources still do badly (Jamerson, 2012).

This could be attributed to neglect of utilization of monitoring and evaluation systems, especially limited appreciation of data dissemination and use, monitoring and evaluation work plan and routine program monitoring.

The need for an effective and efficient means of managing and sharing data that takes full advantage of the benefits of data sharing has arisen within the construction industry (Giffels, 2010). This underscores the importance of data dissemination and use to performance of educational building infrastructural projects. On the other hand, most developing nations now have evidence of M&E systems to ensure timely and quality

implementation of projects. This can only be achieved through a well-designed M&E work plan among other things hence making it critical in performance of educational building infrastructural projects.

On routine program monitoring and performance of educational building infrastructural projects, monitoring provides the background for reducing schedule and cost overruns while ensuring that required quality standards are achieved in project implementation (Crawford and Bryce, 2003).

Infrastructure is a major constraint to educational performance in Bungoma County according to the yearly reports on county performances. The report by Elimu Yetu Coalition on educational capacity of learning institutions 2015 reveals that 64% of secondary schools do not have school libraries and science laboratories in Bungoma County which could be attributed to the poor results in sciences and languages in national examinations.

The report further acknowledges that 68% of boarding schools have boarding space problems following progressive enrolments yearly. This is due to increasing awareness for need of education in the county (Elimu Yetu Coalition, 2015).

In a study commissioned by Institute of Economic Affairs (I.E.A) in the year 2014 among 25counties to determine the impact of Community Empowerment Projects on the

target community, it was revealed that only 38.7% of the counties have structured monitoring and evaluation systems in place (Institute of Economic Affairs, 2014).Poor resource absorption in the implementation of projects was observed.

This was attributable to the approach adapted by M & E committees. It was reported that in most cases the implementation of M & E systems was not and has not been evidently emphasized. Bungoma County could just be suffering the same fate. The constitution of Kenya 2010 emphasizes on monitoring and evaluation as an integral approach in government activities to ensure that transparency, integrity and accountability principles prevail.

A review of an empirical study by Peterson (2010) among 3 states in the USA investigating the influence of data dissemination and use, and routine program monitoring as components of a monitoring and evaluation system on implementation of education projects, reveals a positive relationship between data dissemination and implementation of Educational projects but negates the relationship between routine program monitoring with implementation of Educational building infrastructural projects. The study does not identify monitoring and evaluation work plan as a component of monitoring and evaluation system.

In a similar study by Ogbene (2012) among devolved states in Nigeria, examining influence of monitoring and evaluation systems on implementation of educational

projects, the findings reveal a negative correlation between both data dissemination and use and monitoring and evaluation work plan and implementation of educational projects. These findings significantly contradict previous studies by (Peterson, 2010). Furthermore, this study identifies more components of monitoring and evaluation systems like reporting, supervision and feedback.

With this unclear picture around utilization of various monitoring and evaluation systems and the implementation of educational building infrastructural projects the world over, this study therefore sought to establish the influence of M & E systems on the performance of educational building infrastructural projects in Bungoma County. The overall study question was how monitoring and evaluation systems influence performance of educational building infrastructural projects in Bungoma County, Kenya.

1.3. Purpose of the Study

The purpose of this study was to explain how utilization of M&E systems influence performance of educational building infrastructural projects. The study further examined the moderating influence of organizational culture and leadership on the relationship between utilization of M&E systems and performance of educational building infrastructural projects in Bungoma County.

1.4 Objectives of the Study

The study was guided by the following objectives;

Specific objectives;

i. To determine the extent to which data dissemination and use, influence performance of educational building infrastructural projects in Bungoma County.

ii. To assess how M & E work plan influences performance of educational building infrastructural projects in Bungoma County.

iii. To examine how routine programme monitoring influences performance of educational building infrastructural projects in Bungoma County.

iv. To examine how combined utilization of M&E systems influence performance of educational building infrastructural projects in Bungoma County.

v. To assess how organizational culture moderates the relationship between utilization of monitoring and evaluation systems and performance of educational building infrastructural projects in Bungoma County.

vi. To assess how leadership moderates the relationship between utilization of monitoring and evaluation systems and performance of educational building infrastructural projects in Bungoma County.

1.5 Research Questions

The study sought to answer the following research questions;

i. To what extent does data dissemination and use influence performance of educational building infrastructural projects in Bungoma County?

ii. How does M & E work plan influence performance of educational building infrastructural projects in Bungoma County?

iii. How does Routine programme monitoring influence performance of educational building infrastructural projects in Bungoma County?

iv. How does the combined utilization of M & E systems, influence performance of educational building infrastructural projects in Bungoma County?

v. To what extent does organizational culture moderate the relationship between utilization of monitoring and evaluation systems and performance of educational building infrastructural projects in Bungoma County?

vi. How does leadership moderate the relationship between utilization of monitoring and evaluation systems and performance of educational building infrastructural projects in Bungoma County?

1.6 Research Hypotheses

The study sought to test the following research hypotheses:

1. **H_0**: Data dissemination and use has no significant influence on performance of educational building infrastructural projects in Bungoma County.

   H_1: Data dissemination and use significantly influences performance of educational building infrastructural projects in Bungoma County.

2. **H_0**: M & E work plan has no significant influence on the performance of educational building infrastructural projects in Bungoma County

H_1: M & E work plan significantly influences the performance of educational building infrastructural projects in Bungoma County.

3. **H_0**: Routine programme monitoring has no significant influence on the performance of educational building infrastructural projects in Bungoma County.

   H_1: Routine programme monitoring significantly influences the performance of educational building infrastructural projects in Bungoma County.

4. **H_0:** Combined effect and utilization of M & E systems have no significant influence on the performance of educational building infrastructural projects in Bungoma County.

   H_1: Combined effect and utilization of M & E systems significantly influence the performance of educational building infrastructural projects in Bungoma County.

5. **H_0:** Organizational culture does not significantly moderate the relationship between utilization of monitoring and evaluation systems and performance of educational building infrastructural projects in Bungoma County.

   H_1: Organizational culture moderates the relationship between utilization of monitoring and evaluation systems and performance of educational building infrastructural projects in Bungoma County.

6. **H_0:** Leadership does not significantly moderate the relationship between utilization of monitoring and evaluation systems and performance of educational building infrastructural projects in Bungoma County.

H_1: Leadership moderates the relationship between utilization of monitoring and evaluation systems and performance of educational building infrastructural projects in Bungoma County.

1.7. Significance of the Study

It is hoped that the findings shall inform stakeholders in education concerning M & E systems and performance of educational building infrastructural projects in Bungoma County. It is also hoped that the findings shall guide county governments' departments of education in conducting monitoring and evaluation activities, inform policy formulation and legislation around monitoring and evaluation functions by the departments of finance and economic planning in the county governments and also provide academic background for further studies.

1.8 Assumptions of the Study

The study considered the following assumptions; that utilization of M&E systems, organizational culture and leadership influence performance of educational building infrastructural projects in Bungoma County.

All respondents would give honest responses, sample taken represented the population adequately and that the data collection instruments were valid and measured the desired outcomes for the study.

1.9 Limitation of the Study

The study was carried out in Bungoma County alone and hence generalization to the rest of the counties would be done with caution. Data collected entirely depended on the honesty and emotions of the respondents at the time of filling the questionnaires and the fact that county governments are new entities, M & E policy might have not been quite clear to the implementers and the researcher ensured that the research instruments captured any M&E system being utilized in Bungoma County.

1.10. Delimitations of the Study

This study aimed at assessing utilization of M&E systems and performance of educational building infrastructural projects in Bungoma County. The reason for picking on Bungoma can be attributed to the fact that it is among the most populous counties in Kenya and as highlighted earlier, there is great concern about performance of educational building infrastructural projects in the county. This is evidenced by dilapidated buildings, inadequate space and white elephant buildings, pointing to a problem that needs to be addressed. On the other hand, the choice of the three components of M&E systems under study; data dissemination and use, M & E work plan and routine program monitoring can be justified by the fact that educational building infrastructural projects require an M&E system comprising of these critical components in order to perform (Baker, 2011).

The study was delimited to Bungoma County government project implementation committee, national government ministry of education officials at county level and the NG-CDF project implementation committees in the nine (9) sub counties of Bungoma

County. The study was limited to utilization of M & E systems and performance of educational building infrastructural projects in the County.

1.11. Definition of Significant Terms of the Study

Monitoring and Evaluation: Is a tool used by project staff to ensure transparency, accountability and also aids in decision making.

Monitoring and Evaluation Systems: An M & E system is made up of 13 components but in this study, M&E systems implies; Data dissemination and use, M&E work plan and Routine programme monitoring. The reason for the choice of the three components lies in the fact that the success of building infrastructural projects heavily relies on these three components more than any others and they are the ones that are used commonly.

Data dissemination and Use: In this study, this implies dissemination system in place, information dissemination to key stakeholders, timely dissemination of information to key stakeholders and stakeholder data dissemination and validation workshops.

Monitoring and Evaluation Work plan: According to Charley (2011), a work plan is a detailed accounting of how an individual or group proposes going about accomplishing a specific task. In this study, M & E work plan was measured in terms of; adherence to the organizations strategic plan, implementation of work plan activities, budgets allocated to work plans and decisions made based on the work plan.

Routine Programme Monitoring: This refers to regular tracking of the progress of a project or a program. In this study routine program monitoring was measured by regular

meetings; follow up site visits, stakeholder participation in monitoring activities and program briefs.

Organizational Culture: In this study, organizational Culture was measured by the shared vision and mission, organizational values and employees' attitudes.

Leadership: In this study leadership was measured by the various leadership styles; laissez faire, participative, autocratic, transactional and transformative leadership styles.

Performance of Educational Building Infrastructural Projects: In education sector, building infrastructural projects succeed if they adhere to design specifications by the school safety manual, quality as specified in the same manual and the completion rate of buildings. In this study, performance of educational building infrastructural projects was measured by; Adherence to manual design specifications, quality of materials used, buildings completion rates and number of new buildings completed.

1.12. Organization of the Study

This study was organized in five chapters. The first chapter describes introduction to the study, the background of the study and the problem the study sought to address. The purpose of the study, research objectives, research questions and the research hypotheses were then examined.

This was followed by examining the significance, assumptions, limitations, delimitation and definition of significant terms in the study. In chapter two, literature relevant to the study was reviewed as per the thematic areas of Data dissemination and use and

performance of educational building infrastructural projects, M&E work plan and performance of educational building infrastructural projects, routine program monitoring and performance of educational building infrastructural projects, monitoring and evaluation systems and performance of educational building infrastructural projects, organizational culture and performance of educational building infrastructural projects, leadership and performance of educational infrastructural projects and finally, performance of educational building infrastructural projects. Lastly, the theoretical framework of the study consisting of change theory, systems theory and theory of project management was discussed which was then followed by the conceptual framework and finally, summary of literature reviewed.

The third chapter considered research methodology. Here, the research paradigm, research design, target population, sample size and sampling procedures, data collection procedures , research instruments, and data analysis techniques were examined. Operationalization of variables was then done. The fourth chapter contains data analysis, presentation, interpretations and discussions.

In this chapter data was analyzed and presented thematically as per the objectives. Chapter Five shall cover summary of findings, conclusions, recommendations and areas for further research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this chapter, the main focus is the literature review: the theoretical framework and the conceptual framework. It focuses on M & E systems and performance of educational building infrastructural projects based on the following sub-themes; data dissemination and use and performance of educational building infrastructural projects, M & E work plan and performance of educational building infrastructural projects, routine program monitoring and performance of educational building infrastructural projects, Organizational culture and performance of educational building infrastructural projects and finally, leadership and performance of educational building infrastructural projects.

2.2. The Concept of Monitoring and Evaluation Systems

The importance of monitoring and evaluation has kept on growing among governments with the purpose of inculcating transparency and accountability in governance. An M&E system is made up of thirteen (13) components namely, Human capacity for M&E, organizational structure with M&E functions, Partnerships and planning, coordinating and managing the M&E system, M&E frameworks, M&E work plan and costs, Communication, advocacy and culture for M&E, Routine programme monitoring, Surveys and Surveillance, National and local databases, Supportive supervision and Data Auditing, Evaluation and Research and Data dissemination and use.

Monitoring and evaluation systems are management toolkits that enable decision-makers to track progress and demonstrate the impacts of a given program/project. In the long run, the toolkits help organizations make decisions on the success, failure, relevance, efficiency and effectiveness of their programs hence it also follows that for good returns from the systems, both the monitoring system and the evaluation system must be well-designed, functional, and well-implemented.

Any slack in monitoring and evaluation planning, data dissemination and routine program management automatically leads to derailing of progress in the managing of educational infrastructural programs and projects (Jefferson, 2012).

Monitoring and Evaluation systems provide important feedback about the progress in Educational building infrastructural projects. That is, the success or failure of projects, programs, and policies throughout their respective lifecycles. These systems constitute a powerful, continuous management reference point that decision makers can use to improve performance, and demonstrate results. Monitoring and evaluation systems (especially data dissemination) have a special capacity to add to the learning and knowledge process (Yames, 2013). These systems provide for learning and knowledge, since by providing continuous feedback to managers, they promote organizational learning through a cycle involving reflecting on progress, learning, and adjusting the course of programs or projects where there is need (Woodwork and Kelvin, 2006).

These system components have been designed to monitor and evaluate at all levels: macro, meso and micro levels, which can roughly be translated to policy, program and project levels respectively.

Several lessons can be drawn from the sampled empirical literature reviewed. For instance, it can be deduced that a number of factors account for success with monitoring and evaluation systems. These include well designed plan, proper data dissemination as well as effective routine monitoring it is the combination of these factors that accounts for success with these systems (Nuguti, 2009). Conversely, the absence of any or all the factors mostly produces dismal results. And furthermore, for any system to be functional, design strengths should be accompanied by implementation strengths. A slack in design or implementation translates to a slack in the whole system's performance.

In addition, there are numerous technical challenges in the application and institutionalization of monitoring and evaluation systems as there are also less obvious political and organizational challenges to be considered. From the reviewed cases above, problems and challenges fall into two broad strands of design weaknesses and implementation weaknesses (Mohan, 2001).

Design weaknesses entail shoddy or poor construction of the whole or part of the monitoring and evaluation system. This is manifested in the form of too many or too few

performance indicators, irrelevant baseline data, uncoordinated reporting structures, delays in relaying required feedback to managers (hence negatively impacting on their decision-making), duplicative monitoring systems, among other problems. Implementation weaknesses and/or failures entail much of the human element with all its manipulations, sabotage, errors, incapacity and even opposition. These are in the form of management lapses where implementation of the system is poorly done.

Related challenges affecting these systems include structural constraints and organizational loopholes, especially at country level, where there is need for coordination and harmonization of systems as well as a favorable administrative culture (Maurice Gosselin, 2011). In addition to challenges above, there are other inherent challenges besides. For example, there is an inherent challenge to balance different levels of methodological rigor and quality of data, given the different uses of data.

For management purposes, for example, usually moderate levels of rigor and quality of data are required, while impact assessment requires high levels of methodological rigor and quality. The needs of the end-users are often vaguely understood by those ready to start the monitoring and evaluation building process. In addition, too little emphasis is placed on existing political, organizational, cultural factors and contexts (Ryan, 2009).
This study focused on Data dissemination and use, M&E work plan and Routine programme monitoring for the mere fact that performance of building infrastructural projects depend on the hexagon of time, cost, quality, achievement of objectives by the

project initiator, satisfaction of final users and satisfaction of other stakeholders (Baker, 2011). Based on this, the selected 3 components become very critical for project success and hence their common use.

2.3 Performance of Educational Building Infrastructural Projects

Performance of educational building infrastructural projects is attained when the buildings strictly adhere to the guidelines stipulated in the school safety manual by the ministry of education in Kenya. Quality of building materials is emphasized with specifications for various components to ensure security and comfort of the learners. County Government-funded building projects have a project cycle consisting of concept, design, tendering, initiation, and implementation and commissioning stages. Management of the projects is normally in a tri-party form with the government as the financier, a project manager to administer resources and activities, and the implementing entity in form of a contractor (Uher, 2009). Scope and quality specify what is to be achieved, the time aspect is established with specified start and end dates, whereas the cost element is in regard to the limited financial resources to be expended. These factors determine project performance. Although all these elements are interrelated, it is important to note that for building projects, delay has a major impact on a project's cost.

A study carried out in Kenya by Mohan (2001) indicated that "the organizations' projects had adequate number of supervising staff and that project teams used work schedules and plans to monitor project implementation". The study also concluded that supervision capacity has a significant influence on the successful completion of projects.

This study corroborates with the other studies that monitoring and evaluation is critical to project success even in Kenya. According to a research by Ika LA, Diallo A, Thuillier D, (2010) projects in Africa face problems which can be categorized into any of the four traps namely: "the one-size-fits-all technical trap, the accountability-for-results trap, the lack-of-project-management- capacity trap, and the cultural trap".

The study suggests increase in supervision and monitoring efforts as one of the actions that should be taken to avoid some of the traps. This implies that the projects in Africa often fail due to lack of effective monitoring and evaluation.

Several legislations in Kenya such as the Public Service Commission Act, the Public Procurement and Disposal Act, and the Constitution of Kenya2010 create demand for M & E and emphasizes on accountability and transparency from public institutions. Entrenching monitoring and evaluation in the law attempts to make it mandatory for all the public projects. The main question is whether the mandatory M &E is working effectively given a number of white elephants in the country in the recent past. Creation of the 47 counties, responsible of their own development and projects financing, has indeed increased the need for Monitoring and evaluation and Project Management services at the county level.

Kontinen and Robinson (2010) identified lack of monitoring tools, difficulty in defining performance indicators and short time allocation to M & E as some of the challenges

that constantly face the project monitoring function. When M & E faces various challenges, its effectiveness is at stake hence impacting on the project success. Monitoring and evaluation exercise involves data collection and processing. Traditional control systems are characterized by "manual data collection, improper data sharing, and the gap between monitoring and control usually result in late identification of deviations in project performance". An effective monitoring and activity is one that identifies deviations in a timely manner and provides feedback appropriately; hence enhancing the chances of project success. In Kenya M & E is not automated. This may lead to delays in data collection and analysis (Kontinen and Robinson. 2010).

Since full automation of M & E process may not be practically possible, it may be difficult to fully eliminate the problem of delays in detecting the variances (Yames, 2013). Managers risk wasting monitoring resources as a result of poor planning. Failing to effectively plan for monitoring and evaluation may lead to its ineffectiveness and inefficiency, which has a cost implication. Effective monitoring and evaluation helps in providing timely information on the project progress which in turn leads to increase in technical capacity and project success. Ineffective monitoring and evaluation leads to wastage of resources and has a negative effect on the project success.

The traditionally-accepted measure of project performance is the basic cost-quality-time triangle. However, there are differences between various types of projects in determination of performance since measurement is carried out against pre-determined

success factors (Hendrickson, 2008). For building projects, there have been studies carried out and attempts made towards development of evaluation models aimed at determining performance factors. However, there is no universally accepted basis due to the differing complexity, inherent nature and unique characteristics of such projects There is need for effective monitoring and evaluation of projects as this is increasingly recognized as an indispensable tool of both project and portfolio management.

This acknowledged need to improve the performance of development assistance calls for close attention to the provision of management information, both to support the implementation of projects and programs and to feedback into the design of new initiatives. Monitoring and evaluation also provides a basis for accountability in the abuse of development resources (World Bank Group, 1998).

Given the greater transparency now expected of the development of community, governments and agencies assisting them need to respond to calls for more "success on the ground". There are several monitoring and evaluation tools, however, this study focuses on four of the below named: The strategic plans, the monitoring and evaluation plan, the project budgetary Control, and the Performance Contract Appraisal as shall be discussed below.

At all stages of the project cycle, monitoring and evaluation tools can help to strengthen project design and implementation and stimulate partnership with project stakeholders. This is because it can influence sector assistance strategy (World Bank Group, 1998).

2.4 Data Dissemination and Use and Performance of Educational Building Infrastructural Projects.

The need to promote the sharing of research data is something that needs to be embraced by all stakeholders to a project. One of the key merits for dissemination is its ability to enhance research. Sharing research data enables researchers to collaborate and build on each other's research findings rather than duplication (Fischer and Zigmond, 2010). Use of the same findings also creates a level ground for different researchers to test and evaluate their propositions. This enables to create synergy among them for the betterment of the research industry. Open door policy in research enhances problem-solving from different viewpoints. Diversity in research enhances holistic approach to solving problems which is beneficial to the entire research community. Furthermore, researchers can validate one another's research findings through dissemination which enhances quality (Fischer and Zigmond,2010). Open access policy in research also allows use by researchers with limited resource capacity to avail original research data (Fischer and Zigmond, 2010). This approach is cost effective and enhances sustainability in research as a sector.

There are a number of constraints facing research data dissemination with the main issue being lack of widely recognized data-sharing approaches which poses serious challenges towards the data production and dissemination chain (Axelsson and Schroeder, 2009). All of these technical data management demands require funds, time, and personnel. Since the role of data dissemination currently falls on the researcher, his/her inability in terms of finances to share data affects the entire industry. The lack of incentive to share their raw data goes beyond technical issues since researchers would abscond sharing with the fear that once they have shared, the work might be exposed, plagiarized or even customized (Cecil2008). An approach that encourages research data dissemination without definite compensation makes researchers to use others' research work instead (Fischer and Zigmond, 2010). This defeats the purpose of sharing data, since progress would slow without new research data collections. The need for an effective and efficient means of managing and sharing data that takes full advantage of the benefits of data sharing has arisen within the construction industry. To date, few widely used data sharing models have been developed. The two most commonly used systems are; web-based collaboration and web-based share point (Giffels, 2010).

Monitoring and evaluation reports are developed at different times to gauge the implementation of programs. During the implementation stage the project manager should prepare monthly, trimester and annual reports outlining project inputs, outputs, outcomes and impacts to be submitted to key stakeholders. In addition, periodic evaluation should be conducted defining relevance, effectiveness, efficiency, impact and

sustainability of programs and projects. The reports should then be prepared and submitted to the main office (Durbar and Kathmandu, 2013).

During the preparation of periodic monitoring reports of a project performance, progress in terms of resources, assets and time should be compared with the targets. Analysis of challenges faced during the implementation processes and the interventions taken to resolve them should also be discussed. Concrete recommendations should be included in such reports based on the result of analysis of the performance of project towards accomplishing targeted activities and the measures that are likely to help produce intended outputs (Durbar and Kathmandu, 2013).

Information supplied through data dissemination is used as a crucial management tool in achieving results and meeting specific targets. Such information, which reveals the level of progress, performance and problems, is crucial to managers striving to achieve results. As Yames (2013) argue, these systems are actually one of the “techniques” for managing program/project implementation, especially because they provide an early warning to project management about potential or actual problems.

Subsequently, when problems are identified, this may raise questions about assumptions and strategy behind a given program or project. This way, they aid development managers make choices and decisions on running projects and programs.

While studying on the influence of data dissemination systems on performance of government agencies, Sayyed (2012) undertook an empirical survey and analyzed data by descriptive analytical methods. A sample size of 97 employees was selected by simple random. In the study, questionnaires were used for data collection and structural equation modeling was used for data analysis. The results of the study by Sayyed showed that all effects were adopted with the theoretical framework. Therefore, the variable of data dissemination influences performance of government agencies. The findings by Sayyed (2012) concur with a study carried out by Mohan (2001) indicating that an effective monitoring and evaluation system ought to have effective data dissemination and approach. Sayyed (2012) noted the influence of data dissemination on performance of educational infrastructural projects confirm findings from a study on the influence of reliable data on performance by Aronson and Wilson(2006). Sayyed(2012) attests the findings of Harnell *et al.*, (2011) that linked performance of projects to proper data systems. Although the study by Sayyed indicated the above, the study was not cognizant of the influence of organizational culture on performance.

In addition, the study did not consider other factors influencing the performance of educational infrastructural projects such a routine program monitoring and monitoring and evaluation work plan.

In a study on reporting System, Yujing (2003) investigated whether a performance-based system appreciates data dissemination as a crucial component for effective

monitoring and evaluation activities. The data was collected from the Maine Addiction Treatment System (MATS) standardized admission and discharge data provided by the Maine Office of Substance Abuse (OSA) for fiscal years 1991–1995. The data provided demographic, reporting templates, systems and routine monitoring as key variables for effective systems (Yujing, 2003). The study by Yujing (2003) focused on contextual factors rather than functional aspects. Aronson *et al.,* (2006) argue that experimental designs in research are grounded on positivism philosophy and therefore largely ignore social human aspects in the construction of reality making it difficult to allocate resources objectively and thus meet the intended social objectives. In addition, by choosing multivariate regression analysis to predict the marginal effect, Yujing's study did not control contextual and cognitive factors in the design.

2.5. M & E Work Plan and performance of Educational Building Infrastructural Projects.

Development partners have played a significant role in planning, implementing and financing several socio-economic development programs and projects in developing countries. In most instances, the outcomes of these interventions do not match the planned goals. It has been noticed that due to the lack of ongoing evaluation several governments have failed to learn.

Strategic evaluation while a program or project is in progress and 'expost' for example, after the program or project is completed enhances the quality of public investments and of the Bank's portfolio. Properly timed evaluations can avail the information required to

bring about mid-course corrections in programs and projects, analyze and resolve structured policy issues as well as discuss the design of future operations (WorldBank, 1994). As discussed before, most developing nations now have evidence of M & E systems to ensure timely and quality implementation of projects. Development partners played crucial roles in the establishment of these systems (Khan and Mahlahla, 1993).

Agencies allocate most of their time monitoring the real progress and facilitating implementation. Such as hallow use of monitoring and evaluation occurs due to development partners concerns about fund use and challenges associated with the timely implementation of donor assisted projects. 'Development partners often use M & E initiatives to keep projects on track and maintain acceptable levels of transparency and accountability. In terms of institutional arrangements, most monitoring activities are conducted through a central agency such as the National Planning Office, the Ministry of Finance, Prime Minister or the President's Office (Roy and Wijayasuriya, 1992).

Various developmental partners whose project reports on M&E have cited a misperception on the part of project management of their roles, responsibilities, and objectives with respect to monitoring and evaluation efforts as a major cause of failure of many M&E efforts during the 1970s. Donor support traits, such as underlying motivations for aid, the specific purposes for which support is given, the size of projects, the geographic distribution of support within a country, and the nature of the organization distributing the support can also influence support effectiveness. Many

governments or bilateral development partners seek to relieve poverty only after or as a secondary consequence using support to strengthen networks, trade partnerships, or buy diplomatic unions in sectors like the United Nations (Dollar, 2000).

Establishing a strategic project usually involves the development of monitoring and evaluation systems and work plans. Through involving monitoring and evaluation from project design to implementation and even beyond, both the project manager and the project team will be providing themselves with feedback that will allow them to make timely management decisions without waiting for the results of an evaluation (Stead and Stead, 2003). Cost benefit analysis should follow the original project work plan. The aim is to test whether the project as defined will be economically sustainable or whether it will generate good value for money. Not considering this approach in time denies an opportunity to strengthen the project implementation plan. The structure and form of finance will be influenced by the nature of the project. Some projects may also involve a private sector contribution in which the private sector aims to own and control some or all of the assets (Williams and Mitchell, 2004).

The design and timing for funding a project can pose challenges to effective implementation of the project plan. For projects that apply for ERDF funding for instance, very limited detailed design work is done before the award of grant. This could be because the entire project funding is not yet in place and/or the risk is very high to commit even the design costs of a project that might not receive a grant. Before

construction begins, the necessary consents and authorizations must be in place. The time taken to obtain these is probably the most uncertain component of a huge infrastructure project and can have a significant influence on the project work plan. Additional consents like for health and safety, water, sewerage, waste disposal, fire certification, gas, electricity and highways rights may also need to be obtained.

No two infrastructural projects will cost the same amount of money no matter how similar they are. Apart from basic technical factors, the wide range of economic and institutional conditions in different Member States will itself always lead to variations. Nevertheless, the fundamental project costs are based on the actual cost of the land, materials, equipment and labor in the region where the project is being procured. Once implementation begins, a project's costs rarely remain static. As further information becomes available the costs may be further defined. Yet, even when a cost has become firmly fixed, there are numerous factors that can lead to the increase in cost. Delays are a major factor. Whatever the reason, delays almost invariably increase budget costs. Many events may have contributed to the delay some of which could have been foreseen and others which could not (Weiss and Birnbaum, 2010).

In the context of EU program funding, time and cost over-runs have obvious implications for the number of projects that can be funded within a program period, and for the scale of the outputs and impacts generated. Projects experience a range of problems in both the pre-construction and implementation stages. These lead to projects

overrunning either in time or costs. As indicated above, delays generally translate into higher project costs. From the square of time, cost, quality, and satisfaction proposed by (Baker et al., 1974/1988) project success becomes a hexagon of time, cost, quality, and achievement of strategic objectives of the client organization that initiated the project, satisfaction of final users and satisfaction of other stakeholders (Baccarini, 1999; Shenhar *et al.,* 1997; Ika, 2009).

Various cost estimates are made at different stages of the process: Project planning, decision to build, tendering, contracting, and later renegotiations. Cost estimates at each successive stage typically progress toward a smaller number of options, greater detail of designs, greater accuracy of quantities, and better information about unit price. Thus, cost estimates become more accurate overtime, and the cost estimate at the time of making the decision to build is far from final. It is only to be expected, therefore, that such an early estimate would be highly inaccurate. And this estimate would be unfair as the basis for assessing the accuracy of cost forecasting or so the objection against using the time of decision to build estimate goes (Simon, 1991) Most studies that compare actual and estimated costs of infrastructure projects explain what they call "forecasting errors" in terms of imperfect techniques, inadequate data, honest mistakes, inherent problems in predicting the future, lack of experience on the part of forecasters, etc. (Wachs, 1990).

As regards the public interest, project promoters and forecasters may deliberately underestimate costs in order to provide public officials with an incentive to cut costs and thereby to save the public's money. According to this type of explanation, higher cost estimates would be an incentive for wasteful contractors to spend more of the taxpayer's money. Empirical studies have identified promoters and forecasters who say they underestimate costs in this manner and with this purpose, to save public money. The argument has also been adopted by scholars, for instance Merewitz (1973) who explicitly concludes that "keeping costs low is more important than estimating costs correctly" (Merewitz, 1973).

Project completion within time, cost and scope, and maintaining quality throughout are very common dimensions of success factors mentioned by project management professional bodies and the research community. It is encouraging that research focus on project evaluation is increasing (Crawford, 2009) and research interest in the areas of performance/earned value management increased more than 100% in 2000s (Kwak, 2009). Time and cost performance studies have been conducted for several developing countries and for different types of projects. Literature identifies development projects as well known for over-running cost and schedule budgets. A study by Bromilow (1974) attempt to build an empirical relationship between time and cost performance and predict construction time is a function of cost. Raftery (1994) pointed out that construction projects tend to have a poor reputation for excessive time and cost overruns. Bromilow (1974) found from 309 Australian building projects conducted over the years 1964–1967, only 37 projects(12%) met their estimated completion times.

He also identified the root causes of time and cost overrun for Indonesian high-rise construction projects and concluded the problems were relevant to other developing countries.

For Nigeria, research conducted by Mansfield *et al.,* (1994) investigated the causes of construction project delays and cost overrun. For Ghana, Frimpong *et al.,* (2003) investigated the causes of time and cost overrun on groundwater construction projects. Recently, Kaliba *et al.,* (2009) identified the causes of schedule delay in road construction projects of Zambia as follows: financial processes and difficulties on the part of contractors and clients, contract modification, economic problems, materials procurement, changes in drawings, staffing problems, equipment unavailability, poor supervision, construction mistakes, poor coordination on site, changes in specifications and labor disputes.

However, the influence of financial allocation on utilization of M & E systems and implementation of educational building infrastructural projects is not known.

2.6 Routine Programme Monitoring and Performance of Educational Building Infrastructural Projects

Management and maintenance scheduling have become important for all infrastructural facilities. A wide range of special structures, such as power plants, port and harbor structures, and bridges, may be considerably different from their functional requirements

and performance levels but the tools required for management and maintenance scheduling have a similar format. It is well appreciated that all infrastructural facilities degrade with time with reference to all measurable structural parameters. Some of the major projects built in recent years include special instrumentation for measurement of loads and load effects (Sridhar *et al.*, 2008).

As a key component of project planning, the project team has to ensure that the organization has developed both a monitoring strategy and a reporting strategy focused on scope, schedule and budget as well as other critical information such as change orders, performance measures and risks unique to the project. The monitoring and evaluation staff should carry out project monitoring consistently and provide the management with routine progress reports as well as reports at key milestones, such as at the time of procurement decisions. The monitoring and evaluation staff have to monitor budgets to compare actual costs to what was budgeted and the reasonableness of budget forecast assumptions. Reporting should be at the right level of detail for decision-making. The management should require project summary reports from staff on a routine basis, such as monthly or quarterly (AGLG, 2014).

The majority of projects incorporate, beside economic interests, certain social and environmental features, which may prove powerful sources of competitive advantage. However, assuming social and environmental objectives among the economic targets of

an investment project is not enough, as it is necessary for those objectives to be monitored and evaluated during the entire life cycle of a project.

If monitoring and evaluating the economic performance achieved within an investment project is not such a difficult challenge, monitoring the overall success of a project, taking into account also the social and environmental impact of that project, is a more difficult and challenging issue. In order to get a full view regarding a sustainable project, the project manager should focus on developing adequate monitoring and evaluating mechanisms (AGLG, 2014).

Monitoring and evaluation are regarded as core tools for enhancing the quality of project management, taking into account that in short and medium run managing complex projects will involve corresponding strategies from the financial point of view, which are supposed to respect the criteria of effectiveness, sustainability and durability. Monitoring activity supports both project managers and staff in the process of understanding whether the projects are progressing on schedule or meet their objectives, inputs, activities and deadlines (Solomon and Young, 2007). Therefore, monitoring provides the background for reducing schedule and cost overruns while ensuring that required quality standards are achieved in project implementation (Crawford and Bryce, 2003). At the same time, evaluation can be perceived as an instrument for helping planners and project developers to assess to what extent the projects have achieved the objectives set forth in the project documents. Even if the monitoring and evaluation processes are

complementary and are part of the same project management function, they are regarded separately (Pollack, 2007).

Monitoring is based on a current management practice with a focus on improving day-to-day project operation, while evaluation uses a research framework to evaluate the extent to which project objectives have been met or surpassed (Shepard, 1994). From the history, large-scale construction projects were delivered under a tayloristic control of just two parties (Clegg, Pitsis, Rura-Polley, and Marossezeky, 2002). The architects were responsible for the design and the contractors for construction. With growing forms of complexity in large scale projects, "the concept design and construct", more and more became the standard way of organizing this type of project, with government as a "third party."

In connection to this, there is a worldwide transformation visible toward the so called BOOT arrangements (Build Own Operate Transfer), which has consequences for the way large-scale megaprojects are organized (Dyer and Singh, 1998). However, these BOOT arrangements are typically high-risk ventures (Pestman, 2001). Such projects are not only extremely expensive, but also involve political controversies, complex organizational arrangements, and technological challenges. They are long-term projects that are constantly changing overtime. The developments of the project or the outcomes are hard to predict and carry great uncertainties. The interesting point here is that in such technology-driven cases the organizational design anticipates this high- risk context and

binds this project to periodic “progress reports,” in part based on specific “risk analysis” (Pestman, 2001). Therefore, it can be seen in such situations that risk monitoring and reporting systems are often implemented as specific management tools not only designed for administering the project but also intended for steering it.

Construction management involves many problems, such as cash control, engineering technique, manpower management and soon (Huang and Ku, 2008). They further developed a set of cash flow prediction models for application to the construction industry, which emphasized the importance of pre-understanding the cash flows and the influence of various risk factors.

Their cash flow forecasting system was a computer-based model that could analyze the influence of five risk factors upon the project cash flow, taking into account variation in construction time, material costs, and measurement risk variation. One of the critical causes lies in the improper utilization of cash resources. Therefore, prediction of expected cash demands at the tender stage is an extremely important issue for any contractor.

According to one related study, problems with cash flow during the initial period of implementation of an engineering project as well as poor control performance were the primary causes which could lead to a financial crisis in the construction industry (Kaka and Price (1994).

Kaka and Prince (1994) computed the cumulative curve for total cost and total time in order to predict cash flows for public construction projects from historical data. Kaka and Price (1994) constructed a cost conversion curve based on historical case data for purchasing expenses, and then combined this with an income curve to calculate cash flows. They further, modified the cash flow prediction model, based on the S-curve polynomials of study cases.

They examined the difference between the predicted value and the actual value. They tried to enhance the value of the model for practical applications by making the predicted value closer to the actual value (Kaka and Price (1994).

Effective evaluation both 'concurrent' (while a program or project is in progress) and 'ex post' (after the program or project is completed) enhances the quality of public investments and of the Bank's portfolio. Well focused and properly timed evaluation can provide the information needed to bring about mid-course corrections in programs and projects, analyze and resolve systematic policy issues, discuss the design of future operations, and increase country ownership' (World Bank, 1994). As noted earlier, most developing nations now have in place some sort of M & E systems to ensure timely and quality implementation of projects. Donors played important roles in the establishment of these systems (Jefferson, 2012).

Routine program monitoring can also aid in promoting greater transparency and accountability within organizations and government (Yames, 2013).

Review of literature points out two common categories of routine Monitoring System: Implementation-Focused Monitoring and Results-Based Monitoring System. The Implementation-Focused monitoring systems focus on monitoring and assessing how well a project, program, or policy is being executed (Njiru, 2008). In that vein, "Implementation-focused M & E systems are designed to address compliance questions like "did they do it?" Did they mobilize the needed inputs? Did they undertake and complete the agreed activities? Did they deliver the intended outputs?" However, the noted weaknesses in this approach include the fact that it does not provide policy makers, program managers, and stakeholders with an understanding of the success or failure of projects, programs, or policies. This seems to be one of the major reasons why the approach lost favor in both the development community and the management community at large. This resulted in the shift in preference to Results-Based monitoring and evaluation systems, which have since dominated the arena from the beginning of the twenty-first century (Njiru, 2008).

In a study on the influence of routine monitoring of educational projects and performance in china educational sector, Cecil (2012) undertook an empirical survey and analyzed data by correlative analytical methods.

A sample size of 172 respondents was selected by simple random. In the study, structured questionnaires and interviews schedules were used for data collection and structural equation modeling was used for data analysis. The results of the study by Cecil (2012) showed that routine monitoring has no significant influence on the performance of educational projects.

Therefore, the variable of routine program monitoring has no significant influence on performance of infrastructural building projects in education sector.

The findings by Cecil (2012) contradict a study carried out by Jefferson (2012) on monitoring and evaluation systems and performance of development projects that indicate that an effective monitoring and evaluation system with a sustainable continuous reporting has the potential of enhancing the performance of the project in general. These findings confirm findings from a study on the influence of routine monitoring on service delivery in government agencies [Woodwork and Kelvin (2006)].This study endeavors to validate or negate the above findings by Cecil (2012), Kelvin (2006) and Jefferson (2012).

2.7 Organizational Culture and Performance of Educational Building Infrastructural Projects

Although there is no consensus on the definition of organizational culture, most authors agreed that organizational/corporate culture referred to something that is holistic,

historically determined (by founders or leaders), related to things anthropologists study (like rituals and symbols), socially constructed (created and preserved by the group of people who together form the organization).

This study adopts the definition of Hofstede (1980). According to Hofstede, organizational culture refers to the collective programming of the mind that distinguishes the members of one organization from another. This includes shared beliefs, values and practice that distinguish one organization from another. The beginning of formal writing in an organizational culture started with Pettigrew (1979). He introduced the anthropologist concepts like “symbolism, myths,” and “rituals” that could be used in organizational analysis.

According to the Webster's dictionary, culture is the ideas, customs, skills, arts, etc. of a given people in a given period. Astute managers have realized that any organization also has its own corporate culture.

Moreover, social anthropologists are now as fascinated by corporate cultures as they once were by head-hunting tribes in Borneo. This indicates the important role of corporate culture. Many researchers have found a positive relationship between the corporate culture and performance. Stewart (2007) mentioned that profitability is any organizational goal. One of the best places to start improvements is with an examination of the organization's work culture. He states that the strongest component of the work

culture is the beliefs and attitudes of the employees. It is the people who make up the culture, he stated. For example, if these cultural norms contain beliefs such as, “around here, nobody dares make waves" or,” *Do just enough to get by and people will leave you alone*," the organization's performance will reflect those beliefs. Moreover, if the cultural belief system contains positive approaches, such as, "*Winners are rewarded here*" or, “*People really care if you do a good job in this outfit*," that also will be reflected in the organization's performance.

Stewart (2007) also stated that an organization's cultural norms strongly affect all who are involved in the organization. Those norms are almost invisible, but if we would like to improve performance and profitability, norms are one of the first places to look. He is wondering what employee beliefs or attitudes; relate to the question," How are things done in the organization?" He further tries to answer such a question by stating that knowing these attitudes and norms will make it possible to understand the corporate culture and its relationship to organizational performance. He further explains that the successful manager cannot leave the development of a high-performance work culture to chance if the business is not to risk its very future. Although many studies have found that different companies in different countries tend to emphasize on different objectives, the literature suggests financial profitability and growth to be the most common measures of organizational performance (Stewart, 2007).

One of the best places to start improvements is with an examination of the organization's work culture. The strongest component of the work culture is the beliefs and attitudes of the employees. It is the people who make up the culture.

An organization's cultural norms strongly affect all who are involved in the organization. Those norms are almost invisible, but if we would like to improve performance and profitability, norms are one of the first places to look into (Stewart, 2007). The literature on the impact of organizational culture on the performance seems inconsistent. For example, Denison, (1990) linked management practices in his studies with the underlying assumptions and beliefs that it was an important but often neglected step in the study of organization. He found that performance was a function of values and beliefs held by the members of the organization.

He postulated that an organization that had a strong 'culture' was defined to be of widely 'strong shared values among its employees'. The strength with which the cultural values were held among its employees was then taken to be the predictor of future organizational performance. This was usually measured financially. In a similar vein, a study of Chava Frankfort (1996) found supporting evidence that a strong culture was predictive of short-term company performance.

Lim (1995) claimed that high performance firms could be distinguished from low performance firms because they possessed certain cultural traits and 'strong culture'. He

further suggested that organizational performance can be enhanced by strong shared values. However, their suggestions were criticized by Cummings (2008) who commented that's simple model' relating organizational culture to performance no longer fits-a more sophisticated understanding of the tie between culture and performance must be developed. Research on the link between organizational culture and performance has increased substantially during the past decade (Lim, 1995). A wide variety of culture as well as performance indicators have been utilized, and they have been employed in various kinds of organizations and industries. What connects these studies is a strong belief among the researchers that the performance of organizations is attributable, in part, to organizational culture (Crawford & Bruce, 2003). However, some researchers such as Cummings and Worley (2008) argued that instead of striving for strong culture, researchers should attempt to reduce the gap between employees' preferred organizational culture practices and their perception of the organizational practices.

They pointed out that the empirical evidence for the impact of the organizational performance using organizational culture practices was still limited, but it formed a fruitful basis for more refined organizational culture-performance research. The use of organizational cultural practice to assess organizational culture was supported by Hofstede(1990); House *et al.,* (2004);Pfeffer (1997). The objective of this review paper is to highlight the definition, conceptualization, and measurement of organizational

culture and organizational performance. It also highlights the literature and previous studies on the link between organizational culture and organizational performance.

In this section, an empirical review on the influence of organizational culture on the relationship between monitoring and evaluation systems and performance of educational building infrastructural projects is examined. Ravasi and Schultz (2006) indicate that contextual factors are not just the structural aspects of an organization but the organizational culture as well. Organizational culture is cultivated by the shared mission and inspired by the organization's vision and reflected in common values and belief system (Ravasi and Schultz, 2006). Jolise (2007) conducted a survey in South Africa to investigate service delivery to the community by local municipalities. The problem the study sought to address was poor standards of service to the community. In this study, Jolise (2007) indicated that if there is commitment within the organization, then employees will identify with their organization and its goals, and will deliver the service more effectively.

The study by Jolise (2007) was analyzed in the current study because of the similarities in the purpose of the study in that the current study seeks to address non-satisfactory performance in the public sector as well. Gomez (2008) argues that organizations are established to optimize performance.

In the study by Jolise (2007), organizational commitment and organizational culture of employees within the selected municipality were indicated to be the determinants of performance. In the study, a survey was conducted on 148 respondents from a selected local municipality. The study by Jolise revealed a significant difference between the existing culture and the preferred culture and between the existing commitment and the preferred commitment.

Systems theory indicates that such a gap between sub-systems in an organization leads to a state of organizational imbalance. Ryan (2009) adds that management should seek ways to bridge the gap of 'power culture' and 'normative commitment' and cultivate 'support culture' and 'absolute commitment' based on mutual trust.

In addition, the study by Jolise (2007) indicated that although biographical variables do not influence existing organizational culture, there are significant relationships between the biographical variables, namely the departments in which respondents work, and the education level of respondents, and the preferred organizational culture. That organizational culture can be manipulated through re-organizing organizational structure was also observed Luttans (2009). In addition, Lutans (2011) suggest that organizational culture can be acquired and unlearned through capacity building. Olu (2012) examined the influence of organizational culture on employee work behavior. Survey research design was used in the study in which respondents were selected through stratified and simple random sampling techniques. Primary data were collected through questionnaires

and data were presented and analyzed by means of percentages while hypotheses were tested by chi-square test statistics.

The study indicated that organizational culture (norms, artifacts, values, traditions, assumptions and belief) influences employee work behavior.

Employee work behavior identified by Olu (2012) as a dependent variable can be studied as a moderating variable and its influence on the relationship between performance management system and organizational performance determined. This is because as observed by Jolise (2007). The 'end-product' in organizations is 'performance' and not 'processes'. Therefore, employee behavior is seen in this study as part of the organizational process whose end-product is organizational performance.

Arie (2005) advanced the argument that performance measurement is only one way of managing performance but not the only effective management style for governments as had been indicated earlier by Mohan (2001). The purpose of Arie's work was to introduce to a symposium, asset of linked studies, which illustrate the reality that, when it comes to improving organizational performance, performance management is a broader and more meaningful concept than simply performance measurement. Thus the study sought to emphasize earlier concepts on participatory management in respect to organizational performance (Mohan, 2001). Arie (2005) provided a brief review of the issues involved in using performance measurement in general and balanced scorecard

(BSC) approach in particular. It was found that performance management can take many forms from dealing with issues internal to the organization to catering to stakeholders or handling issues in its environment.

It was concluded in the study by Arie that performance management involves the use of both quantitative and qualitative techniques and paying due attention to the human (behavioral) side of the organization. This conclusion confirmed Mohan's (2001) discourse on participatory development whereby it was argued that development cannot be taken to the people but rather the people must initiate development for it to be sustainable. This argument was informed by the concept of sustainable development being analogous to a tree as stipulated by Arie (2005).

It can therefore be deduced that Arie's (2005)study identifies performance measurement as a sub-system of performance management which is consistent with the systems approach theory (Ryan, 2009).

Further, Arie's study suggests that resorting to performance management is in fact a return to the basic concept of management, which assumes that there is need to include employees in management in order to ensure that the use of resources results in the attainment of desired goals.

Whereas these arguments are sound from a management perspective, the study fails to recognize the need for negotiated target setting with employees in PC management as well as the use of tools that are simple to use, valid and reliable which is identified as a knowledge gap in this study (Arie, 2005). A critique of the performance measurement system in Costa Rica in evaluating the impact of assessment on project performance similarly revealed undesired results. In particular, a study was carried out by Sayyed Mohsen, (2012) and presented to the Ministry of Health officials in Costa Rica on the reduction of high levels of absenteeism among healthcare workers as a means of improving public hospital performance.

The purpose of the study was to review the impact of changes in reimbursement methods and organizational reform on absence rates among healthcare personnel in Costa Rican public hospitals for the period 1997–2001.This was implemented in line with recommendations by World Bank to fast track development in developing countries (WorldBank, 2003) and the Paris Conference on sustained development among the developing countries (OECD, 2012).

The methodology used in Sayyed Mohsen (2012) study was quantitative with the Costa Rican public hospitals forming the research population. The results from Sayyed Mohsen (2012) study, just like was the case with a similar study by Abramson (2001) carried out exclusively on experimental designs on M & E contracts for health service delivery in Costa Rica, showed that the reforms had a negative impact on absenteeism,

which increased throughout the considered period. Results further indicated that the policy of not substituting absentee workers, which was introduced through the reforms, did not work as expected in a permissive environment in which peer pressure mechanisms were lacking. Abrahamson (2001) further suggest that such anomalies indicate influence of cognitive factors on organizational performance.

In addition, although explicit incentives for workers included in the reforms were retained and used at facility level, this motivation did not lead to performance which validates that motivation on its own does not enhance performance without the necessary organizational culture and structures (Abrahamson, 2001).

Nevertheless, the study by Sayyen Mohsen (2012) provided insights into how Costa Rican public hospitals responded to the pressure for increased efficiency and quality introduced by the reforms carried out over the period 1997–2001 through performance contracts. For such a purpose to be scaled up and replicated in the public sector in Kenya, a generalized output distance function by means of non-parametric mathematical modeling to construct a productivity index need to be developed. Nuguti (2009)suggest that this approach will account for improved performance while controlling for quality of performance indicators computed. Such results will demonstrate an improvement in real performance of Government ministries mainly driven by the quality of the evaluation criteria as well as the M&E skills of the evaluators and the implementers (Obong'o 2009).

There is therefore need to examine the influence of monitoring and evaluation systems as well as organizational culture and leadership in enhancing performance in Government ministries in Kenya. The adoption of management contracts in the public sector seems to have unearthed and quantified the role of implementers unlike in the past when many public servants would lack clear job descriptions (Angote, 2009).

Enhanced organizational performance was indicated to be influenced primarily by change in technical and scale efficiency rather than changes in the systems in respect to nature of technology used. This is because it is people who produce results and not technology as advanced in the social technical approaches (Angote, 2009).

Although a number of policy implications were drawn from the results of the study carried out by Sayyed Mohsen (2012) in that the study identified contextual factors in organizational performance; the study fell short of addressing cognitive factors especially the attitude of the health workers in respect to organizational performance.
They further suggest that organizational performance cannot be exhaustively explained without recognizing the role played by the attitudes and skills acquired by the players. For this reason, the current study identifies the influence of monitoring and evaluation systems on the performance of educational building infrastructural projects as a gap in knowledge.

Since the monitoring and evaluation systems experiences in various countries reveal contradicting results as indicated by Olu(2012), there is therefore need to interrogate the influence of monitoring and evaluation systems, organization culture and leadership on performance of educational building infrastructural projects.

In another study, UlMujeeb (2011) empirically tested the relationship between the components of organizational culture and performance management practices. The study adopted the exploratory research approach. In the study, primary data was collected through questionnaires from 140 employees at the COMSATS Institute of Information Technology.

Regression and correlation statistical analysis were used for data analysis. Results from the study indicated that involvement of employees had a strong correlation on performance. Although the study by UlMujeeb (2011) is consistent with participatory management proposed by Mohan (2001), the scope of the study can be extended to investigate the influence of organizational structure as well as cognitive factors on the relationship between performance management system and organizational performance.
Bertrand (2008) examined the relationships between four contextual factors related to empowerment (communication with supervisor, general relations with company, teamwork, and concern for performance) and the four components of psychological empowerment (meaning, impact, self-determination, and competence).

In the study, 203 employees of a manufacturing firm were surveyed using new and established measures of contextual factors and Spreitzer's measures of empowerment components. The contextual factors were found to be differentially associated with the elements of psychological empowerment Bertrand, (2008).

Communication with supervisor and general relations with company were significantly related to the empowerment facets of meaning, self-determination, and impact, but were not related to the facet of competence. The study by Bertrand, (2008) revealed that organizational performance was influenced by teamwork and concern for performance and these two factors varied by the type of job done by employees (Bertrand, 2008).

The study by Bertrand (2008) enriched the arguments surrounding the influence of contextual factors on organizational performance. Lutans (2011) argues that most studies carried before 1990 focused chiefly on structural aspects of organizational context.
He further (2008) argues that the work of Marc and Susan (2006) contributed significantly in helping organizational management to pay attention on determinants of organizational culture. However, the same can be enriched by looking at other aspects of organizational culture such as clarity of organizational vision, promptness to duty and the degree to which teamwork is experienced in the entire chain of command.

The studies of Bertrand (2008) focused on team work from a departmental perspective and the only factor that was measured down the chain of command was

communication and hence the need to examine cross-sectional and top-down teamwork in respect to organizational performance as indicated in studies by John and Michael (2004).In addition, although communication with supervisor, general relations with company, teamwork, and concern for performance were identified as important contextual factors. They were viewed as predictors of employee empowerment in the studies carried by Bertrand (2008). The influence of these factors on organizational performance can be tested as proposed by Mohan (2001) in participatory development. Thus the moderating role played by these contextual factors on the relationship between performance management and organizational performance provides grounds for further research.

In the results-based monitoring and evaluation system, Kusek and Rist (2004) equally indicate that the performance of an organization is influenced by the extent to which the performance management is participatory. Barzilai (2011) argues that many studies excluded possibilities of other variables as predictors of organizational performance save contextual factors.

There is therefore need for an independent study to investigate the moderating influence of organizational culture on the relationship between monitoring and evaluation systems and performance of educational building infrastructural projects.

2.8 Leadership and Performance of Educational Building Infrastructural Projects

Top management support of information systems refers to the degree to which top management understands the importance of the educational function and the extent to which it is involved in educational building infrastructural projects (Dyer, 1998). Top management support refers to management approval and continuous support not only during the educational project implementation but also throughout the operational phase of the system (Dyer, 1998). It is reasonable that, when managers dedicate a high level of resources to support information technology; they tend to foster a greater use of information systems within that organization.

If senior executives support educational projects, they may strengthen the budget towards education as funding improve, the performance of the whole sector would improve as well (Fullan and Miles, 1992). Literature review suggests a linkage between top management support and the success of educational building infrastructural projects.

The influence of organizational leadership on performance has been of interest to many scholars (Bertrand, 2008**).** For instance, Maurice (2011) undertook a study on the influence of contextual factors on the deployment of innovative performance systems. The study examined the association between strategy, structure and environmental uncertainty, and the design and the use of performance measurements systems.

The study provided empirical evidence on the contextual factors associated with the use of financial and non-financial measures, process and outcome measures and the

deployment of innovative performance measurement systems in manufacturing business units. In this study, Maurice (2011) administered questionnaires to 200 Canadian manufacturing organizations which were randomly sampled. Respondents were asked to indicate to what extent they used different measures. They also had to mention if they had adopted an innovative performance measurement approach such as the balanced scorecard traced to Ducker's (1954) studies. The research instrument also included items that helped to classify organizations as prospectors, defenders or analyzers and to measure the levels of decentralization and perceived environmental uncertainty. This study was informed by the influence of support systems on performance as advanced by other scholars from the same school of thought (Lim *et al.*, 2010).

Maurice (2011) indicated that there was a significant relationship between strategy, organizational culture and environmental uncertainty and the use of non-financial and process measures.

In addition, the results indicated that there is a relationship between strategy and environmental uncertainty and the deployment of innovative performance measurement systems in agreement with environmental theories on organizational performance (Morgan,2007). The work by Maurice (2011) can be enhanced by being cognizant of cultural influence on organizational performance by identifying factors such as teamwork, promptness to duty and clarity of organizational vision as indicated in studies undertaken by Ravasi (2006).

It was concluded in the study carried by Maurice (2011) that managers should design innovative performance measurement systems such as balanced scorecards that include financial and non-financial measures as well as process and outcome measures. Whereas the work of Maurice (2011) provided a better understanding of the factors that affect the implementation of innovative performance measurement systems and the contingent factors that influence the design and the use of innovative performance measurement systems; the study did not expound on an effective performance management systems as indicated in performance management by Hatry (2006).

This is because unless targets, tools used for measuring results and the role of the implementers are clearly stated, then performance cannot be guaranteed (Kusek and Rist, 2004).

Qingmin *et al.,* (2012) undertook a study to investigate the relationship between support systems and organizational performance. In the study, a conceptual and structural equation model was setup through a questionnaire survey and a sample of 90 Austrian and 71 Chinese companies was undertaken. Data was analyzed quantitatively through partial least squares and the results tested by bootstrap methods. The findings from this study by Qingmin *et al.,* (2012) reinforced the influence of support systems on performance as indicated by studies carried out by Paurav (2009) on the same subject. In studies carried out by Qingmin *et al.,* (2012), leadership and structure were found to have more influence on organizational learning than on innovation. In addition, whereas

organizational support systems were found to have a direct influence on performance, organizational learning was found to have an indirect influence on performance.

In the study by Qingmin *et al.*, (2012), innovation and learning were found out to be the main factors influencing the relationship between support systems and organizational performance. The study indicated that senior managers think organizational structure improves organizational performance directly through innovation while middle level managers think organizational learning has an important mediating effect on organizational performance. Learning as a cognitive factor influencing organizational performance was also identified by Gibson (2009) while innovation as a factor influencing organizational performance was also identified by studies carried out by Paurav (2009). Therefore, organizational performance is depicted as a variable of both contextual and cognitive factors and not just the performance system in place.

In another study by Levent and Mehmet (2004) on the influence of support systems on entrepreneurial orientation and expansion performance, the expansion decision-making process of an international hotel group was investigated. In the study, in-depth interviews, observations and document analysis were used as the data collection techniques.

Findings from the study indicate that protecting and developing internationally recognized brands profitably caused the organizational systems to be centralized. These

findings suggest that centralized organizational structures are likely to be formations of managerial insecurity. Angote (2009) observes the same trend in the public sector in Kenya where some departmental heads hardly delegate nor do they take leave sessions due to the centralized system of corporate governance.

Although studies carried out by Levent and Mehmet (2004) did not address the influence of organizational support systems, implementer attitudes and skills on organizational performance, the study demonstrated the negative influence of a centralized decision-making structure on organizational performance. In respect to government bureaucracies, Angote(2009) argue that they negatively influence employee innovation and performance in the public sector in Kenya.

That the study by Levent and Mehmet (2004) indicated lack of motivation among employees entrusted with organizational expansion in a bureaucratic system is a pointer to the negative influence of an organizational structure.

2.10 Theoretical Framework

This study relies much on theory of change as proposed by Fullan and Miles (1992).

2.10.1 Change Theory

This theory stipulates that rational planning models for change cannot address complex human processes (Fullan and Miles, 1992). The message here is basically that reformers can plan, but more than likely, they will have to plan again for the unexpected (planning

is continuous). They also observe that problems arise from the change process and these are natural and expected. Reformers must be assertive in identifying, discovering and solving problems. Fullan and Miles warn that to sustain a large-scale change process, often much time is spent on identifying and acquiring additional resources to feed the engine of change. Fullan and Miles (1992) are clearly most interested in systemic change, the process of understanding one's current system, identifying and understanding problems, identifying and managing change relevant resources and embarking towards a newly reformed system.

A year after this article, Anderson (1993) developed a useful continuum of system change. The continuum highlights the stages of change which include: maintenance of old system, awareness, exploration, transition, emergence of new infrastructure and predominance of new system. This theory is in line with the concept of monitoring and evaluation systems which advocates for continuous and systematic planning in line with, data dissemination and use, M&E work plan and routine program monitoring. The theory also supports performance of educational building infrastructural projects in the mere sense that such projects aim at causing systematic change in the learning process that result in quality education.

Additionally, Anderson describes how several 'elements of change' for example vision, public and political support are affected as they move through this continuum in line with the study's moderating variables of organizational culture and leadership.

2.11. Conceptual Framework

Figure 1 shows the relationship between the independent variables; Data dissemination and use, M&E work plan, Routine programme monitoring and the dependent variable, performance of educational build

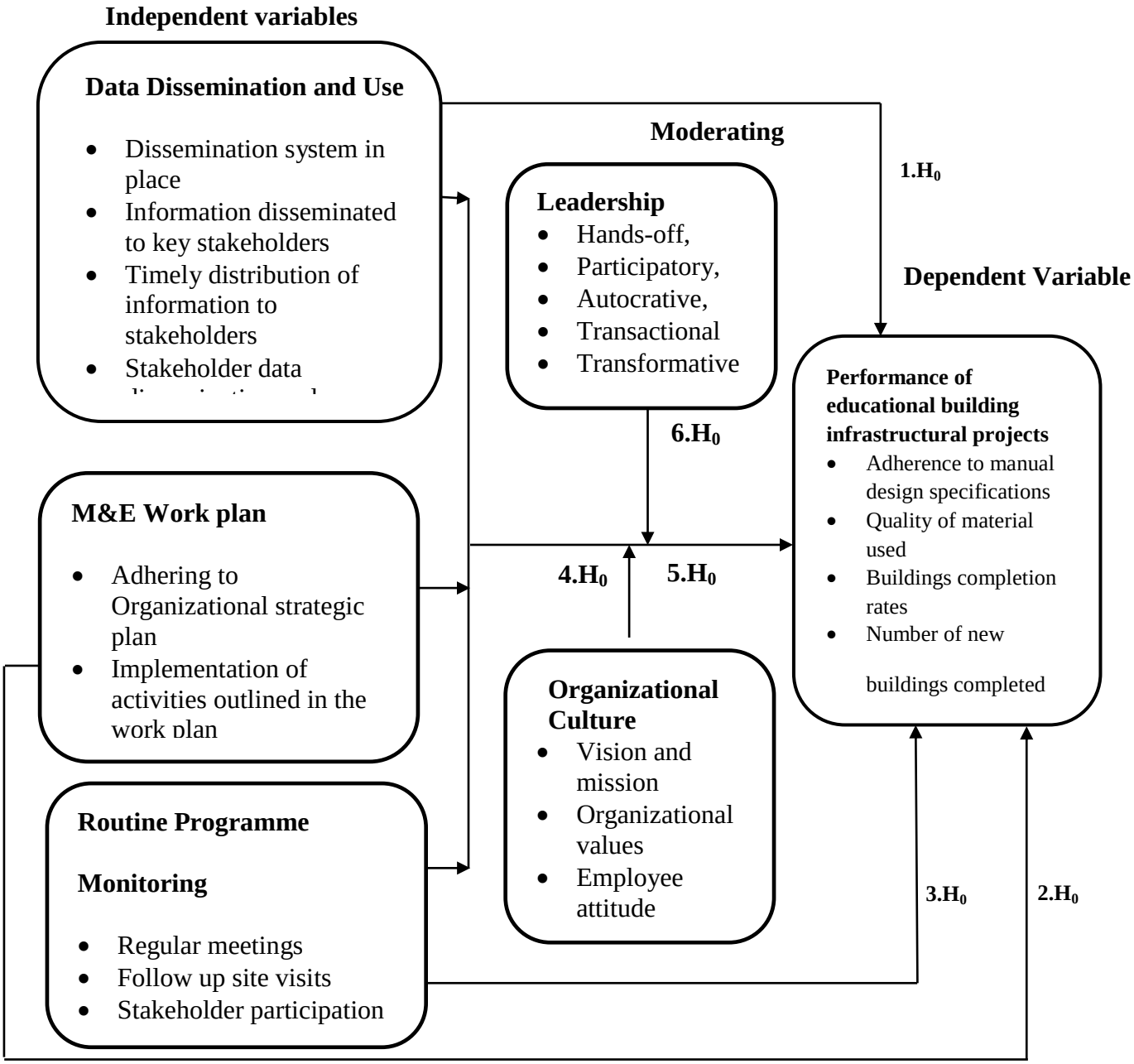


Figure 1: Conceptual Framework of Utilization of M&E systems and performance of educational building infrastructural projects.

The independent variables were monitoring and evaluation system components; Data dissemination and use, M&E work plan, and routine programme monitoring. Organizational culture and leadership were the moderating variables in this study. The influence of the moderating variables on the relationship between the independent variables and the dependent variable were investigated.

Data dissemination and use influences performance of building infrastructural projects in the sense that through it, the construction industry is able to learn from past mistakes and improve practice. Also given the common nature of challenges faced by building infrastructural projects, it calls for information sharing in order to device mechanisms of overcoming such challenges and hence ensuring delivery of successful projects. Advancing technology in the construction industry also necessitates data dissemination platforms to enable project implementers to move with the changes and remain relevant within the industry.

M&E work plan acts as an appraisal to the project since it clearly stipulates what has to be done, when it has to be done, the indicators and budgets associated with each activity of the project. It acts as a road map to the project implementation and through it, success of a project can be determined. M&E work plan is therefore very critical when we talk of performance of educational building infrastructural projects as evidenced by most developing nations now ensuring that M&E systems are in place to support timely and quality implementation of projects.

From its definition, routine programme monitoring directly affects performance of educational building infrastructural projects since it is the periodic supervision of activities in progress to ensure they are on-course and on-schedule in meeting the objectives and performance targets (Sinchair, 2005).Through routine program monitoring, both schedule and cost overruns are reduced while ensuring required quality standards are achieved by project implementers (Crawford and Bryce, 2003).This in essence determines the performance of any project, and in the case of this study, the performance of educational building infrastructural projects.

2.12. Summary of Literature Reviewed

Table 2.1: Summary of Empirical Literature

Variable	Author(Year)	Title of study	Findings	Knowledge Gaps
Data disseminatio n and use	Sayyed (2012)	An empirical survey of ebtekar manufacturer on data dissemination and performance	Stakeholder involvement in data dissemination system positively influences stakeholder' abilities and skills to create creativity. This variable positively effects on employees' attitudes toward creativity and employees' perceptions	Although the study indicated the influence of data dissemination on performance, it did not consider the influence of organizational structure. In addition, the study did not consider other factors influencing the performance assessment system
	Mohan (2001)	Effective M&E systems	An effective M&E system has a	The study does not specify the best

Variable	Author(Year)	Title of study	Findings	Knowledge Gaps
			representation of at least 4 of the 12 standard M&E systems	combination of the components
	Hatry (2006)	Performance Measurement: Getting Results	Strategic projects have performance as its main focus during project implementation process	The study did not evaluate M&E systems and their roles in performance of educational building infrastructural projects
	Maurice(2011)	The association between leadership, strategy, structure and environmental uncertainty, and the design and the use of performance	Organizational strategy, structure, environmental uncertainty and deployment of innovative performance measurement systems were found to influence organizational performance	Leadership was found not to influence performance thus the need to study on it

Variable	Author(Year)	Title of study	Findings	Knowledge Gaps
		measurements systems.		
	Yujinh(2003)	To investigate whether a performance-based contracting (PBC) system provides incentives for nonprofit providers of substance abuse treatment to select less severe clients into treatment	The percentage of OSA outpatient clients classified as most severe users dropped by 7 percent ($p<=0.001$) after the innovation of performance-based contracting, compared to the increase of 2 percent for Medicaid clients. The regression results also showed that PBC had a significantly negative marginal effect on the probability of OSA clients being most severe	Although the study raised moral concerns in using experimental designs with patients, corrective measures were left for further research. The gap in knowledge therefore would be to triangulate while measuring performance to incorporate qualitative aspects

Variable	Author(Year)	Title of study	Findings	Knowledge Gaps
M & E work plan	Baker (2011)	Determinants of project success	Project success in infrastructural projects is blend of time, cost and quality	There is need to investigate the case of educational building infrastructural projects
	Chan (2011)	Influence of time and cost on the performance of projects	Time and cost influence positively the performance of infrastructural projects	The study did not consider M&E systems and performance of educational building infrastructural projects
	Kaming(1997)	Causes of cost overruns in public projects	Public projects are faced with a lot of local politics that makes it difficult to conclude on decisions thus time and cost overruns	This is against the findings of Baker (2011) thus the need to examine the issue in this study
	Kaliba(2009)	Causes of schedule delays	Poor Stakeholder involvement	Other causes of project delay were

Variable	Author(Year)	Title of study	Findings	Knowledge Gaps
		in project completion	was highlighted as the major cause of delays	not examined
Routine program monitoring	Cecil (2012)	Influence of routine programs on performance of educational infrastructural projects	Time to time monitoring platforms should be organized during the cycle of project implementation to enhance stakeholder involvement	The study used a small sample of 54 respondents only
	Jefferson (2013)	Influence of M&E systems on performance of county government projects	County governments are new entities with poorly developed M&E frameworks posing a potent for poor project performance	The study was done in a time when counties were just being set up thus need to revisit the subject 5 years after inception of counties
Organization	Jolise (2007)	Influence of	Organizational culture was found	Although service delivery was

Variable	Author(Year)	Title of study	Findings	Knowledge Gaps
al culture		organizational culture and employees' commitment on performance	to have a significant effect on the organizational commitment of employees and therefore can affect organizational service delivery.	identified as an indicator of performance, the scope can be broadened to include employee satisfaction and corporate social responsibilities.
	Ryan (2009)	Systems theory		
	Olu (2012)	Influence of organizational culture on employee work behavior	The study indicated that organizational culture (norms, artefacts, values, traditions, assumptions and belief) influences employee work behavior.	Employee work behavior identified by Olu (2012) as a dependent variable can be studied as a moderating variable and its influence on the relationship between performance management system and organizational performance determined.
	Ulmujeeb (2011)	The relationship between the components of	Results from the study indicated that involvement of employees had a strong correlation on performance.	The gap in knowledge in this study is to investigate the influence of organizational structure as well as cognitive factors on the relationship

Variable	Author(Year)	Title of study	Findings	Knowledge Gaps
		organizational culture and performance management practices		between M&E system and organizational performance.
	Marc & Susan (2006)	The relationship between locus of control and performance among Russian employees.	Controlling for a variety of worker characteristics, the study indicated that individuals who exhibit an internal locus of control perform better, but this result is not always statistically significant. Among "internals," women earn significantly less than men and have a much lower expectation of promotion. Among "internals," experience with unemployment has a negative influence on performance.	The study can be broadened to control for contextual factors like organizational structure as indicated by contingency theory and organizational culture as indicated in results theory on cultivating a results oriented work culture. Considerations on the influence of the performance measurement system as indicated by systems theory and results theory can also enrich the study.
Leadership style	Maurice (2011)	The association between leadership, strategy, structure and	Organizational strategy, structure, environmental uncertainty and deployment of innovative	Leadership was found not to influence performance thus the need to examine the variable in

Variable	Author(Year)	Title of study	Findings	Knowledge Gaps
		environmental uncertainty, and the design and the use of performance measurements systems.	performance measurement systems were found to influence organizational performance	this study
	Qingmin (2012)	The relationship between organizational structure and performance	Learning and innovation were identified as moderating factors influencing the relationship between organizational structure and organizational performance.	The study can be enriched though mixed methods research design. The influence of the performance management system can be incorporated in the study.
	Levent & mehmet(2004)	Influence of leadership on entrepreneurial orientation and expansion performance	A centralized decision making organizational structure was found to demotivate employees and negatively influenced organizational performance.	Although the study was qualitative in design, the determinants of good leadership could be expanded to include employees' skills and attitudes.
	Angote (2009)	Analyzing HRD needs in	Training is important in	The study did not investigate the

Variable	Author(Year)	Title of study	Findings	Knowledge Gaps
		the public service: The Kenya Experience	leadership	moderating role of leadership on performance
Performance of educational building infrastructural projects	Baker (2011)	Determinants of project success	Project success in infrastructural projects is blend of time, cost and quality	There is need to investigate the case of educational building infrastructural projects
	PMOK (2010)	Determinants of project completion	Project completion is a responsibility for all the stakeholders in a project	The study did not identified a list of determinants
	Ika LA, Diallo A, Thuillier D(2010)	Influence of M&E systems on performance of county government projects	County government are new entities with poorly developed M&E frameworks posing a potent for poor project performance	The study was done in a time when counties were just being set up thus need to revisit the subject 5 years after inception of counties

Variable	Author(Year)	Title of study	Findings	Knowledge Gaps
	Kontinent& Robinson (2010)	Determinants of the project monitoring function	An effective M&E system has a representation of at least 4 of the 12 standard M&E systems	The study does not specify the best combination of the components

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology refers to how you go about finding out knowledge and carrying out your research. It is your strategic approach, rather than your techniques and data analysis (Wainright, 1997).

This section describes research paradigm, research design, target population, sampling procedures and sample size, data collection methods, validity and reliability of research instruments, data analysis techniques, ethical considerations and operationalization of the variables.

3.2 Research Paradigm

A research paradigm is the set of common beliefs and agreements shared between scientists about how problems should be understood and addressed (Khan, 2003). The various paradigms used in research include; Positivism/ Post-Positivism, Constructivism, Critical theory and Pragmatism. Positivism paradigm adheres to the view that; only factual knowledge gained through observation, including measurement is trustworthy (May, 1993). This approach separates the researcher from what is being researched and findings are usually observable and quantifiable. It therefore leads to statistical analysis. Positivism is used in experimental and survey research. On the other hand, constructivism as a paradigm posits that learning is an active, constructive process and

people actively construct their own subjective representations of objective reality (Nola 1997). This approach uses open-ended questions, emerging approaches and text/image data and hence used in qualitative research.

Constructivism positions the researcher within the context and hence involves researcher in collaborating with participants. Finally, pragmatic paradigm asserts that; reality is constantly negotiated and debated but not fixed (Morgan, 2014). It embraces both qualitative and quantitative approaches and hence leads to both qualitative and quantitative data analyses. It is used in mixed methods design-based research.

The paradigm used in this study was pragmatism because its epistemology rests on the premise that; the best method is the one that solves the problems. In this study, both qualitative and quantitative data was collected and analyzed. It therefore calls for a mixed approach to research. Questionnaires with closed-ended questions and interview schedules with open-ended questions were used to collect data which was analyzed using descriptive statistics, correlation and regression analysis and also thematically. The best method therefore was the mixed one and hence pragmatism.

3.2.1 Research Design

The researcher employed descriptive survey research design. Descriptive survey design was suitable because it allows for both qualitative and quantitative surveys. It is factual

and supply practical information that can be statistically inferred on a population by allowing the researcher to measure the significance of results on overall population. The design enabled the researcher to better define opinions, attitudes or behavior held as far as utilization of monitoring and evaluation systems on performance of educational building infrastructural projects is concerned. Further, the design enabled researcher determines whether variables were correlated or not. Finally, this design allowed for critical analysis and interpretation of data, leading to generalization and prediction.

3.3 Target Population

Target Population can be defined as the sum of objects under consideration of which the statistical traits may be appropriated by the study (Khan, 2000).The target population in this study consisted of twenty (20)County implementation committee members (the county budget coordinator, County Executive Committee Member education, Chief officer public works, director M & E, eight M & E committee members from education, six from public works and two from the M & E directorate), one hundred and twenty six (126) implementation committee members at the NG-CDF level from the nine constituencies, 14 officers per constituency committee (CDF administrator, Fund manager, chair of implementation committee and 11 committee members), six(6) officers from the National Ministry of Education(the County Director of education and 5 officers) giving a total of one hundred and fifty two(152)as target population where the study sample was drawn. These respondents helped the study in understanding how

monitoring and evaluation systems under study, influence performance of educational building infrastructural projects to that the technical and administrative levels. The study was carried out in the nine constituencies of Bungoma County. This is tabulated as follows;

Table 3.1: Target Population matrix

The strata	Target population
County implementation committee	20
CDF implementation committee	126
MoE officials	6
Total	**152**

3.4 Sample Size and Sampling Procedure

This section discusses sample size and sampling procedure that was used in the study.

3.4.1 Sample Size

The study sample was 110 respondents were drawn from a target population of 152 using the Yamane (1967) formula, thus:

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

$= 152/1+152(0.05)^2$

$= 110$

Where n = required sample size

N = targeted population (152 respondents)

e^2= error limit (0.05)

Substituting N in the above formula yields a sample size of 110 respondents. Therefore, the sample size was 110 respondents.

Where n is the sample size, N is the population size, and is the level of precision.

3.4.2 Sampling Procedure

The number of respondents was selected proportionally to get the sample size from each strata as shown in table 3.2

Table 3.2: Sampling Procedure

The strata	**Target population**	**Sample size**	**Sampling Procedure**
County implementation committee	20	15	Simple Random
CDF implementation committee	126	91	Simple Random
MOE officials	6	4	Simple Random
Total	**152**	**110**	

The selection of a sample from each stratum was based on proportionate method to ensure representation according to each stratum strength as shown in Table 3.2.

The sampling technique used in selecting the sample strata was purposive sampling since it is non-probability sampling because the study specifically targeted those involved in the implementation of projects and not just anybody else. Also it represents many non-probability sampling techniques.

Simple random sampling was employed in picking the sample size from each stratum which assumes that whoever is picked from the group is able to provide information the researcher seeks for and they are a homogenous group.

3.5 Research Instruments

The study's main instruments of data collection were questionnaires for the M & E committee members and interview schedules for key informants.

The questionnaires helped in collecting quantitative data while the interview guides helped in gathering qualitative data. The questionnaires that were used utilized both structured (closed ended) and un-structured (open-ended) items. By structured items it means that the questions will be accompanied by a list of all possible alternatives from which respondents select the answer that best describes their situation (Khan, 2000).

The questionnaires were divided into seven sections as follows; Section A showing background information, Section B, Data dissemination and use and performance of educational building infrastructural projects, Section C, M&E work plan and performance

of educational building infrastructural projects, Section D, Routine program monitoring and performance of educational building infrastructural projects, Section E on performance of educational building infrastructural projects, Section F on Organizational culture and performance of educational building infrastructural projects and finally, Section G on Leadership and performance of educational building infrastructural projects in Bungoma county.

The questionnaire was handy in that it was able to collect a lot of information needed concerning M & E systems and performance of educational building infrastructural projects in Bungoma County. Open-ended questions were included in the instrument for the advantage of giving insight. The questions on the interview schedule covered all aspects of data dissemination and use, M & E work plan, routine program monitoring, organizational culture and Leadership on performance of educational building infrastructural projects.

3.5.1 Pilot Testing of instruments

A pilot study sharpens the research hypotheses to be studied, identifies relevant factors that could create barriers to subsequent study and evaluates acceptability of methods and instruments to participants (clin Trans Sci, 2011). Based on this, the researcher undertook a pilot study in the neighboring Busia County to ensure that the instruments are adjusted accordingly to ensure reliability. A sample size of 11 respondents

comprising; 1 executive committee member for education, 1 county budget coordinator, 1 chief officer public works, 1 county director of education from the national ministry and 7 project implementation committee members of Nambale CDF was picked based on ((Khan, 2000) theory stating that a sample size for a pilot study is 10% of the sample which was 110 respondents. Interview schedules were administered to the 4 officials as the 7 members were given questionnaires to respond to.

At the end of data collection exercise, data was analyzed, gaps identified, questions rephrased and questionnaires taken back to the respondents to be filled again. The outcomes of this session were keenly recorded and in cooperated in the data analysis and synchronizing the data collection tools to ensure their reliability.

3.5.2 Validity of the Instruments

Kothari (2004) stated that validity indicates the degree to which an instrument is supposed to measure, that is the extent to which differences found with measuring instruments reflect true differences among those who have been tested. This study adopted content validity where there is agreement that a scale systematically reflects accurately what it is measuring.

To ascertain this, the instruments were subjected to analysis by the researcher's supervisors. They looked at construct validity of the instruments by checking phrasing of

the questions to determine whether they will elicit the required responses or not. In essence, they assessed the relevance of the contents used in the instruments with regards to their objectivity, ability to capture the desired responses, ability to be analyzed, ease of communication among others. The supervisors also did face validity by looking at and judging the instruments to ensure proper layout. Pilot study was also used to enhance validity. The researcher then developed and made structured changes for the purpose of improvement and refinement before embarking on the actual data collection process.

3.5.3 Reliability of the Instruments

Reliability is the ratio to which the instrument provides consistent data after a number of trials (Khan, 2000). Reliability indicates the stability and consistency with which the data collection instrument measures the concept. Cronbach's alpha (1951) reliability coefficient was used to measure the internal consistency or average correlation of items in a survey instrument to gauge its reliability because it is the most common measure of internal consistency when one has multiple Likert questions in a questionnaire that form a scale and wishes to determine if the scale is reliable.

To run a Cronbach's alpha on a sample of 11 respondents, in SPSS statistics, the numbers of questions were labeled from the first to the last and the data entered into SPSS statistics. The outcome was as in Table 3.3

Table 3.3: Reliability Test Results

Cronbach's Alpha	No of Items	Coefficient
Data dissemination	4	0.622
M&E work plan	4	0.822
Routine program monitoring	4	0.443
Organizational culture	3	0.663
Leadership	5	0.574
Performance of educational building infrastructural projects	5	0.631
Total	**25**	**0.643**

The value 0.643 shows that the reliability is high, since Cronbach's alpha coefficient test recommends a value of 0.6 and above.

3.6 Data Collection Procedures

The research permit was sought from the National Commission for Science, Technology and Innovation (NACOSTI) through the department of Graduate studies of the University of Nairobi before proceeding to the field to collect data in the targeted departments in Bungoma County. With the permit, the researcher proceeded to the field

for data collection. The researcher sought the consent of the respondents over if they can help in responding before issuing them the questionnaires.

The questionnaires were administered to the respondents in person after seeking the consent to issue from the respondents. The questionnaires were collected back for analysis in person as well.

3.7 Data Analysis Techniques

Descriptive analysis and inferential statistics was employed in data analysis. This study used frequencies and percentages because of their ease in showing the research findings to majority of the readers (Khan, 2000). Frequencies easily show the number of subjects in a given category. Percentages were used to compare sub-groups that differ in size and population. Inferential statistics in form of Pearson's product moment coefficient, Analysis of variance, coefficient of determination and multiple regression analysis were used in this study to analyze quantitative data. Pearson product moment correlation coefficient was used to determine the relationship between monitoring and evaluation systems and performance of educational building infrastructural projects in Bungoma County.

Coefficient of determination and regression analysis was computed using Statistical Package for Social Sciences (SPSS) to determine the extent to which they are related. Multiple regression analysis was computed so as to determine the inter correlation

among the variables while qualitative data from interviews was read carefully, paying attention to comments, ideas and concerns from participants transcribed and analyzed.

For the first objective, the relationship between data dissemination and use and performance of educational building infrastructural projects in Bungoma County was determined by use of regression analysis as per the model; the hypothesis was tested at 95% level of confidence.

Model for testing hypothesis;

$$\mathbf{Y = \beta_{0i} + \beta_i X_i + \varepsilon, ,}\text{.....}(3.1)$$

Where, $\boldsymbol{\beta_{0i}}$ is the overall effect of the independent variable on Y; $\boldsymbol{\beta_{0i,}}$ is the intercept for the linear equation and $\boldsymbol{\varepsilon}$ is the corresponding error term in the equation. The overall regression is as shown in equation 3.2

$$\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon,}\text{.....}(3.2)$$

Where;

$\mathbf{Y}$	=	Performance of educational building infrastructural projects
$\mathbf{X_1}$	=	Data dissemination and use
$\mathbf{X_2}$	=	M & E work plan
$\mathbf{X_3}$	=	Routine programme monitoring
$\boldsymbol{\varepsilon}$	=	the error term
$\boldsymbol{\beta_0}$	=	Constant (the intercept of the model)
$\boldsymbol{\beta_{1...}\beta_4,}$	=	Coefficients of the X (independent) variables.

The independent variables were combined to form one single variable which is indicated in the following equation

$\mathbf{Y = \beta_0 + \beta_c X_c + \varepsilon}$,……………………………………………………………......(3.3)

Where

Y	=	Performance of educational building infrastructural projects
$\mathbf{X_c}$	=	combined M & E systems
ε	=	the error term
$\mathbf{\beta_0}$	=	Constant (the intercept of the model)
$\mathbf{\beta_c}$,	=	Coefficients of the X_c (independent) variable.

Moderated Model

Moderation effects are typically viewed as an interaction between factors or variables, where the effects of one variable depend on levels of the other variable in analysis. (Fairchild and Mackinnon, 2009).

$Y = \mathbf{\beta_0 + \beta_i X_i + \beta'_i Z + \beta''_i XZ + \varepsilon_i}$,…………………………………………….....(3.4)

Where;

Y	=	Performance of educational building infrastructural projects
$\mathbf{X_1}$	=	combined M & E systems
Z	=	Organizational Culture
ε	=	the error term
$\mathbf{\beta_i}$	=	coefficient relating the independent variable, X_i, to Y, when Z = 0,
$\mathbf{\beta'_i}$	=	coefficient relating the moderator variable, Z, to Y, when X = 0,
$\mathbf{\beta_0}$	=	the intercept in the equation, and **ε** is the residual in the equation.

$Y = \mathbf{\beta_0 + \beta_i X_i + \beta'_i Z + \beta''_i XZ + \varepsilon_i}$,…………………………………………….....(3.5)

Where;

Y	=	Performance of educational building infrastructural projects
$\mathbf{X_1}$	=	combined M & E systems

$\mathbf{Z}$ = Leadership

$\boldsymbol{\varepsilon}$ = the error term

$\boldsymbol{\beta_i}$ = coefficient relating the independent variable, X_i, to Y, when Z = 0,

$\boldsymbol{\beta_i^{'}}$ = coefficient relating the moderator variable, Z, to Y, when X = 0,

$\boldsymbol{\beta_0}$ = the intercept in the equation, and $\boldsymbol{\varepsilon}$ is the residual in the equation.

Information was sorted, coded and input into the statistical package for social sciences (SPSS) version 21.0 for production of graphs, tables, descriptive statistics and inferential statistics.

3.7.1 Diagnostic Tests

Diagnostic test is a requirement before any classical linear regression analysis is conducted. These tests are based on a set of assumptions that are usually made concerning the unobservable error or disturbance terms and the generalizability of the results (Brooks, 2014) and include: linear relationship between parameters, use of random sampling, no perfect collinearity, uni-dimensionality, specification of the relationship between the variables, data independence, normally distributed and homoscedastic (Wooldridge, 2009).

Linearity is assessed by examining scatter plots of the variables, running a simple regression analysis to detect non-linearity in the residuals (Saunders *et al*., 2009) or testing an alternative model specification through curve fitting (Hair *et al*., 2010).

If non – linearity is as a result of extreme values on one or more variables, the remedy includes: identifying and excluding the outliers from analysis; transform one or both variables; and creating of new variables to represent the non - linear portion of relationship (Hair *et al*., 2010, Saunders *et al*., 2009). The study will run a number of linear regression models in order to compare the relative fit of the models rather than to establish the validity of a single model while a Cronbach's alpha coefficient of 0.8 which may be in the form of an index or scale will serve as a measure for unidimensionality(Garson (2013).Both graphical plots and Shapiro-Wilk test for small and medium samples size, n = 2000 or Kolmogorov-Smirnov test for large sample can be used to assess the actual degree of departure from normality. The W- test statistic which is significantly smaller than 1, indicates that the normality assumption is not met and in such cases the variable in question is first transformed by taking, the square root, logarithms, squared or cubed terms or even the inverse of the variable before (Garson, 2013).

The test for homoscedasticity is carried out to determine whether the variables display constant variance. The test for homoscedasticity is best examined graphically or through the use of Breusch-Pagan-Godfrey test. A finding of significance means the null hypothesis is rejected and homoscedasticity cannot be assumed (Garson, 2013).

If heteroscedasticity is as a result of non-normality in one of the variables, the remedies includes data transformations similar to those of correcting non-normality or through the use of weighted least squares regression in a linear regression context (Hair *et al*., 2010). In cases of high collinearity or multicollinearity, or the presence of high correlations (generally 0.90 and above) (Hair *et al.,* 2010), the rule of thumb is that cut-off value for variance inflation factor(VIF) is ≥10 or a tolerance figure of 0.1 (Sekaran and Bougie, 2010). In such cases the variable in question is dropped from the analysis (Sekaran and Bougie, 2010; Saunders *et al*., 2009).

3.8 Ethical consideration

In this research, the researcher considered confidentiality, privacy and informed consent of the respondents. Confidentiality is the right to maintain autonomy on data collected while privacy refers to the control of who accesses personal information.

The confidentiality of all respondents was ensured by hiding their personal information in the research. Only appropriate information that helped in answering the research questions was included. The researcher owed loyalty to the informants and honored promises associated with the research.

Ethical issues require informed consent by all participants agreeing to the research before it commences and are informed what the research is about and their role in the

research. The respondents in this research were informed adequately about the procedures to be followed in the research, expected duration of participation, the context of privacy/confidentiality and the purpose of the research. From this, the respondents made their decision to participate in the study based on adequate knowledge of the study.

3.9 Operationalization of the Variables

This section focuses on operationalizing the variables of the study.

Table 3.4 Operationalization of the Variables

Objective	Variable	Indicators	Scale of Measurement	Research Approach	Data analysis techniques	Tools of analysis
To determine the extent to which data dissemination and Use influence performance of educational building infrastructural projects in Bungoma	Data Dissemination and use	• Dissemination system in place • Information disseminated to key stakeholders • Timely distribution of information to stakeholders	Interval	Quantitative Qualitative	Parametric analysis Non Parametric	Frequency, percentages, means, standard deviation, correlation & regression

County.		• Stakeholder data dissemination and validation workshop				
To assess how M & E work plan influences performance of educational building infrastructural projects in Bungoma County.	M & E work plan	• Work plan adhering to organizational strategic plan • Implementation of activities outlined in the work plan • Budgets allocated to work plans • Decision making based on work plans	Interval	Quantitative Qualitative	Parametric analysis Non Parametric	Frequency, percentages, means, standard deviation, correlation & regression

To examine how the combined M & E Systems influence performance of educational building infrastructural projects in Bungoma County.	M & E Systems	• Evidence of use of all • Evidence of use of any (2) • Evidence of use of any (1) • Failure to use any	Interval	Quantitative Qualitative	Parametric analysis Non Parametric	Frequency, percentages, means, standard deviation, correlation & regression
To assess how organizational culture Moderates	Organizational Culture	• Vision and mission • Organizational values • Employee attitude	Interval	Quantitative Qualitative	Parametric analysis	Frequency, percentages, means, standard

the relationship between utilization of monitoring and evaluation systems and performance of educational building infrastructural projects in Bungoma County					Non Parametric	deviation, correlation & regression
To assess how Leadership moderates the	Leadership	• Laissez faire, • Participative, • Autocratic,	Interval	Quantitative Qualitative	Parametric analysis	Frequency, percentages, means, standard

relationship between monitoring and evaluation systems and performance of educational building infrastructural projects in Bungoma County		• Transactional, • Transformative			Non Parametric	deviation, correlation & regression
	Performance of educational building	-Adherence to manual design specifications -Quality of material used	Interval	Quantitative Qualitative	Parametric analysis	Frequency, percentages, means, standard

	infrastructural projects	-Buildings completion rates -Number of new buildings completed			Non Parametric	deviation, correlation & regression

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSIONS

4.1 Introduction

The chapter presents findings of the study which has been analysed in line with the study objectives using thematic and sub thematic areas as follows: questionnaire return rate, background information of the respondents and thematic areas of data dissemination and use and performance of educational building infrastructural projects, M & E Work plan and performance of educational building infrastructural projects, routine program monitoring and performance of educational building infrastructural projects, M & E systems combined and performance of educational building infrastructural projects, organizational culture moderating the relationship between Monitoring and Evaluation systems and performance of educational building infrastructural projects and finally leadership moderating the relationship between Monitoring and Evaluation systems and performance of educational building infrastructural projects.

4.2 Questionnaire Return Rate

The study used questionnaires as a tool for data collection. The sample size of the study was 110 respondents comprising of 15 county government implementation committee members, 91 CDF implementation committee members and 4 MOEST officials. Out of the 110 questionnaires, 104 were filled and returned. This represented a return rate of

94.6% which was good when compared to the recommended response rate to verify consistency of measurements required for analysis (75% based on Nachimias and Nachimias, 2005). Table 4.1 shows this information;

Table 4.1: Questionnaire Return Rate

Questionnaire	Number	Percentage %
Delivered	110	100
Returned	104	94.6
Not returned	06	5.4

However, six questionnaires were not returned despite making several attempts to have them returned, and given that the return rate was adequate for social science research the study proceeded.

4.3 Demographic Information of respondents

The study examined the respondents in respect to their age, gender, academic qualifications and whether they had ever attended a course in monitoring and evaluation or not. It was important to consider the above demographic characteristics of respondents to see whether they have any implications on performance of educational building infrastructural projects. The respondents who participated in the study were therefore to state, their gender, age, academic qualifications and whether they had ever attended any

course in M&E. The results are presented in table 4.2 for each category of demographic in focus.

Table 4.2: Socio-Demographic Characteristics of Respondents

Variable	Categories	Frequency(f))	Percent(%)
Gender	Male	65	62.5
	Female	39	37.5
	Total	**104**	**100.0**
Age	26 to 35 years	35	33.7
	36 to 45 years	43	41.3
	Above 46 years	26	25.0
	Total	**104**	**100.0**
Level of education	O – level	17	16.3
	A level	10	9.6
	Certificate/ diploma	44	42.3
	Graduate	25	24.0
	Total	**104**	**100.0**
Attended M&E Course	No	67	64.4
	Yes	37	35.6
	Total	**104**	**100.0**

On age, the study established that out of 104 who participated in the study, 35(33.7%) were in the age bracket of 26 to 35 years, 43(41.3%) were in the age bracket of 36 to 45 years and 26(25%) fell in the age bracket of 46 years and above. In summary (69) (66.3%) were aged above 35 years. This implies that most committee members are not youths and this could lead to lack of innovation to ensure modern infrastructure within Bungoma County.

In the gender category, out of the 104 participants, 65(62.5%) were male while 39(37.5%) were female. In general, majority (65) (62.5%) were male.

This shows that more men are considered in the formation of project committees as compared to women implying that building infrastructural projects remains a male domain within Bungoma County.

As for the level of education of the respondents,17(16.3%) were 0' Level, 10(9.6%) were A' Level, 44(42.3%) were diploma holders, 25(24%) were graduates and none was post graduate. It was established that majority of the participants (77) (74.1%) were holders of diploma and above. (27) (25.9%) had lesser academic qualifications. It was therefore true that most of the committee members had good academic qualifications implying that the level of education was not wanting in building infrastructural projects within Bungoma County.

Lastly in having attended M&E course or not, out of the 104 participants,37(35.6%) had attended an M&E Course while 67(64.4%) had not attended any M&E course. In summary, (67) (64.4%) had never attended any course in Monitoring and Evaluation while only 37(35.6%) had attended. Majority of the committee members had not attended any course in M&E implying that committee members lacked the capacity for M&E of educational building infrastructural projects hence poor performance of educational building infrastructural projects in Bungoma County. This could inform why most of

building infrastructural projects remain uncompleted or delayed in completion, because they lack capacity to monitor the progression of the projects.

4.4. Tests for Statistical Assumptions

This section begins with the control of Type I and Type II errors and then the test for statistical assumptions is carried. These tests include: tests of normality, linearity, multicollinearity, linear relationship between the variables, and heteroscedasticity were carried out in order to control the disturbance term. They are the diagnostic tests which are carried out before any classical linear regression analysis is conducted.

4.4.1 Control of Type I Error and Type II Error

The control Type I and Type II errors is critical in the validity of the statistical findings in that wrong interpretation of results may occur during tests of various statistics. Type I error occurs when the null hypothesis is rejected when it was supposed to be accepted while Type II error occurs when the null hypothesis is accepted when it was supposed to be rejected (Larry, 2013). The study control both Type I and II errors from occurring by specifying the α at 0.05 levels and thus the researcher was able to establish the level of acceptable statistical significance.

4.4.2 Tests for Normality

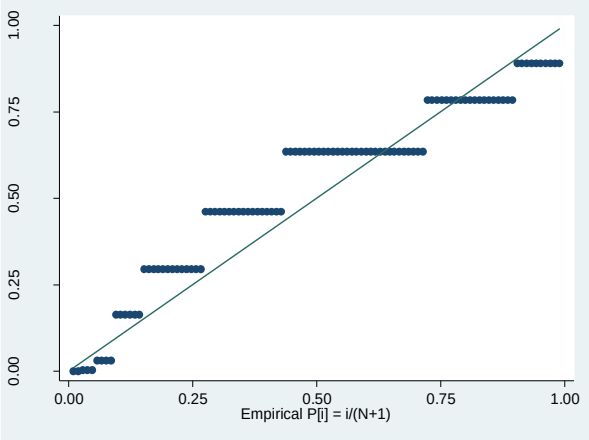
The study used both the graphical plots and any statistical tests to assess the actual degree of departure from normality as suggested by Hair et al., (2010). First, the study ran the

statistical tests of normality that is the Shapiro – Wilk test. The data showed some instance of non- conformance to normality and thus graphical analysis of normality was used. The interpretation of graphical analysis is based on the fact that if the actual data distribution closely follows the straight diagonal line of the normal distribution, then the data variables come from a normally distributed population.

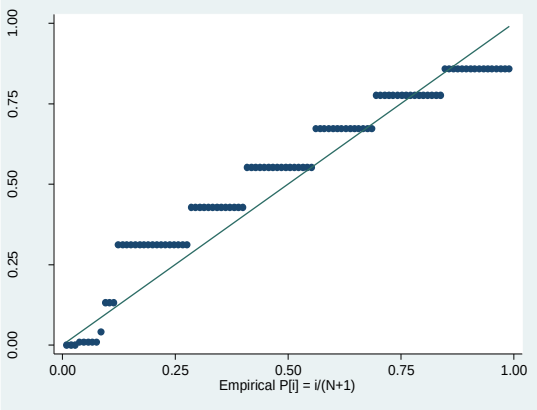
Table 4.3: Shapiro – Wilk Normality Test

Variable	Obs	W	z	Prob>z
Data dissemination and use	104	0.84724	5.708	0.00000
M & E work plan	104	0.83908	5.823	0.00000
Routine program monitoring	104	0.90788	4.583	0.00000
M & E systems combined	104	0.94513	3.432	0.00030
Organizational culture	104	0.98325	0.794	0.21374
Leadership	104	0.98425	0.657	0.25550

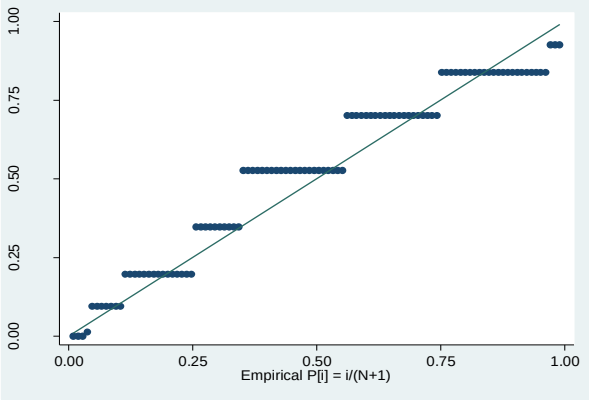
The test shows that only two variables; organizational culture and leadership; have W which the $p > 0.05$, indicating they do not violate the assumption of normal distribution. However, the graphical analysis of the normality indicates that the data variables closely follow the straight diagonal line as indicated in the figures.



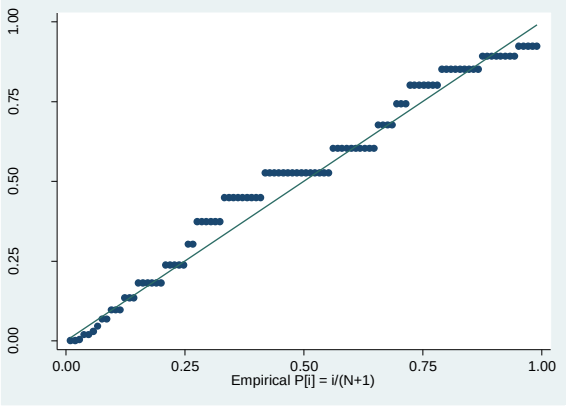
Normality plot for Data dissemination and use



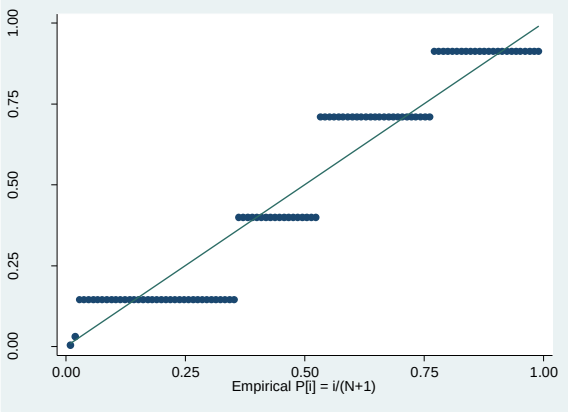
Normality plot for M & E work plan



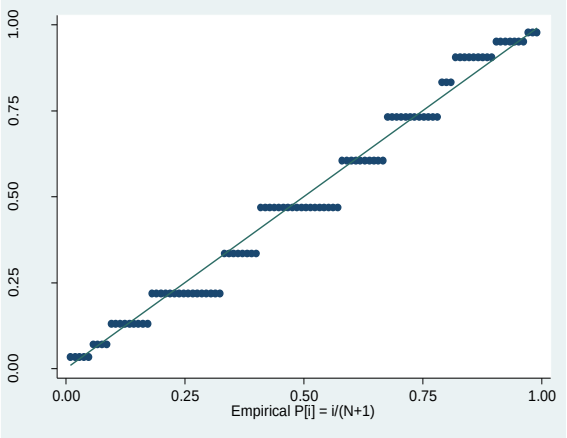
Normality plot for Routine program monitoring



Normality plot for M & E systems combined



Normality plot for Organizational culture

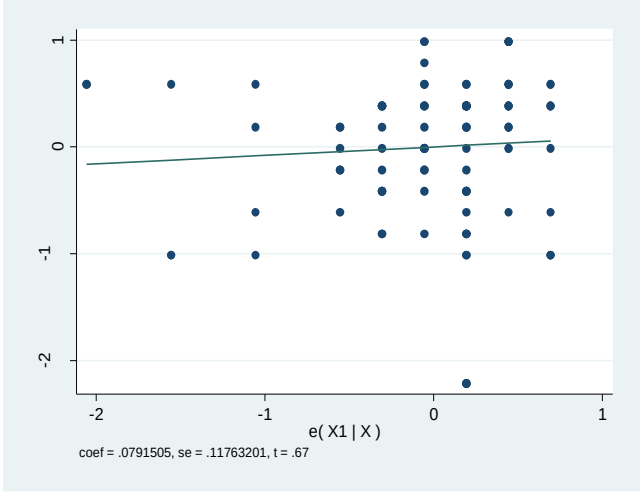


Normality plot for Leadership

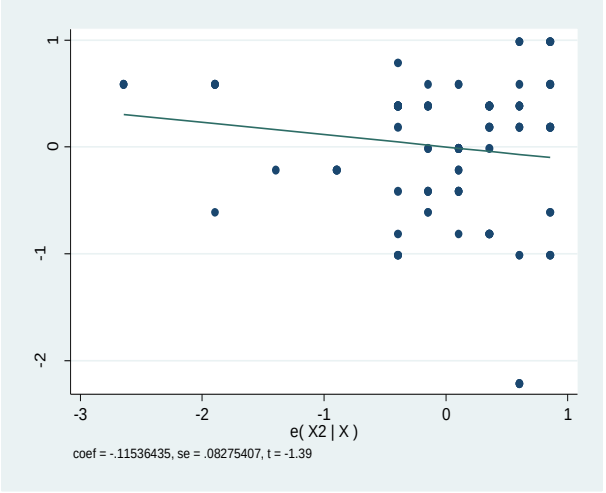
Figure 2: Normality Plots for the variables

4.4.3 Tests for Linearity

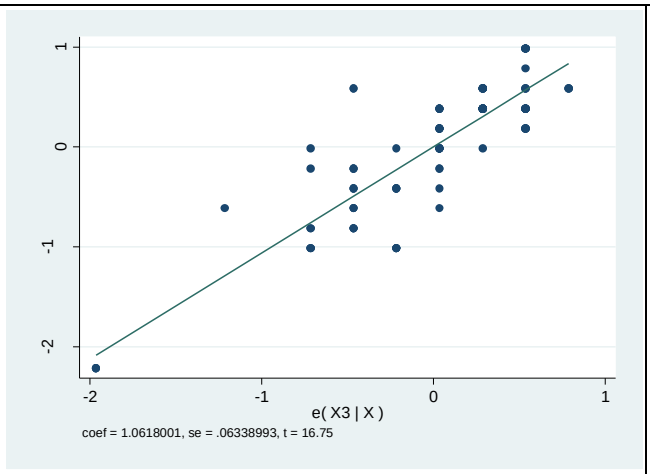
Linearity assumptions of singularity were checked before the regression analysis. During data analysis, singularity occurs when an independent variable is formed from a combination of other independent variables. The study used the most common of assessing linearity which examines the scatter plots of the variable in order to identify any non-linear patterns of the data and this included; a simple regression analysis and modeling a non-linear relationship by testing an alternative model specification (curve fitting) to bring out nonlinear elements (Hair *et al.,* 2010). The scatter plots in Figure 4.2 indicate that the independent variables were to some extent linearly related with the dependent variable.



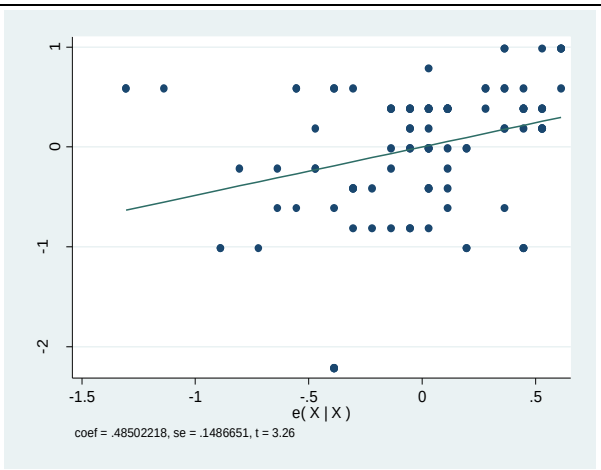
Scatter plot for data dissemination and use



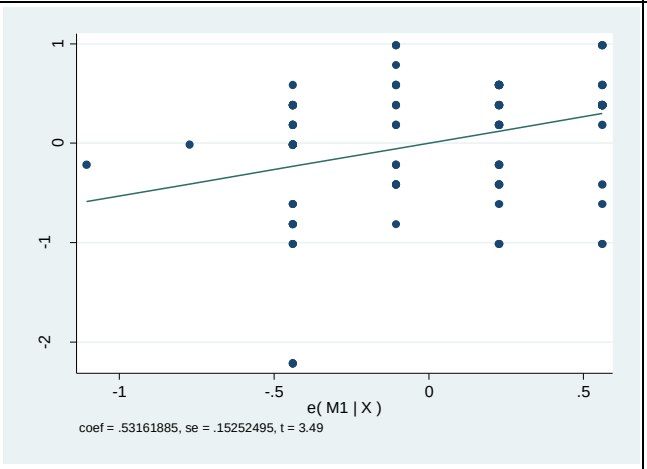
Scatter plot for M & E Work plan



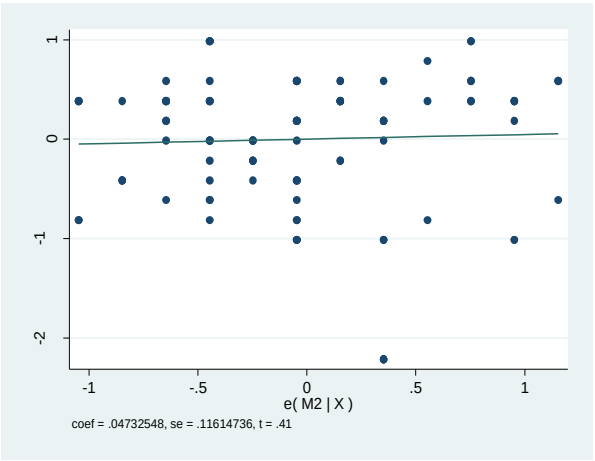
Scatter plot for routine program monitoring



Scatter plot for M & E systems combined



Scatter plot for organizational culture



Scatter plot for leadership

Figure 3: Scatter Plots for the variables

4.4.4 Tests for Linear Relationship

The correlation coefficient indicates the statistical measure of co-variation, or association between two variables which indicates both the magnitude of the linear relationship and the direction of that relationship (Coopers and Schindler, 2014). A correlation coefficient of less than 0.3 signifies a weak correlation, 0.3 – 0.5 is moderate and greater than 0.5 is

strong, with correlation coefficients, r≥ ±0.9 indicate the presence of multicollinearity in the data set (Henson and Roberts, 2006).

Table 4.4: Correlation Statistics

	Performance of projects	Data dissemination	M & E work plan	Routine program monitoring	Organizational culture	Leadership
Performance of educational building infrastructural projects	1	0.166*	-0.137*	0.856*	0.326*	0.040
Data dissemination	0.166*	1	0.524*	-0.001	0.296*	0.067
M & E work plan	-0.137*	0.524*	1	-0.098	0.000	0.071
Routine program monitoring	0.856*	-0.001	-0.098	1	0.395*	0.142
Organizational culture	0.326*	0.296*	0.000	0.395*	1	.467*
Leadership	0.040	0.067	0.071	0.142	0.467*	1

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

The data in table 4.4 shows that the indicators of performance of the educational building infrastructural projects, positively correlated with Data dissemination and use($r = 0.166$, $p<0.05$) meaning that a positive variation in Data dissemination results in a positive variation in performance. Further, M & E work plan ($r =- 0.137$, $p< 0.05$) correlated negatively with performance, meaning that a positive variation in M&E work plan results in a negative variation in performance. Routine programme monitoring correlated positively($r= 0.856$, $p< 0.05$) with performance, implying that a positive variation in Routine programme monitoring results in a positive variation in performance. Organizational culture correlated positively ($r= 0.326$, $p < 0.05$) as a moderator in the relationship between M&E systems and performance, which means that positive changes in organizational culture results in positive influence of the relationship between M&E systems and performance.

Finally, leadership positively correlated ($r= 0.040$, $p < 0.05$) as a moderator , meaning that a positive change in leadership results in a positive influence in the relationship between M&E systems and performance.

4.4.5 Tests for Collinearity

The test for collinearity for the regression residuals was tested using both VIF and tolerance values as indicated in Table 4.5. The statistics show that all VIF values were below 10, while at the same time the tolerance values were greater than 0.1. The significant cut off points for the collinearity between independent variables thus indicating that multi-collinearity wasn't encountered.

Table 4.5: Collinearity Statistics

Variable	VIF	Tolerance	Conclusion	Analysis
Direct effects model				
Data dissemination and use	1	1	No multicollinearity	Table 4.8
M & E work plan	1	1	No multicollinearity	Table 4.12
Routine program monitoring	1	1	No multicollinearity	Table 4.16
M & E systems - X1	1.38	0.72239	No multicollinearity	Table 4.17
- X2	1.40	0.71541	No multicollinearity	
- X3	1.01	0.98685	No multicollinearity	
Moderated effects model 1				
M & E systems	1.53	0.655702	No multicollinearity	Table 4.19
Organization culture	1.29	0.773886	No multicollinearity	
M & E systems# Organization culture	1.36	0.735880	No multicollinearity	
Moderated effects model 2				
M & E systems	5.61	0.178197	No multicollinearity	Table 4.21
Leadership	4.89	0.67175	No multicollinearity	
M & E systems# leadership	2.61	0.383481	No multicollinearity	

4.4.6 Tests for Heteroscedasticity

The test for heteroscedasticity was examined through the use of Breusch-Pagan-Godfrey test with a finding of significance meaning the null hypothesis is rejected and homoscedasticity cannot be assumed (Garson, 2013). In some cases, if heteroscedasticity was observed and were as a result of non-normality; the study remedied the problem through the use of weighted least squares regression in the regression (Hair *et al*., 2010).

Table 4.6: Test for Heteroscedasticity

χ^2 value	p-value	Conclusion	Action	Analysis
0.31	0.5792	homoscedasticity can be upheld	None	Table 4.8
9.78	0.0018	homoscedasticity cannot be upheld	Use of WLS method	Table 4.12
4.23	0.0397	homoscedasticity cannot be upheld	Use of WLS method	Table 4.16
2.99	0.0839	homoscedasticity can be upheld	None	Table 4.17
12.54	0.4443	homoscedasticity can be upheld	None	Table 4.19
15.72	0.0000	homoscedasticity cannot be upheld	Use of WLS method	Table 4.21

4.5. Data Dissemination and use and Performance of Educational Building Infrastructural Projects.

One of the objectives of the study was to determine the extent to which data dissemination and use influence performance of educational building infrastructural projects. To achieve this, respondents were asked to give their opinions on how they agree or disagree with the statements in Likert scale of 1-5, where 1= strongly disagree, 2= disagree, 3= not sure, 4= agree, 5= strongly agree. The results are presented in table 4.7.

Table 4.7: Descriptive Statistics for Data Dissemination and Use

Statement		SD	D	U	A	SA	Tot	Mean	SD
The act of sharing information about the project to stakeholders increases their ownership and appreciation of the project	F	0	3	7	10	84	104	4.68	.728
	%	0	2.9	6.7	9.6	80.3	100		
Making public project information increases transparency and accountability in a project	F	71	3	4	26	0	104	4.58	.705
	%	68.3	2.9	3.8	25	0	100		
Timely distribution of information to stakeholders helps in managing their expectations towards the project	F	0	3	8	40	53	104	4.37	.753
	%	0	2.9	7.7	38.5	51.0	100		
Stakeholder data dissemination and validation workshop should not be held during implementation	F	2	23	9	53	17	104	3.58	1.07
	%	1.9	22.1	8.7	51	16.3	100		
Composite mean and Standard Deviation								**4.305**	**0.566**

On act of sharing information about the project to stakeholders increasing their ownership and appreciation of the project, out of 104 respondents who participated in the study, 84(80.3%) strongly agreed, 10(9.6%) agreed, 7(6.7%) were not sure, while 3(2.9%) disagreed. Since 94(90.4%) of the respondents agreed, it is agreeable to say that sharing information about the project to stakeholders increases their ownership and appreciation of the project. This is supported by the mean of 4.6827 which is way above the composite mean of 4.3053. This validates findings of a study by Sayyed (2012) that linked performance of projects to proper data systems stating that allowing project stake holders access information enhances their appreciation of the project.

On making public project information increasing transparency and accountability in a project, out of 104 respondents who participated in the study, 71(68.3%) strongly disagreed, 3(2.9%) disagreed, 4(3.8%) were not sure, 26(25%) agreed while none strongly agreed. This means that 74(71.2%) disagreed with the statement that, making public project information increases transparency and accountability in a project while 26(25%) agreed with the statement. This is confirmed by the mean of 4.5865 implying that according to this study, making public project information does not increase transparency and accountability in a project. This means that implementing committees in Bungoma do not believe in making project information public and this casts doubt on transparency and accountability in project implementation in Bungoma County.

On timely distribution of information to stakeholders helping in managing their expectations towards the project, out of 104 respondents who participated in the study, 53(51%) strongly agreed, 40 (38.5%) agreed, 8 (7.7%) were not sure while 3 (2.9%) did not agree. This shows that 93 (89.5%) of the respondents were in agreement that, timely distribution of information to stakeholders helps in managing their expectations towards the project as opposed to only 3 (2.9%) who did not agree. This is reflected in the mean of 4.3750 which is above the composite mean 4.3053 implying that timely distribution of information to stakeholders influences performance of projects as supported by the study by Sayyed (2012).

On the issue of stakeholder data dissemination and validation workshop not being held during project implementation, out of 104 respondents who took part in the study, 17(16.3%)strongly agreed,53(51%) agreed, 9(8.7%) were not sure, 23(22.1%) disagreed, while 2(1.9%) strongly disagreed. From the study 70(67.3%) agreed with the assertion that stakeholder data dissemination and validation workshop should not be held during project implementation as supported by the mean of 3.5769 suggesting that stakeholder data dissemination and validation workshop does not influence performance of educational building infrastructural projects.

The above findings are supported by the qualitative analysis demonstrated by the statement:

"We are appointed to represent the people and all our working is centered on involving the people because once the people feel we are involving them in planning and implementation, they will embrace our projects". (Kimilili CDF, 2017)

4.5.1 Regression Analysis for Data Dissemination and Use and Performance of Educational Building infrastructural projects.

Regression Analysis of date dissemination and use on performance of educational building infrastructural projects was done and generated Table 4.8.

Table 4.8: Data dissemination and use on performance of infrastructural projects in Bungoma County.

ANOVA statistics					
Model	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
Regression	.207	1	.207	F(1,102) = 1.94	0.166
Residual	46.568	102	.457		
Total	46.775	103	.454		

R-squared = 0.004	Adj R-squared = -0.005	Root MSE= .056

Coefficient estimates							
Performance of project	Unstd Coefficient.	Std beta	Std. Err.	t	P>t	[95% Conf. Interval]	
Constant	3.675		.511	7.19	0.000	2.662	4.688
Data dissemination and use	.079	.066	.118	0.67	0.503	-0.154	.312

Data dissemination and use does not explain any variations in performance of educational building infrastructural projects in Bungoma County. Since the overall model is not statically significant, all the beta coefficients are not significant.

4.5.2 Test of Hypothesis one

The study sought to determine the extent to which data dissemination and use, influence performance of educational building infrastructural projects in Bungoma County.

The null and alternative hypotheses were;

H_{01}: Data dissemination and use has no significant influence on performance of educational building infrastructural projects in Bungoma County.

H_1: Data dissemination and use significantly influences performance of educational building infrastructural projects in Bungoma County

This was tested at 95% level of confidence and from the regression analysis the statistic, $F(1, 102) = 1.94$, $p > 0.05$, shows that the regression model is not statistically significant in predicting the dependent variable, the study finding therefore fails to reject the null hypothesis that Data dissemination and use has no significant influence on performance of educational building infrastructural projects in Bungoma County and therefore concludes that Data dissemination and use does not influence the performance of educational building infrastructural projects in Bungoma County.

This finding validates Ogbene (2012) findings in a similar study which sought to examine influence of M&E systems on implementation of educational projects. The study revealed a negative correlation between Data dissemination and use and implementation of educational projects. The findings on the other hand contradicts Sayyed (2012) finding in an empirical survey on Data dissemination and performance which revealed that stakeholder involvement in Data dissemination system positively influences stakeholder abilities and creativity.

4.6 M&E Work plan and Performance of Educational Building Infrastructural Projects.

The second objective that the study sought to achieve was to assess how M&E Work plan influence performance of educational building infrastructural projects. The study began by seeking to establish whether the respondents had work plans.

The responses were as in Table 4.9.

Table 4.9: Presence of a work plan for implementing M&E

	Response	**Frequency**	**Percentage**
1	Yes	13	12.5
2	No	90	86.5
3	Not sure	1	1
	Total	**104**	**100**

Out of the 104 respondents who participated in the study, 13(12.5%) agreed that they use M&E Work plans while 90(86.5%) disagreed and 1(1%) was not sure. These findings imply that building infrastructural projects are implemented without adhering to the M&E Work plan and this may increase chances of poor performance of the construction projects in public educational institutions. This implies that M&E work plans are not being utilized in the implementation of educational building infrastructural projects in Bungoma County.

The study sought to establish the level of conformance and utilization of M&E Work plan. The results are presented in the Table 4.10.

Table 4.10: The level of Conformance to the work plan

	Response	**Frequency**	**Percentage**
1	Below 50%	10	9.6
2	50%	49	47.1
3	Fully complaint	35	35.6
4	Not applicable	8	7.7
5	Not sure	3	2.9
	Total	**104**	**100**

From Table 4.10, it shows that out of 104 respondents who took part in the study 8(7.7%) indicated not applicable while 10(9.6%) said conformance and utilization is below 50%. 49(47.1%) indicated conformance and utilization was 50%, 35 (35.6%) indicated that they were fully compliant even as 3(2.9%) were not sure. This implies that majority of the respondents 67 (64.4%) do not comply with the M&E Work plan and hence implementation of the educational projects is being done in total disregard of M&E work plans.

Respondents were requested to give their opinions on how they agree or disagree with the statements in a Likert scale of 1-5, where 1= strongly disagree, 2= disagree, 3= not sure, 4= agree, 5= strongly agree. The results are presented in Table 4.11.

Table 4.11: Descriptive Statistics for M & E Work plan

Statement		SD	D	U	A	SA	Tot.	Mean	SD
A project work plan should be in line with the organizational strategic plan	F	0	3	0	47	54	104	4.46	.652
	%	0	2.9	0	45.2	51.9	100		
Implementation of project activities is in line with the work Plan	F	0	8	8	40	48	104	4.23	.895
	%	0	7.7	7.7	38.5	46.2	100		
The amount of money estimated for implementing a project strongly determined the level of success of that particular project	F	9	3	3	57	32	104	3.96	1.111
	%	8.7	2.9	2.9	54.8	30.8	100		
Every decision made concerning a particular project is in reference to the project work plan	F	3	19	4	35	43	104	3.92	1.200
	%	2.9	18.3	3.8	33.7	41.3	100		
Composite Mean and Standard Deviation								**4.144**	**0.799**

On whether M&E work plan should be in line with organizational strategic plan, the study revealed that out of 104 respondents who participated in the study, 54(51.9%) strongly agreed, 47((45.2%) agreed, 3(2.9%) disagreed while there was no response for not sure and strongly disagree respectively. This implies that majority 101(97.1%) are in agreement that work plans should be in line with organizational strategic plan. This is confirmed with a mean of 4.4615which is way above the composite mean of 4.1442.

This implies that organizational strategic plan guides the M&E work plan and hence affects monitoring and evaluation of the projects and the overall performance of educational building infrastructural projects.

On implementation of project activities being in line with the work plan, out of the 104 participants in the study, 48(46.2%) strongly agreed, 40 (38.5%) agreed, 8(7.7%) were not sure, 8(7.7%) disagreed, while there was no one who strongly disagreed.

This means that 88(84.7%) agree that implementation of project activities should be in line with the work plan while only 8(7.7%) disagree with this. This is supported by the mean of (4.2308) which is way above the composite mean of (mean = 4.1442). This means that implementing committees support use of M&E work plan in theory and not practice since an earlier revelation by the same respondents show lack of adherence to M&E work plan.

Concerning the issue of the amount of money estimated for implementing a project, out of 104 respondents, 32(30.8%) strongly agreed, 57(54.8%) agreed, 3(2.9%) were not sure, 3(2.9%) disagreed, while 9(8.6%) strongly disagreed. This implies that 89(85.6%) agree that the amount of money estimated for implementing a project strongly determines the level of success of that project while only 12(11.5%) disagree with this as 3(2.9%) were not sure. This is accompanied by a mean of 3.9615. This implies that budgetary

allocation affects the overall performance of educational building infrastructural projects in Bungoma County.

For every decision made, out of 104 participants, 43(41.3%) strongly agreed, 35(33.7%) agreed, 4(3.8%) were not sure, 19(18.3%) disagreed, while 3(2.9%) strongly disagreed. This implies that majority 78(75%) agreed that every decision made concerning a particular project should be in reference to the project work plan. 4(3.8%) were not sure while 22(21.2%) disagreed. This is accompanied by a mean of 3.9231.This further emphasizes importance of M&E work plan in implementation of the educational building infrastructural projects and can enhance performance of the projects if it becomes practice by the implementation committees.

These findings are in agreement with Baker (2011) findings on cost of implementing a project which asserts that project performance becomes a hexagon of time, cost, quality, and achievement of strategic objectives of the client organization that initiated the project, satisfaction of users and other stakeholders. The study also affirms his findings on importance of conformity to the work plan where he asserted that every decision made concerning a particular project is in reference to the project work plan.

The interviewed respondents were of the opinion that monitoring and evaluation work plan is a tool at Centre of their operations hence affirming earlier opinions. One of the respondents said:

> "*Our work plans are normally ready by November after a quite long structured process of identification, validation and selection. It's our culture and our way of doing things".(Bumula CDF, 2017)*

4.6.1. Regression Analysis of M&E Work Plan and Performance of educational Building Infrastructure Projects

Regression analysis for M&E work plan and performance of educational Building infrastructural Projects was done and generated Table 4.12

Table 4.12: M & E work plan on performance of infrastructural projects in Bungoma County

ANOVA statistics					
Model	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
Regression	.875	1	.875	F(1,102) = 2.38	0.126
Residual	45.901	102	.450		
Total	46.775	103	.454		
R-squared = 0.019		Adj R-squared = 0.009		Root MSE= .671	

Coefficient estimates							
Performance of projects	Unstd Coefficient.	Std beta	Std. Err.	t	P>t	[95% Conf. Interval]	
Constant	4.493		.285	15.78	0.000	3.929	5.058

M & E work plan	-0.115	-.137	.075	-1.54	0.126	-.264	.0329

The presence of M & E work plan does not explain any variations in performance of educational building infrastructural projects in Bungoma County. Since the overall model is not statically significant, all the beta coefficients are not significant.

4.6.2. Test of Hypothesis two

The study sought to assess how M & E work plan influences performance of educational building infrastructural projects in Bungoma County

The null and alternate hypotheses were;

H_{02}: M & E work plan has no significant influence on the performance of educational building infrastructural projects in Bungoma County

H_1: M & E work plan significantly influences the performance of educational building infrastructural projects in Bungoma County.

This was tested at 95% level of confidence. From the regression analysis the statistic F (1, 102) = 2.38, $p > 0.05$, shows that the regression model is not statistically significant in predicting the dependent variable, the study finding therefore fails to reject the null hypothesis that M & E work plan has no significant influence on the performance of educational building infrastructural projects in Bungoma County and therefore conclude that utilization of M & E work plan does not influence the performance of educational building infrastructural projects in Bungoma County. This study finding supports Ogbene

(2012) finding that M&E work plan has a negative relationship with implementation of educational projects in a study investigating influence of M&E systems on implementation of educational projects.

4.7. Routine Program Monitoring and Performance of Educational Building of Infrastructural Projects.

The third objective that the study sought to achieve was to examine how routine programme monitoring influences performance of educational building infrastructural projects. The respondents were initially asked to state whether they have any mechanism in place to periodically monitor and evaluate educational building infrastructural projects. The results are presented in Table 4.13.

Table 4.13: Presence of mechanism in place

	Response	Frequency	Percentage
1	No mechanism In place	47	45.2
2	Have a mechanism in place	57	54.8
	Total	**104**	**100**

Results from Table 4.13 show that, out of 104 respondents who participated in the study, 47(45.2%) indicated that they did not have any mechanism in place to monitor and evaluate educational building infrastructural projects, while 57(54.8%) indicated that they had mechanism in place. This implies that majority of project implementers are practicing monitoring of performance of educational building infrastructural projects although there is need for improvement.

Table 4.14: Frequency of Periodic Reports

	Response	Frequency	Percentage
1	Not available	11	10.6
2	Few reports	33	31.7
3	Many reports	51	49.0
4	Very many reports	9	8.7
	Total	**104**	**100**

The results in Table 4.14 show the responses of the respondents on periodic project reports. It shows that out of 104 participants, 11(10.6%) said periodic reports not

available, 33(31.7%) said they had few reports, 51(49.0%) said they had many reports while 9(8.7%) said they have very many reports. This implies that 93(89.4%) of project implementers prepare reports although there is need for this to be strengthened in some areas where there are no reports.

Still on this third objective of the study, respondents were asked to give their opinions on whether Routine program monitoring influence performance of educational building infrastructural projects using statements in a Likert scale of 1-5 where; 1= strongly disagree, 2= disagree,3=Not sure, 4= Agree, and 5 = strongly agree. The results are presented in Table 4.15.

Table 4.15: Descriptive Statistics for Routine Programme Monitoring

Statement		SD	D	U	A	SA	Tot.	Mean	SD
Conducting regular meetings to discuss building designs helps in tracking project implementation	F	0	3	3	39	59	104	4.48	.696
	%	0	2.9	2.9	37.5	56.7	100		
Project implementation is not successful without periodic visits to the project site to track progress	F	0	1	0	49	54	104	4.50	.557
	%	0	1	0	47.1	51.4	100		
It's not a must for project implementers to involve stakeholders during their periodic monitoring activities	F	19	15	6	13	51	104	3.44	1.32
	%	18.3	14.1	5.8	12.5	49.0	100		
Conducting program briefs is essential in restructuring and redirecting project implementation	F	3	0	1	45	55	104	4.43	.785
	%	2.9	0	1	43.3	52.9	100		
Composite Mean and Standard Deviation								**4.213**	**0.544**

On the statement that conducting regular meetings to discuss building designs helps in tracking project implementation, out of 104 respondents who took part in the study, 59(56.7%) strongly agreed,39(37.5%) agreed, 3(2.9%) were not sure, 3(2.9%) disagreed, while there was no response for strongly disagree.

This implies that majority of the respondents 98(94.2%) agreed that regular meetings to discuss building designs helps in tracking the implementation of the project and hence facilitate performance of educational building infrastructural projects. This is confirmed by a mean of 4.480 which is way above the composite mean of (mean = 4.2139).

On the statement that project implementation is not successful without periodic visits to the project site to track progress. Out of 104 respondents who participated in the study, 54(51.9%) strongly agreed, 49(47.1%) agreed, 1(1%) disagreed and there was no response for not sure and strongly disagreed. These findings imply that majority 103(99%) of the respondents agree that performance of educational building infrastructural projects is influenced by periodic visits to project site. This is confirmed by the mean of 4.5000 which is way above the composite mean of 4.2139.

About the statement that it is not a must for project implementers to involve stakeholders during their periodic monitoring activities, out of 104 respondents who took part in the study, 19(18.3%) strongly disagreed, 51(49%) strongly agreed, 6 (5.8%) were not sure, 13(12.5%) agreed, while 1(14.4%) disagreed. This finding implies that the majority of

respondents 70(67.3%) agreed that it is not a must for project implementers to involve stakeholders during periodic monitoring activities, which is confirmed by the mean of (mean ≈ 3.4423) which is way below the composite mean of (mean = 4.2139). This means that in Bungoma County, project implementation committees do not believe in involving stakeholders in monitoring activities and this could be affecting the performance of the educational building infrastructural projects.

The findings of this study on periodic monitoring are in line with Cecil (2012) study on influence of routine programs on performance of educational projects who asserts that time to time monitoring platforms should be organized during the cycle of project implementation to enhance stakeholder involvement.

Concerning the statement that conducting program briefs is essential in restructuring and redirecting project implementation, out of the 104 respondents, 55(52.9%) strongly agreed, 45(43.3%) agreed, 1(1%) were not sure while 3(2.9%) strongly disagreed. Since majority of the respondents 100(96.2%) agreed. This is confirmed by the mean of 4.4327 which is higher than composite mean 4.2139.

This implies that conducting program briefs is essential in taking decisions on implementation of educational projects that may enhance their performance.

Views from interviews were in support of the feedback from questionnaires. In his own words, one of the respondents outlines as follows:

> *"Monitoring is a routine practice that we value so much during implementation of projects. We periodically collect data about projects and use it to effect changes. It's a practice that has yielded fruits so much so far". (County CDE, 2017)*

4.7.1. Regression Analysis of Routine Programme Monitoring and performance of Educational Building Infrastructural Projects

The regression analysis was done for routine programme monitoring on performance of Performance Educational Building Infrastructural Projects and generated Table 4.16

Table 4.16: Routine Programme Monitoring on Performance of infrastructural projects in Bungoma County

ANOVA statistics					
Model	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Regression	34.304	1	34.304	F(1,102) = 320.41	0.000
Residual	12.471	102	.122		
Total	46.775	103	.454		
R-squared = 0.7334	Adj R-squared = 0.731		.349		

Coefficient estimates							
Performance of projects	Unstd Coefficient.	Std beta	Std. Err.	t	P>t	[95% Conf.	Interval]
Constant	-.459		.263	-1.74	0.084	-.993	.0752

Routine program monitoring	1.062	0.856	.059	17.90	0.000	.936	1.188

Therefore, the presence of Routine programme monitoring explains variations in performance of educational building infrastructural projects in Bungoma County. The R^2 = 0.7334 indicating that 73.34% in the performance of educational building infrastructural projects is explained by the Routine programme monitoring activities.

The beta coefficients: constant, β_0 = -0.4589 (t = -1.74, p > 0.05) and Routine program monitoring, β_1= 0.856 (t = 17.90, p < 0.05) indicating that influence of Routine program monitoring activity is significant. The overall model is that the performance of the educational building infrastructural projects, $Y = 0.127 + 0.856X_3$. This indicates that one unit change in Routine programme monitoring behaviour has a corresponding 0.856 unit changes in the performance of educational building infrastructural projects.

4.7.2 Test of Hypothesis Three

The study sought to examine how routine program monitoring influences performance of educational building infrastructural projects in Bungoma County

The null and alternate hypotheses were;

H_0: Routine program monitoring has no significant influence on the performance of educational building infrastructural projects in Bungoma County.

H_1: Routine program monitoring significantly influences the performance of educational building infrastructural projects in Bungoma County

This was done at 95% level of confidence and from the regression analysis, the statistic F (1, 102) = 320.41, $p < 0.05$, shows that the regression model is statistically significant in predicting the dependent variable. The study finding therefore rejects the null hypothesis that Routine programme monitoring has no significant influence on the performance of educational building infrastructural projects and therefore concludes that, Routine programme monitoring influences the performance of educational building infrastructural projects in Bungoma County. This finding supports Woodwork and Kelvin (2006) finding on influence of routine monitoring on service delivery where Routine monitoring was found to influence service delivery positively. The finding however contradicts Peterson(2010) finding in a similar study investigating influence of Routine programme monitoring on performance of education projects, which revealed a negative relationship between Routine programme monitoring and performance of educational projects.

4.8. Combined M&E Systems and Performance of Educational Building Infrastructural Projects

4.8.1. Regression Analysis of Combined M&E Systems and Performance of Educational Building Infrastructural Projects

Regression Analysis of Combined M&E Systems and Performance was done and generated Table 4.17

Table 4.17: Combined M&E Systems and Performance of Educational Building Infrastructural Projects

ANOVA statistics						
Model	**Sum of Squares**	**Df**	**Mean Square**	**F**		**Sig.**
Regression	35.024	3	11.675	F(3,100) = 99.35		0.000
Residual	11.751	100	.118			
Total	46.775	103	.454			
R-squared = 0.749		Adj R-squared = 0.741		Root MSE= .343		
Coefficient estimates						
Performance of projects	Unstd Coefficient.	Std beta	Std. Err.	t	P>t	[95% Conf. Interval]
Constant	-.644		0.377	-1.71	0.091	-1.392 .104
Data dissemination and use	.157	.132	.0702	2.24	0.027	.018 .297
M & E work plan	-.104	-.123	.050	-2.08	0.040	-.203 -.005
Routine program monitoring	1.047	.844	.063	16.74	0.000	.923 1.171

Therefore, the utilization of the M & E systems combined explains variations in performance of educational building infrastructural projects in Bungoma County. The R^2

= 0.7488 indicating that 74.9% in the performance of educational building infrastructural projects is explained by the utilization of M & E systems combined.

The beta coefficients: constant, β_0 = -0.644 (t = -1.71, p > 0.05); data dissemination and use β_1= 0.132 (t = 2.24, p < 0.05); M & E work plan, β_2 = -0.123 (t= -2.08, p < 0.05); and Routine program monitoring, β_3 = 0.844(t= 16.74, p < 0.05). All the p – values < 0.05 indicating that all the coefficients are significant. Thus, the regression equation indicates that the predicted performance of the educational infrastructural building projects; $Y = 0.132X_1 - 0.123X_2 + 0.844X_3$.

This indicates that one unit change in data dissemination and use results in 0.132 unit increases in the performance of the infrastructural project, while in the case of a unit change in M & E work plan results in 0.123 unit decreases in performance of the infrastructural projects and lastly one unit change in routine program monitoring behaviour has a corresponding 0.844-unit increase in the performance of educational building infrastructural projects.

4.8.2. Test of Hypothesis Four

The study sought to examine how M & E systems combined influence performance of educational building infrastructural projects in Bungoma County

The null and alternative hypotheses were;

H_0: Combined Utilization of M & E systems have no significant influence on the performance of educational building infrastructural projects in Bungoma County.

H_1: Combined M & E systems significantly influence the performance of educational building infrastructural projects in Bungoma County

This was tested at 95% level of confidence and from the regression analysis, the statistic $F(1, 102) = 99.35$, $p < 0.05$, shows that the regression model is statistically significant in predicting the dependent variable. The study finding therefore rejects the null hypothesis that utilization of M & E systems combined has no significant influence on the performance of educational building infrastructural projects in Bungoma County and therefore concludes that the utilization of combined M & E systems in the projects activities influence the performance of educational building infrastructural projects in Bungoma County.

Routine programme monitoring had the highest positive beta coefficient indicating that of the three M&E components considered in the study, Routine programme monitoring is the most critical component for performance of educational building infrastructural projects while M&E work plan with negative beta coefficient has a negative influence on performance of educational building infrastructural projects in Bungoma County.

These findings validate Ogbene (2012) findings on M&E work plan and implementation of educational projects.

4.9. Organizational Culture and Performance of Educational Building Infrastructural Projects

The fifth objective that the study sought to achieve was to assess how organizational culture moderates the relationship between utilization of M&E systems and performance of education building infrastructural projects. To achieve this, the respondents were requested to give their opinions on how they agree or disagree with the statements on a Likert scale of 1 to 5 where 5= strongly agree, 4= agree, 3= no idea, 2= disagree, 1= strongly disagree. The respondents' opinions are indicated in Table 4.18

Table 4.18: Descriptive Statistics for Organizational Culture

Statement		SD	D	U	A	SA	Tot.	Mean	SD
The values treasured in an organization influence the overall performance of projects in that organization	F	0	0	1	59	44	104	4.414	.514
	%	0	0	1	56.7	42.3	100		
The organization's vision and mission influences the monitoring of a project	F	0	0	1	59	44	104	4.414	.514
	%	0	0	1	56.7	42.3	100		
The attitudes of the project implementers are key in influencing the monitoring of a project	F	0	0	4	45	55	104	4.490	.574
	%	0	0	3.8	43.3	52.9	100		
Composite Mean and Standard Deviation								**3.846**	**0.574**

On values treasured in an organization influencing the overall performance of projects, out of 104 participants, 44(42.3%) strongly agreed, 59(56.7%) agreed, 1(1%) was not sure while none disagreed. With 103(99%) agreeing and supported by a mean of 4.413, it

shows that values of an organization influence performance of building infrastructural projects of that organization.

About the organization's vision and mission influencing monitoring of projects, out of 104 participants, 44(42.3%) strongly agreed, 59(56.7%) agreed while the remaining 1(1%) was not sure. Since 103(99%) agreed with the statement and this is confirmed by a mean of 4.414, it implies that organization's vision and mission play a key role in the monitoring and evaluation of an organizations projects and hence contribute to performance of educational building infrastructural projects.

As for the attitudes of project implementers influencing the monitoring of a project, out of 104 participants, 55(52.9%) strongly agreed, 45(43.3%) agreed as the remaining 4(3.8%) were not sure. With 100(96.2%) agreeing and this supported by a mean of 4.490 which is way above the composite mean of 3.846, this means that attitudes of project implementers are key in determining performance of building infrastructural projects. These findings are in line with Jolise (2007) study on influence of organizational culture and employees' commitment on performance where organizational culture was found to have a significant effect on the organizational commitment of employees and therefore can affect service delivery.

The study findings were supported by the qualitative analysis as demonstrated by the statement;

> *" Every time we are developing our work plans, we refer to our vision, mission and values as well as consider an attitude that favours a system for periodic monitoring and summative evaluations. There is a way government does its things and we endeavor always to be consistent with government culture". (Webuye East CDF, 2017)*

4.9.1. Regression Analysis of the Moderating Effects of Organizational Culture on the Relationship between M&E Systems and Performance of Educational Building Infrastructural Projects

Regression Analysis of the Moderating effects pf organizational Cultures on the relationship between M&E Systems and Performance was done and generated Table 4.19

Table 4.19: Moderating Effect of Organizational Culture on the relationship between M & E systems and performance of infrastructural projects

ANOVA statistics							
Model	**Sum of Squares**	**Df**	**Mean Square**	**F**		**Sig.**	
Regression	7.964	3	1.593	F(3, 100) = 4.02		0.002	
Residual	38.812	100	.396				
Total	46.775	103	.454				
R-squared = 0.170		Adj R-squared = 0.128		Root MSE= .629			
Coefficient estimates							
Performance of projects	Unstd Coefficient.	Std beta	Std. Err.	T	P>t	[95% Conf.	Interval]
Constant	.983		.740	1.33	0.187	-.485	2.450
M & E System	.500	.362	.157	3.18	0.002	.188	.812
Organizational culture	.268	.181	.155	1.73	0.086	-.039	.576
M & E System# Organizational culture	1.544	.316	.524	2.95	0.004	.504	2.583

Therefore, organizational culture has a moderating effect on the relationship between utilization of the M & E systems and the performance of educational building infrastructural projects in Bungoma County. The $R^2 = 0.170$ indicating that 17.0 per cent in the performance of educational building infrastructural projects is explained by the interaction effects of organizational culture on M & E systems.

The beta coefficients: constant, $\beta_0 = 0.9827$ ($t = 1.33$, $p > 0.05$); M & E system $\beta_1 = 0.362$ ($t = 3.18$, $p < 0.05$); organizational culture, $\beta_2 = 0.181$ ($t = 1.73$, $p > 0.05$); and M & E

System# organizational culture, $\beta_3 = 0.316$($t= 2.95$, $p < 0.05$). The p – values for M & E systems and interaction effects are below 0.05 indicating that all the coefficients are significant. Thus, the regression equation indicates that the predicted performance of the educational infrastructural building projects; $Y = 0.362\ X_1 + 0.316\beta"_i XM$.

The equation above indicates that one unit change in M & E systems results in 0.362 unit increases in the performance of the infrastructural project, while a unit change in the interactive effects of the organizational culture and M & E systems results in 0.316 unit increases in performance of the infrastructural projects.

The interactive effect of the moderator (organizational culture) seems to reduce the effects of the predictor variable (M & E systems) from 0.3616 to 0.3161. This would confirm the validity of the moderation effects of the organizational culture on the relationship between M & E systems and performance of the educational building infrastructural projects.

4.9.2. Test of Hypothesis Five

The study sought to assess how organizational culture moderates the relationship between utilization of monitoring and evaluation systems and performance of educational building infrastructural projects in Bungoma County

The null and alternate hypotheses were;

H_0: Organizational culture does not significantly moderate the relationship between utilization of monitoring and evaluation systems and performance of educational building infrastructural projects in Bungoma County.

H_1: Organizational culture moderates the relationship between utilization of monitoring and evaluation systems and performance of educational building infrastructural projects in Bungoma County

This was tested at 95% level of confidence and from the regression analysis validity of the moderations effects, the statistic $F(3, 100) = 4.10$, $p < 0.05$, shows that the regression model is statistically significant in predicting the dependent variable. The study finding therefore rejects the null hypothesis that organizational culture does not significantly moderate the relationship between utilization of monitoring and evaluation systems and performance of educational building infrastructural projects in Bungoma County and therefore conclude that organizational culture moderates the relationship between M & E systems and the performance of educational building infrastructural projects in Bungoma County.

This finding validates Jolise (2007) finding that organizational culture has a significant effect on the organizational commitment of employees and therefore can affect organizational service delivery in a study investigating the influence of organizational culture and employees' commitment on performance. It also agrees with Olu (2012) finding that organizational culture influences employee work behavior in a study investigating influence of organizational culture on employee work behavior.

4.10. Leadership and Performance of Educational Building Infrastructural Projects

The sixth objective that the study sought to achieve was to assess how leadership moderates in the relationship between utilization of M&E systems and performance of education building infrastructural projects.

To achieve this, the respondents were requested to give their opinions on how they agree or disagree with the statements on a Likert scale of 1 to 5 where 5= strongly agree, 4= agree, 3= no idea, 2= disagree, 1= strongly disagree. The respondents' opinions are indicated in Table 4.20.

Table 4.20: Descriptive Statistics for Leadership

Statement		SD	D	U	A	SA	Tot.	Mean	SD
Hands-off leadership affects the monitoring of a project	F	0	0	4	21	79	104		
	%	0	0	3.8	20.2	76.0	100	4.644	.835
Participatory leadership enhances monitoring of projects	F	0	0	1	30	73	104		
	%	0	0	1	28.8	70.2	100		
								4.692	.484
Leadership where decision are made and imposed on people is the way to go in monitoring projects	F	50	30	4	11	9	104		
	%	48.1	28.8	3.8	10.6	8.7	100		
								2.028	1.32
Transformative leadership approach that causes change in individuals and social systems is good for project Monitoring	F	3	4	3	55	39	104		
	%	2.9	3.8	2.9	52.9	33.7	100		
								4.183	.889
Transactional leadership	F	5	24	5	35	35	104	3.683	1.29

where leaders emphasis on compliance in terms of rewards and punishments is the best in project monitoring	%	4.8	23.1	4.8	33.7	33.7	100	
Composite mean and Standard deviation								**3.846 0.574**

On hands-off leadership style, out of 104 respondents, 79(76.0%) strongly agreed, 21(20.2%) agreed, 4(3.8%) were not sure, while none was in the disagreeing bracket. This implies that majority 100(96.2 %) agree that hands-off leadership style affects the monitoring of a project and hence the overall performance of educational building infrastructural projects. This is reflected in the mean of 4.6442 which is above the composite mean of 3.8462.

As for participatory leadership, out of 104 correspondents, 73(70.2%) strongly agreed, 30(28.8%) agreed, 1(1%) was not sure, while there was no respondent in the disagreeing bracket. Majority 103 (99%) agree that participatory leadership enhances monitoring of projects which results in performance of the educational building infrastructural projects. This is confirmed by a mean of 4.6923 which is above the composite mean of 3.8462.

For leadership where decisions are made and imposed on people, 9(8.7%) strongly agreed, 11(10.6%) agreed, 4(3.8%) were not sure, 30(28.8%) disagreed and 50(48.1%) strongly disagreed. This implies that only 20(19.3%) agree while majority 80(76.9%) disagree with the assertion that leadership where decisions are made and imposed on people is the way to go in monitoring projects. This is confirmed by the mean of 2.0288 which is below the composite mean of 3.8462. This implies that leadership that dictates to staff does not favor effective monitoring and evaluation of projects and this could impact negatively on the performance of the educational building infrastructural projects.

On transformative leadership approach, out of the 104 respondents, 39(37.5%) strongly agreed, 55(52.9%) agreed, 3(2.9%) were not sure, 4 (3.8%) disagreed while 3(2.9%) strongly disagreed. This implies that majority 94(90.4%) agree that transformative leadership approach that causes change in individuals and social systems is good for project monitoring with only 7(6.7%) disagreeing.

This conforms with the mean of 4.1827 which is above the composite mean of 3.8462 implying that transformative leadership highly favors monitoring and evaluation of educational building infrastructural projects since it causes change in those involved and promotes improvement. This eventually translates to performance of the educational building infrastructural projects.

As for transactional leadership, out of the 104 respondents, 35(33.7%) strongly agreed, 35(33.7%) agreed, 5(4.8%) were not sure, 24 (23.1%) disagreed and 5(4.8%) strongly disagreed. Majority 70(67.4%) agreed that transactional leadership is the best in project monitoring while 29(27.9%) did not agree. This is supported by a mean of 3.6827 which is below the composite mean (3.8462). These findings imply that leadership style is very key in monitoring of educational building infrastructural projects and therefore affects the overall performance of the projects.

The findings in this study are in line with a study by Maurice (2011) which indicated that there was a significant relationship between strategy, organizational culture and environmental uncertainty and the use of non-financial and process measures. In addition, the results indicated that there is a relationship between strategy and environmental uncertainties and the deployment of innovative performance measurement systems.

The interviews supported the findings showing that leadership should be about involving the people in decision making and stakeholder participation. One of the respondents noted as follows,

> *"We don't like a leader who imposes things on us. We want to be consulted, to participate in the decisions that we are to implement. We are part of this organization and we should feel our own presence".(Webuye West CDF, 2017)*

4.10.1 Regression Analysis of the Moderating Effects of Leadership on Performance of Educational Building Infrastructural Projects

The study also sought to establish what performance of educational building infrastructural projects meant. To achieve this, the respondents were requested to give their opinions on how they agree or disagree with the statements on a Likert scale of 1 to 5 where 5= strongly agree, 4= agree, 3= no idea, 2= disagree, 1= strongly disagree. The results are presented in Table 4.21.

Table 4.21: Moderating Effect of Leadership on the relationship between M & E systems and performance of infrastructural projects

ANOVA statistics						
Model	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**	
Regression	15.041	3	2.149	F(3, 100) = 6.50	0.000	
Residual	31.735	100	.331			
Total	46.775	103	.454			
R-squared = 0.322	Adj R-squared = 0.272		Root MSE= .594			
Coefficient estimates						
Performance of projects	Unstd Coefficient.	Std beta	Std. Err.	t	P>t	[95% Conf. Interval]
Constant	-.264		1.397	-0.19	0.851	-3.038 2.510
M & E System	1.736	1.255	.282	6.16	0.000	1.177 2.295
Leadership	-.576	-.684	.261	-2.20	0.030	-1.095 -.057
M & E System # Leadership	3.696	. 757	.666	5.55	0.000	2.375 5.017

The leadership style has a moderating effect on the relationship between the utilization of the M & E systems and the performance of educational building infrastructural projects in Bungoma County. The R^2 = 0.322 indicating that 32.2 per cent in the performance of educational building infrastructural projects is explained by the interaction effects of leadership style on M & E systems.

The beta coefficients: constant, β_0 = -0.264 (t = 1.33, p > 0.05); M & E system β_1= 1.255 (t = 6.16, p < 0.05); leadership, β_2 = -0.684 (t = -2.20, p < 0.05); and M & E System# leadership, β_3 = 0.757 (t= 5.55, p < 0.05). The p – values for M & E systems, the moderator and interaction effects are below 0.05 indicating that all the coefficients are significant. Thus, the regression equation indicates that the predicted performance of the educational infrastructural building projects; $Y = 1.255\ X_1 - 0.684\ \boldsymbol{\beta_i'Z} + 0.757\ \beta''_i XZ$.
The equation above indicates that one unit change in M & E systems results in 1.255 unit increases in the performance of the infrastructural project, with a unit change in the moderator having 0.684 unit decreases in performance of the infrastructural project, while a unit change in the interactive effects of the leadership and M & E systems results in 0.757 unit increases in performance of the infrastructural projects.

The interactive effects of the moderator (leadership) seems to reduce the effects of the predictor variable (M & E systems) from 1.255 to 0.757. This would confirm the validity

of the moderation effects of the leadership on the relationship between M & E systems and performance of the educational building infrastructural projects.

4.10.2 Test of Hypothesis Six

The study sought to assess how leadership moderates the relationship between utilization of monitoring and evaluation systems and performance of educational building infrastructural projects in Bungoma County

The null and alternative hypotheses were;

H_{06}: Leadership does not significantly moderate the relationship between utilization of monitoring and evaluation systems and performance of educational building infrastructural projects in Bungoma County

H_1: Leadership moderates the relationship between utilization of monitoring and evaluation systems and performance of educational building infrastructural projects in Bungoma County

This was tested at 95% level of confidence and from the regression analysis validity of the moderations effects, the statistic, $F(3, 100) = 6.50$, $p < 0.05$, shows that the regression model is statistically significant in predicting the dependent variable. The study finding therefore rejects the null hypothesis that leadership style does not significantly moderate the relationship between utilization of monitoring and evaluation

systems and performance of educational building infrastructural projects in Bungoma County and therefore conclude that leadership moderates the relationship between M & E systems and the performance of educational building infrastructural projects in Bungoma County.

This finding supports findings by a related study by Maurice (2011) on the association between leadership, strategy, structure and environmental uncertainty and the design and the use of performance measurement systems, which revealed that, organizational strategy, structure, environmental uncertainty and deployment of innovative performance measurement systems influence organizational performance.

4.11. Performance of Educational Building Infrastructural Projects

The study also sought to establish what performance of educational building infrastructural projects meant to achieve this, the respondents were requested to give their opinion on how they agree or disagree with the statements on a Likert scale of 1 t 5 where 65=strongly agree, 4=agree, 3= n idea, 2= disagree. 1= strongly disagree. The results are presented on table 4.22

Table 4.22: Descriptive Statistics for Performance of Educational Building Infrastructural Projects

Statement		SD	D	U	A	SA	Tot.	Mean	SD
Institutions that adhere to building specifications as stipulated in the school safety guidelines manual are less likely to encounter legal issues	F	0	3	0	29	72	104	4.634	.6394
	%	0	2.9	0	27.9	69.2	100		
Cheap construction materials are more sustainable than quality materials	F	15	13	6	51	19	104	3.442	1.321
	%	14.4	12.5	5.8	49.0	18.3	100		
It's not a must for buildings to conform to guidelines stipulated in the school safety manual	F	15	13	6	51	19	104	3.442	1.320
	%	14.4	12.5	5.8	49.0	18.3	100		
Projects that don't aim at solving the local needs of a targeted population rarely find ownership from the community	F	0	9	6	47	42	104	4.173	.8862
	%	0	8.7	5.8	45.2	40.5	100		
Delaying the completion of a project is denying the targeted beneficiaries their rights	F	3	6	0	34	61	104	4.385	.9685
	%	2.9	5.8	0	32.7	58.7	100		
Composite mean and Standard deviation								**4.015**	**0.674**

On the issue of institutions adhering to building specifications, out of the 104 respondents, 72(69.2%) strongly agreed, 29(27.9%) agreed, 3(2.9%) disagreed. With majority 101(97.1%) agreeing that institutions that adhere to building specifications as stipulated in the schools' safety guidelines manual, are less likely to encounter legal issues and only 3(2.9%) disagreeing. This is supported by a mean of 4. 6346 which is above composite mean of 4.0154.This implies that adherence to school safety guidelines when implementing educational building infrastructural projects is mainly for purposes of avoiding legal issues and may result in performance of educational building infrastructural projects in Bungoma county.

On the issue of cheap construction materials, out of the 104 respondents, 19(18.3%) strongly agreed, 51(49%) agreed, 6(5.8%) were not sure, 13(12.5%) disagreed and 15(14.4%) strongly disagreed. This implies that majority 70(67.3%) agree that cheap construction materials are more sustainable than quality materials while 28(26.9%) do not agree. This is reflected in the mean of 3.4423 which is below the composite mean, implying that implementing committees do not favor use of quality materials and this could be affecting the quality of educational building infrastructural projects in Bungoma County.

As for buildings conforming to guidelines, out of the 104 respondents, 19(18.3%) strongly agreed, 51(49%) agreed, 6(5.8%) were not sure, 13(12.5%) disagreed and 15(14.4%) strongly disagreed. This implies that majority 70(67.3%) agree that it is not a must for buildings to conform to guidelines stipulated in the school safety manual. This is reflected in the mean of 3.4423 which is below the composite mean, asserting that conformity to guidelines as set in the safety manual is not a factor of performance for educational building infrastructural projects. This may lead to buildings that do not meet the requirements for performance.

As for projects that don't aim at solving the local needs of a targeted population, out of the 104 respondents, 42(40.5%) strongly agreed, 47(45.7%) agreed, 6(5.8%) were not sure, 9(8.7%) disagreed while none strongly disagreed. Majority 89(85.7%) were in agreement with the assertion that projects that don't aim at solving the local needs of a targeted population rarely find ownership from the community while only 9(8.7%) did not agree. This is confirmed by a mean of 4.1731 which is above the composite mean, implying that projects that don't aim at solving local needs do not find ownership in the community and hence influence overall performance.

As far as delaying the completion of a project is concerned, out of the 104 respondents, 61(58.7%) strongly agreed, 34(32.7%) agreed, 6(5.8%) disagreed while 3(2.9%) strongly disagreed. This implies that majority 95(91.4 %) agreed that delaying the completion of a

project is denying the targeted beneficiaries their rights with only 9(8.7%) disagreeing. This is supported by a mean of 4.3846 which is above the composite mean signifying that delaying completion of a project affects performance of a project. These findings are supported by a study done by Baker (2011) on Performance of Government projects using descriptive survey design and found out that project performance is a hexagon of time, cost, quality, and achievement of strategic objectives of the client organization that initiated the project, satisfaction of users and other stakeholders. The interviews brought out similar sentiments as one of the respondents had this to say;

> "*Our committee tries to consider Monitoring and Evaluation, even though at a basic level in every of its operations to ensure that we enhance the performance of our educational building infrastructural projects. It's a practice we advise all other CDF committees to do so".(Kapuchai CDF, 2017)*

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of major findings of the study, conclusions, recommendations and the areas suggested for further research and contribution to the body of knowledge.

5.2 Summary of Findings

The major findings of the study are summarized in this section. It outlines the summary of the findings in line with the objectives of the study.

5.2.1 Background Information of Respondents

The study examined the respondents in respect to their age, gender, academic qualifications, and whether they had ever attended a course in monitoring and evaluation or not. On age the study found that majority (66.3%) of the respondents were aged above 35 years. In the gender category, majority (62.5%) of the respondents were male while on academic qualifications, it was established that majority (76.3%) of the participants were holders of diploma and above. Lastly, in having attended M&E course or not, majority (64,4%) had never attended a training course in Monitoring and Evaluation.

5.2.2 Data dissemination and Use and Performance of Educational Building Infrastructural Projects

The findings revealed that the act of sharing information about the project to stakeholders increases their ownership and appreciation of the projects with a mean of 4.6827 which was above compost mean of 4.3053. It was further revealed that making public project information does not increases transparency and accountability in a project. This is supported by a mean of 4.5865.

In addition, the study found that timely distribution of information to stakeholders helps in managing their expectations towards the project as supported by a mean of 4.3750 which is above the compost mean of 4.3053. Lastly, it was revealed that Stakeholder data dissemination and validation workshop should not be held during project implementation in the mean of 3.5769. The interviews revealed that it's important to involve stakeholders during project planning and implementation as reflected by sharing information with them to have them own those projects.

On hypothesis testing, the study observed that there was no statistically significant relationship between Data dissemination and use and performance of educational building infrastructural projects, plan ($F = 1.94$, $p > 0.05$) hence failing to reject the Null hypothesis that date dissemination and use has no significant influence on performance of Educational Building Infrastructural Projects.

5.2.3 M&E Work plan and Performance of Educational Building Infrastructural Projects

The study revealed that M&E work plans are not being utilized in the implementation of educational building infrastructural projects with 86.5% admitting that they have no work plans. It was also revealed that a project M&E work plan should be in line with the organizational strategic plan. It was also revealed that the Implementation of project activities should be in line with the work plan with a mean of 4.4615 which was way above the compost mean of 4.1442 and that the amount of money estimated for implementing a project strongly determined the level of success of that particular project with a mean of 3.9615. Lastly it came out that every decision made concerning a particular project should be in reference to the project work plan with a mean of 3.9231. The interviews further revealed that work plans should be prepared well in advance before commencement of implementation period.

Furthermore, the study revealed through Pearson correlation that M&E work plan was negatively ($_{r=}0.137$) related to performance. On hypothesis testing, the study found that, there is no statistically significant relationship between Monitoring and Evaluation work plan ($F = 2.38$, $p > 0.05$) and performance of educational building infrastructural projects and hence failed to reject the Null hypothesis that M&E work plan has no significant influence on performance of Educational Building Infrastructural Projects.

5.2.4 Routine Programme Monitoring and performance of Educational Building Infrastructural Projects

The study found that conducting regular meetings to discuss building designs helps in tracking project implementation with a mean of 4.480 which was way above compost mean of 4.2139. It was also established that project implementation is not successful without periodic visits to the project site to track progress and make crucial decisions. This is confirmed by a mean of 4.500.

It was further revealed that it's not a must for project implementers to involve stakeholders during their periodic monitoring activities and lastly that conducting program briefs as confirmed by a mean of 4.4327 which is higher than compost mean of 4.2139 is essential in restructuring and redirecting project implementation.

Interviews further revealed that data about projects was periodically collected and used to effect changes during project implementation.

Hypothesis testing revealed that there was a very strong statistically significant relationship ($F = 320.41$, $p < 0.05$) between Routine program monitoring and performance of Educational Building Infrastructural projects and the Beta coefficients were the highest, hence the Null hypothesis that routine programme monitoring has no significant influence on performance of Educational Building Infrastructural Projects was rejected.

5.2.5 Combined M&E Systems and Performance of Educational Building Infrastructural Projects

Hypothesis testing revealed a very strong statistically significant relationship ($F = 99.35$, $p < 0.05$) with about 75% between combined monitoring and evaluation systems and performance of educational building infrastructural projects with a very high variance in performance ($R^2 = 0.7488$). The Null hypothesis was therefore rejected.

5.2.6 Organizational Culture and Performance of Educational Building Infrastructural Projects

The study found that organization's vision and mission has some implication on the monitoring of educational building infrastructural projects and that the values treasured in an organization affects the overall performance of projects in that organization. The study further found that the attitudes of the project implementers are key in influencing the monitoring of educational building infrastructural projects.

Finally, the interviews revealed that in developing annual work plans the respondents' referred to their vision, mission and values as well as considering an attitude that favors a system for periodic monitoring and summative evaluations consistently to standard government procedure and culture.

On testing of hypothesis, organizational culture was found to have a statistically significant ($F = 4.10$, $p < 0.05$)moderating effect on the relationship between utilization

of M&E systems and performance of educational building infrastructural projects hence leading to rejection of the Null hypothesis.

5.2.7 Leadership and Performance of Building Educational Infrastructural Projects

The study found that hands-off leadership affects the monitoring of educational building infrastructural projects while Participatory leadership enhances monitoring of projects. However, the study found that leadership where decisions are made and imposed on people is not the way to go in monitoring and evaluating educational projects.

Furthermore, the study also found that transformative leadership approaches that causes change in individuals and social systems is good for project Monitoring and Lastly, the study found that transactional leadership where leaders' emphasis on compliance in terms of rewards and punishments is the best in project monitoring.

Interviews on their part revealed that leadership where decisions are imposed on people is not the way to go and people always prefer being involved in decision making.

Hypothesis testing revealed that leadership has a statistically significant moderating effect ($F = 6.50$, $p < 0.05$)on the relationship between utilization of Monitoring and Evaluation System and performance of educational building infrastructural projects which led to rejection of the Null hypothesis.

5.3 Conclusions

The study drew conclusions in respect of utilization of monitoring and evaluation systems and performance of educational building infrastructural projects.

Objective one which sought to determine the extent to which data dissemination and use, influences performance of educational building infrastructural projects found out that Data dissemination and use has no significant influence on performance of educational building infrastructural projects. From this, it can be inferred that Data dissemination and use based on the predictors used in this study does not influence performance of educational building infrastructural projects.

The second objective which sought to assess how M & E work plan influences performance of educational building infrastructural projects in Bungoma County revealed that M&E Work plan does not significantly influence performance of building infrastructural projects. It is agreeable to note that monitoring and evaluation work plan in the context of this study does not influence performance of educational building projects. M&E work plan has a negative influence on performance, according to this study.

The third objective that sought to examine how Routine programme monitoring influences performance of educational building infrastructural projects found out that

Routine programme monitoring significantly influences performance of educational building infrastructural projects in Bungoma County.

From this it can be authoritatively concluded that Routine programme monitoring influences performance of educational building infrastructural projects, and very highly too as demonstrated by both the coefficient of determination and Beta coefficients. It can also be concluded that, in the context of this study, Routine programme monitoring is the most critical M&E component in the performance of educational building infrastructural projects.

Objective four (4) that set out to examine how the utilization of combined M&E systems influences performance of educational building infrastructural projects found out that, combined M & E systems have a very significant influence on the performance of educational building infrastructural projects. Therefore, it can be concluded that utilization of combined M&E systems influence performance of educational building infrastructural projects.

The fifth objective on organizational culture moderating the relationship between utilization of monitoring and evaluation systems and performance of educational building infrastructural projects in Bungoma County found out that organizational culture significantly moderates the relationship between utilization of monitoring and evaluation

systems and performance of educational building infrastructural projects in Bungoma County. Therefore, it can be concluded that organizational culture is a moderator in the relationship between utilization of monitoring and evaluation systems and performance of educational building infrastructural projects.

The last objective set out to assess how leadership moderates the relationship between utilization of monitoring and evaluation systems and performance of educational building infrastructural projects and found that leadership significantly moderates the relationship between utilization of monitoring and evaluation systems and performance of educational building infrastructural projects in Bungoma County.

Hence it can be concluded that, leadership moderates the relationship between utilization of monitoring and evaluation systems and performance of educational building infrastructural projects.

5.4 Recommendations

Based on these findings, it is recommended that for delivery of successful building infrastructural projects,

1. Project implementation committees should ensure proper Data dissemination systems to enable involvement of stakeholders for better performance of projects.
2. Project initiating organizations should ensure strict adherence to M&E work plans by implementing committees to ensure quality and timely project implementation.
3. Organizations should endeavor to establish strong cultures that support project monitoring and evaluation.
4. Routine programme monitoring as a component of M&E systems to be prioritized when selecting M&E systems for building infrastructural projects.

5.5 Suggestions for Further Research

The study suggests further research in the following areas

1. Assessment of utilization of monitoring and evaluation systems (M&E framework, Human capacity for M&E and Database at national and local level) and performance of educational building infrastructural projects.
2. Assessment of utilization of M&E work plan on performance of infrastructural projects.

5.6 Contribution to the body of knowledge

All the components of an M&E system, Routine programme monitoring ranks high in influencing performance of educational building infrastructural projects.

Objective	Contribution to the Body of Knowledge
M&E Work Plan and performance of Educational Building Infrastructural projects	M&E Work Plan negatively correlates with performance of Educational Building Infrastructural Projects
Routine Programme Monitoring and performance of Educational Building Infrastructural Projects	Routine Programme Monitoring has a very high influence on performance of Educational Building Infrastructural Projects

REFERENCES

Abramson W. (2001). Monitoring and evaluation of contracts for health service delivery in Costa Rica. *Health Policy and Planning* 16: 404–11.

Adamchak W. (2010). Monitoring and evaluation of contracts for health service delivery in Costa Rica. *Health Policy and Planning* 16: 404–11.

AGLG. (2004). World Development Report 2004: *Making services work for poor people*. New York: Oxford University Press for the World Bank.

Anderson H. (1993*).Organizational Behaviour*. Singapore: McGraw-Hill. See pages 257-262 and 599-610.

Angote, S. (2009). Analyzing HRD needs in the public service: The Kenya Experience. Capacity Building Seminar Paper, Arusha, Tanzania.

Arie H. (2005*).* Performance measurement is the only way of managing performance, International *Journal of Productivity and Performance Management*, Vol. 54 Iss: 7, Emerald Group Publishing Limited

Armstrong M. (2009).Determinants of construction duration. *Construction Manage Econ*, 13:209–17.

Aronson E. & Wilson D. (2006).*Social psychology* (6th Ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Axelsson, A., &Schroeder, R. (2009). "Making it open and keeping it safe: *Enabled Data sharing in Sweden*."ActaSociological, 52(3), 213 226.

Baccarini D.(1999*) Critical success factors for World Bank projects:* an empirical investigation. International Journal of Project Management, 30(1):105-116.

Baker etal, (1974/1988*). Factors Affecting Project Success In: Cleland* DI, King WR, editors. Project management handbook. (2nd ed.) New York: John Wiley.

Baker M. (2011*) Factors Affecting Project Success In: Cleland* DI, King WR, editors. Project management handbook. (2nd ed.) New York: John Wiley.

Barzilai N. (2011). Development projects .www.ifad.org/.../sfeng. Accessed February 2014

Beiner J.B. (2011). Leadership Styles: An integrative investigation of change content, context, process and individual differences. *Journal of organizational changemanagement* Vol 20.No. 6.

Bertrand, M. J. (1996). Performance Management and Agency Governance for Africa Development: *The search for common cause on Excellence in the Public Service*. UNCEA, Addis Ababa.

Bromilow R. (1974). Project Implementation for Successful projects in Australia and Indonesia. Effective Monitoring & Evaluation. *Journal of Research andGovernance.* 35(5) 23-26

Brooks C. (2014). Diagnostic Tests. Research Methods in the Social Sciences. Worth Pub, Publication Date: March 1996 | ISBN-10: 0312101597

Bruss& Ross, H.J., Armenakis (2008). Factors influencing organizational change efforts: An integrative investigation of change content, context, process and individual differences. *Journal of organizational change management* Vol 20.No. 6.

Burke L. (2011*).Risk Management l o o p of Control. Leadership and Management. Journal of Management and Leadership.* 23(2) 34-35

Caswell F (1989) Success in Statistics. Prentice Hall, New York.

Cecil, S. J. (2008*). Scientists attitudes toward data sharing*.Sci. Technol. *Human*

Champy J. and Michael H. (2013*).Reengineering the Corporation*: A Manifesto for Business Revolution, Harper Business. Publisher: Harper business

Chan, C.M.,Isobe, T., and Makino S. (2011). Which Country Matters? Institutional Development and Foreign Affiliate Performance. *Strategic Management Journal*, 29:1179-1205

Charley B. (2011*). Reengineering the Corporation*: A Manifesto for Business Revolution, Harper Business. Publisher: Harper business

Chava F. N. (1996) *Research Methods in the Social Sciences*. Worth Pub, Publication Date: March 1996 | ISBN-10: 0312101597

Coopers D.R and Schindler P.S. (2003) *Business Research Methods* 8th Edition. Tata McGraw Hill Publishers

Crawford P., Bryce P. (2009). Project monitoring and evaluation: a method for enhancing the efficiency and effectiveness of aid project implementation, *International Journal of Project Management*, Vol. 21.

Cronbach L. J. (1951) .*Measuring reliability coefficients. Research Methods in the Social Sciences.* Worth Pub, Publication Date: March 1996 | ISBN-10: 0312101597

Davenport T. H. (2013). Process Innovation*: Reengineering work through information technology.* Harvard Business School Press, Boston

Denison D.R.(1990) *Corporate Culture and Organizational Effectiveness*. New York: John Wiley and Sons.

Dollar D. and Kraay A. (2000*).Eradicating poverty in developing countries*. The National Planning Office, the Ministry of Finance, Prime Minister or the President's Office

Drucker, P.F. (1954*). The Practice of Management*. New York, NY: Harper.

Durbar S. and Kathmandu N. (2013). Monitoring & Evaluation Reports I Public Governance. Effective Monitoring & Evaluation. *Journal of Research and Governance*. Vol 35(5) 23-26

Dyer, J. H., &Sigh, H. (1998). The relational view: *Cooperative strategy*

ElimuYetu Coalition (2015). Educational Report on possible causes of poor performance of Educational Building Infrastructural projects in Western Kenya. Education 2015.www.elimuyetucoalition.com *Enhancing the Efficiency and Effectiveness of Aid Project Implementation,*

Fischer, B. A.,&Zigmond, M. J. (2010).*The essential nature of sharing in science.*

Frimpong, Y., Oluwoye, J.,&Crawford,L., (2003). *Causes of delay and cost overruns*

Fullan, M., &Miles, M.B. (1992*).Getting reform right: What works and what doesn't.* Phi Delta Kappan,*73 (10), 745-752.*

Garson J. D. (2013*). Diagonistic Tests*. Research Methods in the Social Sciences. Worth Pub, Publication Date: March 1996 | ISBN-10: 0312101597

Giffels, J., Vollmer, S. H., and Bird, S. J. (2010)Editors' overview: Topics in the responsible management of research data

GoK, (2003). Results Based Performance Management., www.PCA.go.ke/component/.../23... - Accessed February 2014.

GoK, (2013). Guideline for Monitoring and Evaluation planning for environmental management plan Ministry of State for Planning National Development Vision 2030, Kenya vision 2030 presented at the London Investment Summit. www.asupa.org.za/image/uploads/8- deadp-emp-guidelinejune05-pdf.Accessed January 2014.

Gomez k. (2008*). Strategic planning work book for non – profit organizations* revised edition, Amherst H. Wilder Foundation, Saint Paul, Minegota U.S.A. Best J. W.

Hair etaal (2010*). Diagonistic Tests*. Research Methods in the Social Sciences. Worth Pub, Publication Date: March 1996 | ISBN-10: 0312101597

Hartnell C.Ou, A. Y.,& Konicki, A. (2011).Organizational Culture and OrganizationalEffectiveness: A Meta-Analytic Investigation of the Competing ValuesFramework's Theoretical Suppositions. *Journal of Applied Psychology* (online publication)

Hatry H. P. (2006*). Performance Measurement: Getting Results*, 2d ed. Washington, DC: The Urban Institute.

Hendrickson, J.K. (2008*). Performance of Educational Infrastructural projects).* American Capitalism: The Concept of Countervailing Power. Boston, MA: Houghton Mifflin.

Hofstede G., Neuijen, B., Ohayu, D. D., & Sanders G.(1980*). Measuring Organizational Cultures*. A Qualitative and Quantitative Study Across Twenty Cases. Administrative Science Quarterly,32,p286-316.

Hofstede G.(1990). Risk society: *Towards a new modernity*. London: sage

Howell (2002). Key project management practices affecting Singaporean firms' project performance in China. *International Journal of Project Management*, 27(1):59-71.

Huang H. and Ku C. (2008).*Social Research Methods*, Oxford: Oxford University Press, Calvert, P., Using Documentary Sources in G. Allan and C. Skinner, (eds), *Handbook for Research Students in the Social Sciences*, New York: The Falmer Press, 1991. p117 – 127.

Ika LA, Diallo A, Thuillier D (2009) Critical success factors for World Bank projects: *an* empirical investigation. *International Journal of Project Management*, 30(1):105-116.

Imam,I. (2007).*Systems concepts in Evaluation*: An Expert Anthology. (eds.) Point Reyes, CA: American Evaluation Association, 2007. Implementation of technological strategies. *Management Science*, *35*, 1014–1026. *In construction of groundwater projects in developing countries*: Ghana as a case study.

Infrastructure on market entry by U.S. telecommunications companies, 1984–infrastructure on market entry by U.S. telecommunications companies,

Institute of Economic Affairs (I.E.A) (2014)- IEA Kenya www.ieakenya.or.ke accessed May 2014m`.

Inter-organizational competitive advantage.

Jamerson P. (2012). Utilization of monitoring and evaluation systems and technology. *Journal of Technology and Evaluation.USIU University*.Vo 2(23)34-56

Jefferson,(2012). Routine Monitoring Programs.www.branson.org/...IBSSI%20counselor February 2014. Bryson, J. and Farnum,

John M. (2004). Monitoring and Evaluation Systems and their value to development planning in African Countries

Jolise Van Stuyvesant Meijen. (2007). The influence of Organizational Culture on Organizational Commitment at a selected Local Municipality. Masters of Commerce Thesis for Rhodes University, Department of Management

Journal of Project Management, 25(3), 266-274

Kaka, A.andPrice, A.D.F. (1994).Relationship between value and duration of construction projects.*Construction Management and Economics.* 9:383–400.

Kaliba, C., Muya, M., and Mumba, K. (2009). Cost escalation and schedule delays in road construction projects in Zambia. *International journal of project management* 27(5),522-531.

Kelvin D. (2006).Research design*: Qualitative & quantitative approaches*. Thousand Oaks, CA: Sage.

Khan M. and Mahlahla S. (1993*). Designing qualitative research*: Newbury Park, CA: Sage.

Khan J. V. (2003*). Research in education* 7th edition (reprint) prentice Hall New Delhi.

Khan, M. A. (2000*). Planning for and monitoring of project sustainability*. A guide line or concepts, issuing and tools UNDP senior advisor M&E adhan@sitnet.ik. Accessed December 2013

Kontinen T, Robinson-Moncada S (2014) *Towards New Practices of Monitoring inWorld Vision Finland*: Pathways of Empowerment.

Koskela L. J. and Howell G. (2002*). Designing qualitative research*: Newbury Park, CA: Sage.

Kothari C. (2004) *Research Methodology – Methods and Techniques* New Age International (P) Ltd, New Delhi

Kusek J. Z. and Rist R. C. (2004).From Stakeholder Management to Stakeholder Accountability,

www.researchgate.net/profile/Andreas_Rasche/publication/...Accessed February 2014.

Kusek J. Z. and Rist R. C. (2004*). Ten Steps to a Results-based Monitoring andEvaluation System*: A Handbook for project managers. World Bank Publications (June 2004). ISBN-10: 0821358235. ISBN-13: 978-0821358

Kwak, Y.H.,&Anbari, F.T. (2009).Analyzing project management research: Perspectives from top management journals;.*International journal of project management.*28:435–46.

Levent A. Mehmet A. (2004) The influence of organizational structure on entrepreneurial orientation and expansion performance, *International Journal of Contemporary Hospitality Management, Vol. 16 Iss: 6, pp.334 – 344*

Lim, M., G. Griffiths, and S. Sambrook (2010).Organizational structure for the twenty-first century.Presented at the annual meeting of The Institute for Operations Research and The Management Sciences, Austin.

Lutans F. (2011*). Organization development and Change*, 9th Edition. Australia: South Western Cengage Learning

Lutans F. (2011). Performance contracting in Costa Rica – The case of the impact of hospital management reforms on absenteeism, The Ministry of Health, Costa Rica

Mansfield, N.R., Ugwu,O.O., and Doran, T. (1994). Causes of delay and cost overruns in Nigeria construction projects.*International journal of project management.* 12(4):254–60.

Marc A.B. and Susan E. R. (2006*). Organizations Behavior, Structures, Processes*, 13th Edition. New York: McGraw Hill

Maurice G. (2011). Contextual factors affecting the deployment of innovative performance measurement systems, *Journal of Applied Accounting Research,* Vol. 12 Iss: 3, pp.260 – 277, Emerald Group Publishing Limited

Mbeche I. (2010). Critical Success Factors for Effective Leadership.*Journal of InternalResearch.* Unpublished MBA Research.

Merewitz L. (1973). Matching Managers to Strategy: Further Tests of Miles and Snow Typology.*British Journal Management,* 7,247- 261.

Milika, W. (2011). Guide to the logical framework approach republic of Serbia.

Mohan, G. (2001). Participatory Development. In Desai, Vandana and Potter, Rob eds. The Arnold Companion to development studies. London, UK: Hodder.

Mohsen A. (2012). Corporate Culture, the Rites and Rituals of Corporate Life. Reading: M.A: Addison Wesley

Morgan,(2007). The Kenyan Experience with Performance Contracting: Discussion Paper, 28th AAPAM Annual Roundtable Conference, Arusha, Tanzania.

Morris, P. W. G. (1987).*The anatomy of major projects*

Nachimies and Nachimies (2005).Questionaire return rate. Diagonistic Tests.*Research Methods in the Social Sciences*. Worth Pub, Publication Date: March 1996 | ISBN-10: 0312101597

Nicole (2000*).Factors Affecting Project Success In: Cleland* DI, King WR, editors.Project management handbook. (2nd ed.) New York: John Wiley.

NIMES (National Integrated Management Evaluation System).(2009). Ministry of National Planning and Vision 2030, Government of Kenya.

Njiru E. (2008). The role of state corporations in a developmental state: the Kenyan experience African Association for the Public administration and Management – 30th AAPAM roundtable conference Accra Ghana 6th – 10th October 2008

Nokes& Kelly.(2007). Organizational performance and decision making – when good intentions are not enough. *Journal of management decision*, Vol 43 No. 7/8

Nuguti E. (2009). Performance contracting in Kenya – A critical evaluation of the monitoring and evaluation system paper

Obong'o S. (2009). Implementation of performance contracting in Kenya, *International Public Management Review*, Volume 10 · Issue 2 · 2009 · © International Public Management Network

OECD. (2012). Performance Management in Government: Performance Management and Results Oriented Management, Occasional Paper Number 12, (OECD, Paris, 1994)

Ogbene C. (2012). Influence of monitoring and evaluation on implementation of educational projects, among devolved states in Nigeria,*Journal of International Affairs*. Nigeria

Ogboune, (2013).National Development Planning Commission(NDPC). Report from an Academic Study. M&E in Ghana.

Olu O. (2012). Influence of Organizational Culture on Employee Work Behavior.*International Journal of Contemporary Business Studies.* Vol: 3, No: 11. November, 2012 ISSN 2156-7506

Parlmeck,(2011). Monitoring and Evaluation in Public projects.*Journal of research andsocial studies.*Unpubished MA Thesis.

Paul, M.,(2005). Principles of project monitoring and evaluation www.plantsscience.Pauline publications Africa daughters of St Paul 00100 Nairobi G.P.O Kenya.www. plantsscience. Ucdavis-edu/-…/publical. Accessed February 2014 79

Paurav (2009). Influence of monitoring and evaluation on implementation of educational projects, among devolved states in Nigeria,*Journal of International Affairs*. *Leban.*

Pestman, P. (2001).*In het spoor vandeBetuweroute.Mobilisatie, besluitvormingen Institutionaliseringrondeen Groot.Infrastructurelproject.*Amsterdam: RozenbergPublishers.

Peterson, (2010).Investigating the influence of data dissemination and use,and routine program monitoring as components of a monitoring and evaluation system on implementation of education projects Project monitoring and evaluation www.plantsscience.Www.plantsscience. Ucdavis-edu/-…/publical. Accessed February 2014 79

Pettigrew A. M. (1979). Management: Tasks, Responsibilities, Practices. New York: Harper & Row. ISBN 1-4128-0627-5.

Pfeffer,J.(1997). *New Directions for Organization theory*; Problems and Prospects. New York: Oxford University Press.

PMBOK (2014).*Project management book of Kenya* hand book for project planning and implementation. Kenya Association of Project planners.

Pollack, J. (2007). The Changing Paradigms of Project Management, *International journal of project management*

Qingmin, (2012) How does organizational structure influence performance through learning and innovation in Austria and China, Emerald Group Publishing Limited. Chinese Management Studies, Vol. 6 Iss: 1, pp.36 – 52.

Raftery, J. (1994).*Risk analysis in project management*. E and FN Spon:London

Ravasi, and Shultz (2006). Performance Management and Agency Governance for Africa Development: The search for common cause on Excellence in the Public Service. UNCEA, Addis Ababa.

Raymond L, Bergeron F (2015) Project management information systems: An empirical study of their impact on project managers and project success. *International Journal of Project Management, 26(2):213-220.*

Reality of project management. New York: John WileyandSons.

responsible management of research data."*Sci. Eng. Ethics,*16(4), 631–637.

Road construction projects in Zambia.*International journal of project management.* 28:522-31.

Roy and Wijayasuriya (2011).Centralization in Monitoring & Evaluation. The NationalPlanning Office, the Ministry of Finance, Prime Minister or the President's Office

Russell G. (1995*). Human Motivation*: A Social Psychological Approach (Pacific Grove, CA: Brooks/Cole Publishing Company).

Ryan K. L. Ko. (2009*). A computer scientist's introductory guide to business processmanagement* (BPM) ACM Crossroads 15(4), ACM Press

Saunders et al (2009). Diagonistic Tests.Research Methods in the Social Sciences. Worth Pub, Publication Date: March 1996 | ISBN-10: 0312101597

Sayyed M. A. (2012). The Influence of Employees' Involvement in Performance Assessment System on Employees' Creativity. *International Journalof Academic Research in Business and Social Sciences* November 2012, Vol. 2, No. 11 ISSN: 2222-6990 310

Sci. Eng. Ethics, 16(4), 783–799.

Sekaran&Bougie, 2010).Diagonistic Tests.Research Methods in the Social Sciences. Worth Pub, Publication Date: March 1996 | ISBN-10: 0312101597

Shenhar et al (1997) Strategic Planning Process: Steps in Developing Strategic Plans

Sheperd, A. (1994). *Post Project Impact Assessment and Monitoring:* Environmental Methods Review: Retooling Impact Assessment for the New Century, ThePress Club, North Dakota

Simon, Frasier (1991). Monitoring and evaluation Massachusetts institute of technology. Web.mit.edu…/issues-tools/monitoring-eval.htm/ Accessed January 2014

Sinchair, (2005).Introduction to Program monitoring & Evaluation.Michigan State University.Department of Agriculture and Extension Education. © 2003 FORREX–Forest Research and Extension Partnership ISBN 1-894822-09-9

Sivagnanasothy, V(2007)., Institutionalization of Monitoring and Evaluation System in Sri Lanka –Lessons Learnt, Best Practices, Issues, Challenges and the Way Forward, 2007. [Accessed 26 September 2010 www.ideas-int.org/documents/Documents.cfm?doclD=41]

Solomon, P., &Young,R. (2007).*Performance Based-Earned Value,* John Wiley and Sons Ltd Publishing House, San Francisco

Stead and Stead (2003).Effective Monitoring and Evaluation Systems..*Journal of Research and Governance*. Vol 35(5) 23-26

Troyey, (2010).M&E in Latin America and Caribbean Countries (LAC).38(2), 535–552, DOI: 10.1111/1475-6773.00132

Turner, J. R. (2009). Project management: A profession based on knowledge or faith? (Editorial). *International Journal of Project Management*, 17(6),329-330.

Uher (2009). The Memorandum of Understanding and Performance of Central PSEs, occasional paper no.1, MOU Division, Department of Public Enterprises, Ministry of Industry, Government of India, New Delhi, 1997

Wachs (1990). Ten Steps to a Results-based Monitoring and Evaluation System: A Handbook for project managers. World Bank Publications (June 2004). ISBN-10: 0821358235. ISBN-13: 978-0821358238

Wagner A, Bob D., Tina J, Robert B. Kozma, Jonathan M. & Tim U. (2005). *Monitoring & Evaluation of ICT in Education Projects.A Handbook for Developing Countries. Washington DC: infoDev/WorldBank*

WBG, (1998). Operations evaluation department (1998) World Bank group 1818h street RM H3 304 washing, 20433.WBG, (1998). World free of poverty: operations evaluation department (1998) World Bank elibrary.worldbank.org>worldbankeconomicreview www.bublew.com/news/1679275: Accessed January 2014. 80

Weiner,(2010). Determinants of Project Success.The Role of M&E in project Management.

Weiss, A. R., & Birnbaum, P. H. (2010).Technological infrastructure and the implementation of technical strategies. *Management Science, 35(8), 1014-1026*

Williams, B.& Imam, I. (2007).*Systems concepts in Evaluation: An Expert Anthology*. (eds.) Point Reyes, CA: American Evaluation Association, 2007.

Williams, C.&Mitchell, W. (2004).*Focusing firm evolution: The impact of information*

Wilson, T.D. (2010). *Social psychology* (6th Ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Woodwork and Kelvin,(2006).*Industrial Organization*. Oxford: Oxford University Press.

Wooldridge (2009).Diagonistic Tests. Research Methods in the Social Sciences. Worth Pub, Publication Date: March 1996 | ISBN-10: 0312101597

World Bank. (1994).*World development report 1994: Infrastructurefor development*.

Yamane, T. (1967).Determining sample size. edis.ifas.ufl.edu/pd006. Accessed, December 2013.

Yames, (2013).A disappointing Search for Excellence. Harvard Business Review, 6(6), p78- 88.

Young. (2007). Selection Incentives in a Performance-Based Contracting System, Health Services Research Volume 38, Issue 2, pages 535–552, DOI: 10.1111/1475-6773.00132

Yujing, S. (2003). Selection Incentives in a Performance-Based Contracting System, *Health Services Research*Volume 38, Issue 2, pages 535–552, DOI: 10.1111/1475-6773.0013.

Zairi and Sinchair (2005).A disappointing Search for Excellence.*Harvard Business Review,*6(6), p78-88

APPENDICES

Appendix I: Introductory Letter

Beryl N. Mutekhele
P.O. BOX437- 50200
BUNGOMA
Date: ……..

Dear Respondent,

RE: DATA COLLECTION

I am a postgraduate student of the University of Nairobi pursuing a program leading to Doctor of philosophy (PhD) in project planning and management (Monitoring and Evaluation). As part of the course, I am expected to conduct a research on **UTILIZATION OF MONITORING and EVALUATION SYSTEMS, ORGANIZATIONAL CULTURE, LEADERSHIP AND PERFORMANCE OF EDUCATIONAL BUILDING INFRASTRUCTURAL PROJECTS IN BUNGOMA COUNTY, KENYA**.

This is to humbly request you to participate in the exercise as a respondent. The information provided for this research will be purely for academic purposes and the recommendations made will be important to your projects, the County as well as the Country as a whole. The information provided will be treated with utmost confidentiality and purpose of this research. Thanks in advance for your cooperation.

Yours Faithfully

PhD student
University of Nairobi
0724821430
bmutekhele@gmail.com

Appendix II: Questionnaire to the Respondents

Questionnaire for National Government- CDF and County Government project implementation committees

SECTION A: BACKGROUND INFORMATION OF RESPONDENTS

Kindly tick in the boxes as appropriate ()

Name of stakeholder(Optional) Telephone Number (Optional)

1) Gender: Male( ) Female( )
2) Age: 18-25 ( ) 26-35( ) 36-45 ( ) Above46 ( )
3) Level of education attained

   O'Level( ) Certificate/Diploma( ) Graduate( ) Post Graduate ( )
4) Have you ever attended a course in Monitoring and Evaluation?

   Yes ( ) No( )

SECTIONB: DATA DISSEMINATION AND USE AND PERFORMANCE OF EDUCATIONAL BUILDING INFRASTRUCTURAL PROJECTS

Instructions: By ticking in the spaces provided, indicate the extent to which you feel the following statements reflect your opinion on how data dissemination influences the performance of educational building infrastructural projects where.:

1-Strongly Disagree 2- Disagree 3-Notsure 4- Agree 5-Strongly Agree

QNO.	Statements	Scale				
		1	2	3	4	5
1	The act of sharing information about the project to stakeholders increases their ownership and appreciation of the project					
2	Making public project information increases transparency and accountability in a project					
3	Timely distribution of information to stakeholders helps in managing their expectations towards the project					
4	Stakeholder data dissemination and validation workshop should not be held during project implementation					

SECTION C: M&E WORK PLAN AND PERFORMANCE OF EDUCATIONAL BUILDING INFRASTRUCTURAL PROJECTS.

Do you have a work plan for implementing M & E for your Educational building infrastructural projects? Yes ( ) No ( )

If yes, kindly tick the level of conformance to the work plan

Below 50%( ) 50%( ) fully compliance( )

Instructions: By ticking in the spaces provided, indicate the extent to which you feel the following statements reflect your opinion on how M & E work plan influence the performance of educational building infrastructural projects where:

1-Strongly Disagree 2- Disagree 3-Notsure 4- Agree 5-Strongly Agree

QNO.	**Statements**	Scale of				
		1	2	3	4	5
1	A project work plan should be in line with the organizational strategic plan					
2	Implementation of project activities is in line with the work Plan					
3	The amount of money estimated for implementing a project strongly determined the level of success of that particular project					
4	Every decision made concerning a particular project is in reference to the project work plan					

SECTION D : ROUTINE PROGRAMME M O N I T O R I N G AND PERFORMANCE OF EDUCATIONAL BUILDING INFRASTRUCTURAL PROJECTS

Do you have any mechanisms in place to periodically monitor and evaluate the educational building infrastructural projects? Yes ( ) No ( )

If yes, kindly tick how often

Monthly( ) Quarterly( ) Semi-annually( ) Annually( )

Do you have periodic projects reports? Yes ( ) No( )

If yes, tick appropriately Few( )Many( ) Very many( )

Instructions: By ticking in the spaces provided, indicate the extent to which you agree with the following aspects of routine program monitoring strategy in influencing the performance of educational building infrastructural projects:

1-Strongly Disagree 2- Disagree 3-Notsure 4- Agree 5-Strongly Agree

QN O.	**Statements**	Scale of				
		1	2	3	4	5
1	Conducting regular meetings to discuss building designs helps in tracking project implementation					
2	Project implementation is not successful without periodic visits to the project site to track progress					
3	It's not a must for project implementers to involve stakeholder during their periodic monitoring activities					
4	Conducting program briefs is essential in restructuring and redirecting project implementation					

SECTION E: PERFORMANCE OF EDUCATIONAL BUILDING INFRASTRUCTURAL PROJECTS

Statements	Strongly Disagree	Disagree	No Idea	Agree	Strongly Agree
Institutions that adhere to building specifications as stipulated in the school safety guidelines manual are less likely to encounter legal issues					
It's not a must for buildings to conform to guidelines stipulated in the school safety manual					
Cheap construction material are more sustainable than quality material					
Projects that don't aim at solving the local needs of a targeted population rarely find ownership from the community					

Delaying the completion of a project is denying the targeted beneficiaries their rights					

SECTION F: ORGANIZATIONAL CULTURE

By ticking in the spaces provided, indicate the extent to which you agree with the following aspects of organizational culture in moderating the relationship between monitoring and evaluation systems and performance of educational building infrastructural projects:

1-Strongly Disagree 2- Disagree 3-Notsure 4- Agree 5-Strongly Agree

QNO.	**Statements**	**Scale of**				
		1	2	3	4	5
1	The organization's vision and mission influences the monitoring of a project					
2	The values treasured in an organization influence the overall performance of projects in that organization					
3	The attitudes of the project implementers are key in influencing the monitoring of a project					

SECTION G: LEADERSHIP

By ticking in the spaces provided, indicate the extent to which you agree with the following styles of leadership in moderating the relationship between monitoring and evaluation systems and performance of educational building infrastructural projects:

1-Strongly Disagree 2- Disagree 3-Notsure 4- Agree 5-Strongly Agree

QNO.	Statements	Scale of				
		1	2	3	4	5
1	Hands-off leadership affects the monitoring of a project					
2	Participatory leadership enhances monitoring of projects					
3	Leadership where decision are made and imposed on people is the way to go in monitoring					
4	Transformative leadership approach that causes change in individuals and social systems is good for project					
5	Transactional leadership where leaders emphasis on compliance in terms of rewards and punishments is the					

Appendix III: Interview Schedule for key Informants

Interview guide for the departmental Executive Officers

Background information

1. Name(optional)
2. Gender: Male ( ) Female ( )
3. Name of department……..
4. Position held in the department…….
5. Level of education…….

3. In your own opinion, is your organization committed to implementing any M & E system for its educational building infrastructural projects?
4. Give a brief account on how your department endeavors to ensure implementation of any M & E system for its Educational infrastructural project.
5. How is your department approaching the following in relation to M&E of educational building infrastructural projects?

a) Data dissemination and use
b) Utilization of M & E work plan
c) Routine Program monitoring
d) Organizational culture
e) Leadership

6. Quality of educational building infrastructural projects
7. How regular is monitoring and evaluation done in your respective department?
8. Describe the challenges encountered in the implementation of M & E systems in Educational projects in your department.
9. What are your recommendations to strengthen M&E systems in educational building infrastructural projects?