

# Influence of Monitoring and Evaluation System on the Performance of Projects

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## ABSTRACT

*Monitoring and Evaluation (M&E) is a project management function. It is also a part of the project cycle, which aids the tracking of the project performance at any given time, as well as provides reasons for any observed project status. The monitoring and evaluation system is made up of components that make it functional. A well developed monitoring and evaluation plan, the skills for M&E and M&E information management systems are vital components of the Monitoring and Evaluation system that influences the performance of a project but this has been because an M&E system has been seen by organizations as a donor requirement rather than a management tool. The broad objective of the study was to assess the influence of the monitoring and evaluation system on the performance of the Reading and Numeracy Activities (RANA) Project in Katsina State of Nigeria. The specific objectives were to assess how monitoring and evaluation plans, monitoring and evaluation skills and M&E Information Management systems influence the performance of the RANA project. The study was guided by the theory of change and the realistic evaluation theory. The study adopted a descriptive survey research design and targeted all the 32 employees working on the RANA Project because of the limited number of employees. Data was collected through questionnaires and interview guides, which were pilot-tested before use and utilized the Cronbach alpha test on SPSS to measure both reliability of the research tool and the internal consistency. The data was analyzed using descriptive statistics which includes correlation analysis aided by Statistical Package for Social Science for quantitative while the qualitative data was analyzed using narrative and thematic methods. Results showed that monitoring and evaluation indeed has an influence on project performance as a management function. This is demonstrated in activities like M&E plan which comprised of appropriate performance indicators for measuring performance, data collection schedules and methods of data analysis well developed prior to project implementation. By this all the appropriate measures to ensure project performance is enhanced, are well taken care of. The results further showed that 94% of the respondents had the skills for M&E. 100% were acquainted with the M&E plan for the project and confirmed the existence of a system for data capturing for the project noting that all data collection from baseline surveys, progress monitoring data, etc. were all captured in the project database. On average, 94% of the respondents gave credible reasons why they thought that M&E influences project performance in reference to the project under study. Spearman's correlation showed a positive relationship of 0.64 between M&E and project performance. Particularly, it showed that M&E plan had an approximate correlation coefficient of 0.8 and M&E skills and M&E Information management system also showed a statistically significant correlation with project performance at 0.698 and 0.474 respectively. In conclusion, the study showed a directly proportional influence of project performance by monitoring and evaluation. It also showed that for a visible positive influence on project performance to be seen, an M&E plan should be in place. Similarly, M&E is to be systematically implemented in full in order for it to influence project performance. The study therefore recommends the institutionalization of M&E in organizations by ensuring an existence of an M&E unit with adequate staffing owing to the critical influence of M&E on project performance.*

## Introduction

Many countries, as noted by United Nations Capital Development Fund (UNCDF) (2004), especially the developed ones have pursued results orientated development initiatives by adopting more effective monitoring and evaluation practices. As part of the broader efforts to institutionalize managing for development results, most governments such as Sri Lanka, Canada, and USA among others have taken specific steps to strengthen Results-based M&E System at their national level.

The concept of Monitoring and Evaluation (M&E) in projects over time has continuously evolved manifesting the paradigm shifts in the management of projects (Nyonje, Ndunge, & Mulwa, 2012). The practice of Monitoring and Evaluation in the 1950's was mostly dominated by the greater emphasis on the adequate use of resources, which reflects the trend of the era which dwelled mostly on social science (Rodgers & Williams, 2006). During the time, the primary focus of monitoring and evaluation was concentrated on lived experiences. "This gave voice to many stakeholders thereby shaping evaluation process" (Schwandt & Burgon, 2006).

Many organizations in the present day has continued to treat M&E as a donor requirement instead of seeing it as a tool for management solely used for tracking the progress of interventions, identification and correction of problems during the planning as well as the implementation stages of projects (Armstrong & Baron, 2013; Alcock, 2009; & Shapiro, 2001). Donors primarily are entitled to the full knowledge of where and how the project money was spent, while on the contrary, the function of M&E primarily is measuring performance of projects or organizations as well as learning. (Naidoo (2011)) noted that “the basis for evidence-based project management decisions are solely enhanced by the effectiveness of the project monitoring and evaluation”. Ogula, (2002) noted three different key activities that form part of the components that makes up an effective monitoring and evaluation system which are M&E Planning, M&E Skills, and M&E information management system.

Organizations in the face of globalization are faced with pressures (both internal and external) as well as the demands for continuous quality improvement in project management in order to enhance project performance as well as stay competitive in the global market (Kusek & Rist, 2004). Some of these demands come from either donor agencies, government, private sectors, media, civil society, etc. In the face of all these, organizations must increasingly be responsible to the demands of the stakeholders especially in the demonstration of tangible results irrespective of the call either for increased transparency and accountability in exchange for aid or the call for real results (Khan, 2001). Many of the organizations as a result of all these demands and pressures are becoming increasingly ignorant of the factors that influence project performance as well as the need to properly manage projects.

As opined by (Kusek & Rist, 2004), “Monitoring and Evaluation is a powerful tool that influences projects' performance”. Monitoring and Evaluation as echoed by (Shapiro (2004)) aids in the assessment of the quality of the project, the impact of the project against set goals/targets, as well as assess project plans and work plan. It has the sole aim of improving current and future management of project outputs, outcomes and impact (UNDP, 2002). Only by monitoring the performance of a project that one can tell how well the project is doing. In the words of (Wysocki and McGary, 2003), “If you don't care about how well you are doing or about what impact you are having, why bother implement a project at all?”

Understanding the unity between the distinct elements of Monitoring and Evaluation is very key for a holistic understanding of the concept. The OECD defined the concept of M&E giving their use. “Monitoring is a routine and continuous process that collects data systematically on agreed indicators to provide to the management and stakeholders of an on-going project indicating the extent of progress as compared to the objectives” (OECD, 2002). Consequently, “Evaluation is defined as the periodic assessment of ongoing and/or completed projects, policy or program using systematic and objective approach” (OECD, 2002). Armstrong & Baron, (2013) opined that Monitoring and Evaluation system aims at determining the fulfillment of project objectives, measurement of the project's efficiency, effectiveness, significance and impact, as well as incorporate the learning of lessons in the decision-making process.

Monitoring makes contributory inputs for evaluation and this makes it an integral part of the overall evaluation process. (Nyonje, Nduge, & Mulwa, 2012) opined that Monitoring in nature is descriptive and provides information on the status of project intervention in relation to the assigned project targets and outcomes. Contrastingly, Evaluation is seen as an assessment of ongoing and/or concluded projects in an organized, systematic and objective way with the aim of providing on a timely basis, the assessment of relevance/importance, the efficiency and effectiveness, as well as the impact, sustainability and overall progress. Monitoring and Evaluation applied as a function, is a fundamental part of project management that involves reflection and communication to support efficient and effective project implementation through informed/evidence based decision making (Nuguti, 2009).

The Reading And Numeracy Activities (RANA) Project implemented by Family Health International in Nigeria is selected as a case study for this research. The implementing organization has an institutionalized Monitoring and Evaluation system by having an M&E Unit and M&E strategy, which is incorporated in each of the projects implemented by the organization including the RANA Project.

In view of the foregoing, the study seeks to demonstrate the influence monitoring and evaluation systems has on the performance of the Reading And Numeracy Activity Project considering that “Monitoring and Evaluation system is a very key component of project management which gives control over the major variables that defines the components of the constraint triangle of a project which includes scope, quality, resources, time and cost” (Kohli & Chitkara, 2008). This study focuses on three key M&E components, which includes M&E plan, M&E skills/capacity, and M&E information management system.

### **Monitoring and Evaluation Activities**

The activities of Monitoring and evaluation provides great support to the management function and circumscribes the whole of the management, operating systems as well as the culture of an organization (Cook, 2006).

Monitoring and evaluation activities are aligned to accountability and its activities tend to ensure that projects achieve both upward and downward as well as the horizontal accountability demands. (Cook, 2006) opined that this alignment to accountability can be linked to the fields of audit, compliance, as well as project performance management. Expected from a monitoring and evaluation which is accountability-oriented according to Cheng, et. al, (2007) is a “high level of scrutiny and judgment made against clear norms and standards established for a range of performance”.

Monitoring and evaluation promotes reflection and learning in organizations (PMI, 2006). It is assumed that organizations when faced with evaluation, it would be more self reflective and open. This is not the case majority of the time as operationalizing learning in organizations are usually not easy given the complex range of integrating information in organizations, as well as management culture and protocols that exist in the system which must be negotiated (Preskill, 2004; PMI, 2006). Kennerly and Neely (2003) also noted the influence of several factors such as the context, technicalities and psychology on the utilization of evaluation, reflection and learning in organizations. The assessment of the contributions of monitoring and evaluation to reflection and learning by Schwartz & Mayne (2005) noted that “monitoring and evaluation is a project management tool that supports evidence-based decision making by improving and providing quality data and information”. This opinion is supported by Verma (2005) stating that monitoring and evaluation is a very valuable and irreplaceable project management tool.

Of great importance are the intentions of monitoring and evaluation in a project because it has the potential to lead to different outcomes haven different identities given the different context of application. Depending on this, Bamberger (2008) noted possibility of the utilization of monitoring and evaluation as a tool for promoting behaviors, learning, or practice and also could be used for accountability. Gray (2009) illustrated that aside accountability; evaluation has huge potentials to launch learning in organizations.

The influence of monitoring and evaluation on the project performance cannot be over emphasized. Shapiro (2001) pointed that M&E provides great aid in identification of problems and their causes in project management as well as suggests possible solution to them. Through this, the influence of monitoring and evaluation systems on the performance of projects is established. This study will be exploring project performance as the general quality of a project as regards to the impact it creates, value added to beneficiaries, effectiveness and efficiency of its implementation as well as sustainability.

There are various processes and activities included in project M&E which when implemented correctly, results to adequate project delivery and lead to improvement in project performance (Msila & Setlhako, 2013). Several complementary activities are involved in conducting monitoring and evaluation in projects and this starts with the formulation of M&E plan (UNDP, 2009). This plan guides the rest of the exercises and activities of M&E.

### **Monitoring and Evaluation Planning and Project Performance**

“A monitoring and evaluation plan is a document that gives a quick description of how the whole M&E system of a program/project works” (Bullen, 2013). Cleland & Ireland, (2007) added that “the M&E plan should include the information on how a program/projects should be assessed” while UN Women (2012) expatiated the description of the M&E plan by adding that it defines the project indicators, defines the data that is to be collected, the data collection methods, analysis and reporting.

In the planning of the monitoring and evaluation system, every aspects of the program that is required to be in place are covered in order to ensure early detection of issues/lapses as well as making informed decisions.

For this study, of great essence are the constituents of an M&E plan that influences project performance. Generally, the monitoring and evaluation plan lays down the different underlying assumptions that the project achievements are dependent on while describing the relationships that exist between the inputs, activities, outputs and outcomes on the log-frame. Also, the plan contains a well outlined measures and definition of indicators and the baseline data, the monitoring schedule showing when the data is to be collect and who will be responsible, the tools for the collection of data, sources of the required data as well as the cost that will be incurred.

Different scholars in the field have laid down the important considerations for a monitoring and evaluation plan. These considerations completed the M&E plan and gives better coverage in terms of providing oversight and giving direction to the project during implementation. Some of these considerations include financial Resources and human capacity to carry out M&E activities (Brignall & Modell, 2010); feasibility, timeline, and ethical considerations were given by Armstrong & Baron (2013). These considerations by different scholars tend to ask important questions that requires the project teams to provide answers which in turn shapes and guides implementation.

### **Monitoring and Evaluation Skills and Project Performance**

In order to efficiently carry out project activities which includes monitoring and evaluation activities, Jones et. al. (2009) pointed out skilled personnel as one of them. The technical capacity of the project team is key to achieving the set goals of a project. The training and capacity building of project staffs on Monitoring and Evaluation and reporting has proven to enhance the comprehension and understanding of project deliverables, reporting requirements by the project as well as brings about team work (Acharya et. al (2006); Wysocki & McGary, 2003).

In general practice, Acharya et. al (2006) opined that every member of the implementation team of a project including partners are to possess or acquire the required skills for M&E. This they justified by the fact that everyone that is part of the project implementation in one way or the other is involved in the implementation monitoring and evaluation activities.

The M&E training in projects and organizations follows through steps that ensure the conduct of the right trainings for the right people at the appropriate time. This starts with the capacity assessment of project staffs as regards M&E. They are usually carried out during the project planning phase in order to identify capacity gaps that exist for M&E and the resources required for the conduct of capacity building for M&E.

The training plan for monitoring and evaluation training follows this assessment. “The plan is shaped to addressing the staff capacity gaps as identified during the capacity assessment and includes topics that are to be covered as well as the persons that need to be trained” (Alcock, 2009). Also, the timeline of the training are also planned. While developing the M&E capacity building plans, it is pertinent to take note of the different staff levels and the levels and topics of trainings applicable to them.

It is important for the project team to have a full knowledge of the M&E system, the logic behind it as well as the role they play in operationalizing the system (UPWARD, 2011). Therefore, the covered topics in M&E training are very vital and play a key role in equipping staffs with the needed skills for data collection, analysis and reporting. They include, “the M&E system to be followed, the key performance indicators for the project, information gathering methods and tools, data analysis, and reporting” (UNDP, 2006). Also, “the training for M&E should include topics on roles and responsibilities” (Woodhill & Lisa, 2012). These topics contained in the M&E training greatly refocuses the implementation team in M&E data collection. Narayan-Parker & Nagel, (2009) opined that “the use of the project log-frame to develop the monitoring and evaluation tools is the most important part of the M&E training and skills required for M&E”.

The training on M&E is usually participatory to ensure that team members are well familiar with the project design, focus and the available M&E tools. Marsden & Oakley, (2001) opined that the use of participatory method in the development of M&E skills improves the general understanding of project indicators as well as their relevance in tracking the performance of projects. This contributes immensely to the full understanding of the project performance at any given time thereby positively influencing the project performance. PAMFORK (2007) supports this with his opinion that understanding by the project team is very critical because it increases the possibilities of collecting quality M&E data within the specified timeline.

Also, to better understand how M&E contributes to the performance of a project, M&E skills generally need to include the skills to understand and interpret the Key performance Indicators (KPI). This skill covers the indicator definitions, measurement of indicators, modes of data collection for each of the indicators, as well as the timelines for data collection and reporting (Alcock, 2009). This shows relevance of monitoring and evaluation skills to the performance of projects.

### **Information Management Systems and Project Performance**

The accumulation and storage of project performance data during M&E is made possible by the information management system. Making sense out of this data as well as supporting the decision-making process is made possible by the process of analysis.

Predictive Analytics (2020) defined data analysis as “the process of inspecting, cleaning, transforming and modeling data with the objective of discovering useful information, arriving at a conclusion and supporting decision making process”.

The concept of information management system as a component of an M&E system is necessitated by the quest to have a well-organized set of data for analysis (Technopedia, 2013) and the starting point for analysis is having an organized data. Analyzing data turns data into information by presenting it in understandable patterns, trends and interpretations (Shapiro, 2001).

M&E information system contributes greatly to influencing project performance as it serves as a tool that is used to organize the project data. Beynon-Davis (2008) opined that it provides the needed data and information to effectively and efficiently manage a project. Usually, the management information systems are made up of people, technology, data and processes and it captures data in a user-friendly database for easy storage, retrieval and analysis. “This system is important because it is a readily available source of data at each level of project implementation on which the project performance can be assessed” (Hailey & Sorgenfrei, 2009) as well as helps to highlight important factors for the successful implementation of projects (Cheng, et. al. 2007). This system also takes on as a tool for planning and communication as well as aid to facilitate the organization, storage, retrieval and dissemination of project information.

For effectiveness and efficient functioning of an M&E information management system, Olive (2002) highlighted the importance of ensuring that information stored in the information system is credible. This makes the system to be management oriented. The M&E information system is holistic in nature and covers all the functional thematic and programmatic areas of a project making it a backbone of a functional M&E system.

### **Conceptual Framework**

This study will focus on three (3) major variables and seeks to establish the extent M&E planning, M&E skills, and M&E information management systems influence the performance of projects. The independent variables include M&E planning, M&E Skills, and M&E information management system. The dependent variable is the Project performance while Technology, operating environment, project funding and capacity of the project staff are the moderating and intervening variables.

### **Methodology**

This study adopted a descriptive survey research design. This allows the researchers in the collection of data, analysis, presentation and interpretation for the sole purpose of clarity (Orodho, 2002). Cooper & Schindler (2008) added that it aids the researcher to have an extensive analysis and to understand a particular concept. The adequacy of a research design to fulfill the research objectives determines its applicability. Descriptive research survey design helps the researcher to collect comprehensive information. This is through a combination of both quantitative and qualitative data collection methods. This survey design aided in drawing conclusions on the influence M&E components/activities have on the project performance. This survey research design was chosen as a result of its suitability to fulfilling the research objectives.

This research targeted all the 32 staffs and consultants working on the RANA project in Katsina state of Nigeria. The sample size for the study included all 32 personnel working on the RANA project in the state. This is as a result of their limited number. Furthermore, key informant interview was conducted for 5 key project management and senior level M&E staffs selected from (2) within and (3) outside of the project.

The survey and key informant interview methods of data collection were used to collect opinion from the participants as regards themes of M&E systems and project performance. Using a semi structured questionnaire with open ended and close ended questions as well as the use of a key informant interview guide for data collection. The tool was piloted and its reliability tested using the Cronbach alpha test using SPSS with a score of 0.73. Nunnally (1978) and Mugenda & Mugenda (2003) noted that scores of 0.70 and above are acceptable reliability coefficient therefore the questionnaire was considered reliable.

The study adopted the descriptive statistic methods as well as correlation analysis using SPSS to analyze the quantitative data while the qualitative data was analyzed using narrative and thematic methods. 95% confidence level was used to test the significance of the outlined factors and this was done using correlation analysis. This was to establish the degree of strength in terms of relationship between the variables. The Spearman's correlation was utilized in the establishment of the relationship between the variables. The below model specification guided the multiple regression analysis;

$$Y = (\alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon)$$

Where;

Y = Project Performance

$\beta_0$  = Constant Term

$\beta_1$  = Beta coefficients

X1 = M&E planning

X2 = M&E Skills

X3 = M&E information management system

$\epsilon$  = Error Term

**Research Findings**

**Response rate**

Response rate is the number of people with whom semi structured questionnaires were properly completed for taking as a fraction of the total number of people in the entire sample frame (Fowler, 2002). The response rate is for the survey is 100% given that all the targeted respondents from the project implementing organization participated in the survey. The table 4.1 below shows the distribution of respondents.

This response rate was satisfactory and representative and was therefore used to draw conclusions from the study. As opined by Mugenda & Mugenda (2003), a response rate of 50% is adequate for analysis and reporting, a rate of 60% is generally good while a response rate of above 70% is excellent. This is also the same position taken by Babbie (2010) who also maintained that a response rate of above 70% is deemed to be very good.

*Table 1 Distribution of respondents by category and by project*

Category of Respondent	Frequency	Percentage (%)
Project Management team members	7	21.8
Project M&E staffs	5	15.6
Project officers	11	34.5
Consultants	9	28.1
Total	32	100.0

**Monitoring and Evaluation roles and responsibilities**

All the survey respondents played a part in project monitoring and evaluation with varying individual roles and responsibilities in the project under review. The respondents consist of the project management team members with the responsibility of Conceptualization and project planning, Information Communication Technology (ICT)/Management Information System (MIS) coordination, Liaison and communication, and Administration & logistics.

As shown in table 4.3 below, the project implementation team had project officers with the responsibilities for coordinating ICT/MIS, officers responsible for data collection and documentation, liaison and communication as well as the handling of administration and logistics requirements of the projects.

*Table 2 Role of respondents in the RANA Project*

Category of Respondent	Roles	Frequency	Percentage (%)
Project Management team members	Conceptualization and project planning	3	21.8
	ICT/ MIS coordination	1	
	Liaison and communication	1	
	Administration & logistics	2	
Project M&E staffs	Data collection and documentation	3	15.6
	ICT/ MIS coordination	1	
	Liaison and communication	1	
Project officers	Conceptualization and project planning	3	34.5
	Data collection and documentation	4	
	Liaison and communication	2	
	Administration & logistics	2	
Consultants	Conceptualization and project planning	4	28.1
	Data collection and documentation	3	
	ICT/ MIS coordination	1	
	Liaison and communication	1	
Total		32	100.0

**Value of Monitoring and Evaluation**

Presenting the proportion of respondents who affirmed to the contribution of monitoring and evaluation to the performance of projects, as show in figure 1 below, 94%(n=30) affirmed that monitoring and evaluation contributes to the performance of projects, 3%(n=1) responded otherwise, while and 3%(n=1) does not know whether monitoring and evaluation contributes to the performance of projects.

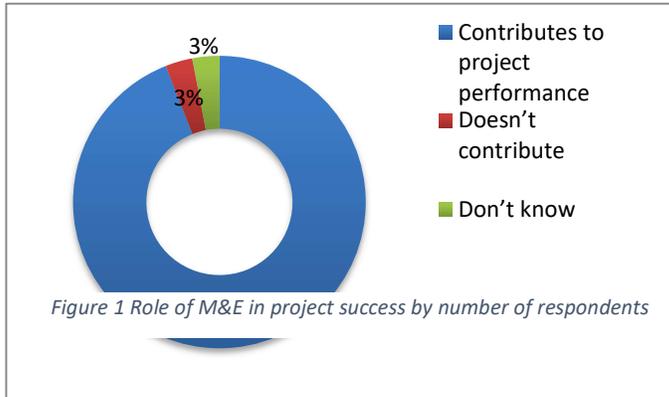


Figure 1 Role of M&E in project success by number of respondents

The explanations given by the respondents who agreed that monitoring and evaluation contributes to the success of a project includes;

The promotion of data use culture and evidence-based decision making: During the monitoring and evaluation of a project, data is collected, analyzed and reported. Monitoring and evaluation strengthens the process of data collection, analysis and reporting as well as promote or drives the use of monitoring data in making evidence-based decisions solely geared towards achieving the set objectives of the

project.

Monitoring and evaluation supports and promotes the management of results: Focusing on the measurement of project results using agreed benchmarks or targets, monitoring and evaluation helps to determine if the project is on track or not, facilitate the documentation of lessons learnt to improve the planning of future projects as well as provide ample opportunities to the project team to timely correct project mistakes before it blows out of proportion.

Promotion of accountability: The accountability system/framework is an integral part of monitoring and evaluation. Through accountability, project outputs are agreed on, staffs are held accountable based on the agreed outputs, and assessments are made through the monitoring and evaluation control systems. This also ensures compliance with stipulated procedures for the physical and financial implementation of a project.

The organizational structure of the RANA project systematically embedded the monitoring and evaluation unit as a unit within the project structure. Having a full-time monitoring and evaluation coordinator, M&E officers and M&E consultants, they were charged with the sole responsibility of all M&E related activities of the project which includes the database designing, data capture and analysis. There also exist for the RANA project, a monitoring and evaluation strategy document which guides the activity implementation for monitoring and evaluation.

The monitoring and evaluation unit played critical roles in ensuring effective planning and management of M&E systems, evaluating the project progress and performance using the outlined indicators in the project's logical framework, conducting project assessments targeting the beneficiaries to determine the impact and effectiveness of the project, documenting lessons learnt, as well as making recommendations on ways to improve project outputs and outcomes while ensuring adherence to the donor guidelines on project implementation.

As deduced from the RANA project implementing team, monitoring and evaluation activities had a great contribution to the success of the project owing to the routine project monitoring and reporting by different stakeholders, which provided ample opportunities for measuring the performance of the project against targets. This also provided opportunities for adjustments in the implementation strategies banking on the feedbacks from the project monitoring visits.

**Monitoring and Evaluation Plans and Project Performance**

From the survey, 100% (n=32) of the respondents were acquainted with the monitoring and evaluation plan of the project. Although the formulation and design of the M&E plan did not have the participation of all the respondents, they all got well acquainted with the M&E plan during the monitoring and evaluation trainings. The development of the M&E plan was done by the implementing organization after the launch of the RANA project with keen considerations to certain relevant factors which included financial resources available for the project activities; availability of human capacity to carry out the proposed M&E activities including but not

limited to data collection and analysis, etc.; the feasibility of the proposed activities; project timeline and feasibility proposed activity timelines; ethical considerations as well as perceived challenges to the proposed activities.

Describing the main parts of the project monitoring and evaluation plan, the respondents mentioned the project objectives; project indicators; baseline data and targets; indicator definitions; monitoring or data collection schedule; frequency of project progress reporting per indicator; data sources or means of verification; methods of reporting; responsible persons; and estimated cost of conducting the M&E activities as major components of a monitoring and evaluation plan.

Responding to the question of whether monitoring and evaluation plan helped in the understanding of project expectations, 100% (n=32) of the respondents answered 'yes'. On the rating of M&E plan's influence on project performance, the respondents gave an average rating of 8.2 out of 10, which showed a good influence on project performance.

Generally, it can be deduced that adequate considerations were given to the achievement of outputs, outcome and impact of the project. This implies that the monitoring and evaluation plan was designed to provide guidance to the project implementation; as well as tracking of results achieved.

#### **Monitoring and Evaluation Skills and Project Performance**

94% (n=30) of the respondents affirmed to have monitoring and evaluations skills required for the project. By frequency of responses, the respondents reported to having the skills for Monitoring and Evaluation reporting using reporting tools (93%, n=28), project indicators formulation (83% n=25), communication strategy (83%, n=25), Project components and deliverables (83% n=25), and other skills such as data analysis (33%, n=10), survey skills (17%, n=5), and performance monitoring skills (13%, n=4). Banking on the M&E skills possessed by the project staffs, respondents noted that capacity building sessions were conducted for the project staffs on M&E, which mostly focused on project data collection tools, data analysis, project indicators measurements and reporting. Further response provided details of the capacity building sessions, which included the indicator definitions, how they are measured or calculated, how the data is to be collected, frequency and timelines for reporting. Respondents narrated the importance of the capacity building sessions, which sharpened the skills of project staffs in better understanding of data collection tools, project indicators and accurate reporting on project indicators noting that the capacity building sessions provided great opportunities for a better understanding of project deliverables as well as the importance of accurate and timely reporting which if accurately done would give opportunities for early detection of areas of concerns and early actions if need be.

100% (n=32) of the respondents had a full understanding of the project expectations noting their full awareness of their different roles and responsibilities on the project. On the rating of how M&E skills influence on project performance, the respondents gave an average rating of 8.0 out of 10, which showed a good influence on project performance. However, comparing the M&E system components, the influence of M&E skills on the performance of project was rated lower than the M&E plan.

#### **M&E Information Management Systems and Project Performance**

Project information management system includes the system that support data capturing, warehousing, analysis and reporting. 100% (n=32) of the respondents confirmed the existence of a system for data capturing for the project noting that all data collection from baseline surveys, progress monitoring data, etc. were all captured in the project database. The database was also used in the retrieval of project information as well as used in the generation of project trends on progress from which new strategies were devised to improve the project performance.

94% (n=30) affirmed to participating in the data collection at different times while 31% (n=10) of the respondents reported conducting routine data cleaning and quality checks and periodic data analysis and reporting. The respondents who participated in data collection reported that the exercise contributed to their understanding of the project expectations noting that the exercise revealed trends over time in terms of progress towards achieving set targets.

On the average, the influence of information management systems on the performance of project was rated 7.8 out of 10 by the respondents, which showed a good influence on project performance. However, comparing the M&E system components, the influence of M&E information management systems on the performance of project was rated lower than the M&E plan and M&E skills.

**Respondent’s perception of Project Performance**

The respondents rated project performance on a scale of 1 – 5 in terms of project success; 1 being ‘least successful/effective’ and 5 being ‘most’. Rating a number of attributes of project performance such as timeliness, number of activities implemented, cost, etc., the respondents were also requested to add comment were possible. The results are shown in table 4.5 below.

*Table 3: Performance rating of the RANA project by attributes by number of respondents*

Attribute	Success rating (1 least & 5					Average score	Percentage (%)	Interpretation
	1	2	3	4	5			
1) Timeliness of project delivery	0	0	7	13	12	4.2	84.0	Very successful
2) Number of project deliverables	1	2	4	12	13	4.1	82.0	Very successful
3) Number of activities implemented	3	5	12	7	5	3.2	64.0	Successful
4) Cost of project	1	2	13	9	7	3.6	72.0	Successful
5) General level of satisfaction of project performance	0	0	2	4	26	4.8	96.0	Outstanding
Average score						4.0	80.0	Very successful

Among the attributes of project success as shown on table 4.5 above, “general level of satisfaction” was rated highest at (96%) while the “number of activities implemented” was rated the lowest at 64%.

In general, the RANA project was rated “Very Successful” by the respondents with the average score of 4.0 out of 5. This implies the rating of the project to be 80% successful.

Similarly, the opinion of the respondents was gathered on how the different variables affect project performance. On the average, the moderating variables had influence on the performance of projects with a 73% rating. This was higher than the 64% rating on the intervening variables as shown in table 4.6 below.

*Table 4: Performance rating of variables of RANA project by respondents*

Attribute	Effectiveness rating (1 least & 5 most)					Average score	Percentage (%)	Interpretation
	1	2	3	4	5			
<b>Intervening variables</b>								
1) Project staff attitude	7	3	9	12	1	2.9	58.0	Not effective
2) Culture	2	7	6	6	11	3.5	70.0	Effective
Average Score						3.2	64.0	Effective
<b>Moderating Variables</b>								
Project funding	0	0	2	4	26	4.8	96.0	Very effective
Skills of project staff	0	1	7	5	19	4.3	86.0	Very effective
Appropriate technology	2	6	10	10	4	3.3	66.0	Effective
Political environment	10	13	4	5	0	2.1	42.0	Not effective
Average Score						3.6	73.0	Effective

The intervening variables on the average were considered to have mild effects on the performance of projects when compared to the moderating variables. This implies that these variables could have had effect on the relationship that exist between monitoring and evaluation and project performance, but the nature of their influence would be difficult to measure. On the other hand, the moderating variables were rated higher than the intervening variables implying a stronger effect/influence on the relationship between monitoring and evaluation and project performance. The relationship between M&E and the performance of projects can be influenced were possible by the moderating variables depending on the strength of M&E. As a matter of fact, the comments from the respondents showed a high potential influence of project funding on project performance. Majority of them mentioned that funding is very important because it is not possible to deliver on project activities without funds and project activities has direct contributions to project performance. However, the effects of both intervening and moderating variables can be defied with a strong monitoring and evaluation plan. This could be in a way of ensuring that all necessary measures such as timely funding mobilization, staff training and capacity building etc. are put in place.

**Correlation analysis between M&E and Project Performance**

A correlation analysis is a descriptive statistical method that is utilized to unravel the relationship that exists between two or more variables or datasets in a single group. It is also used to provide estimates on the level of relationship strength existing between two or more variables. This is measured by the coefficient of correlation or coefficient of determination ( $\gamma$ ), which is an index that shows both the direction and the strength of relationships existing among variables, taking into full account, the entire variable range. The sign (+ or -) of the coefficient shows the direction of the relationship. This means that there is a correlation if the coefficient has a positive sign, indicating that when one variable increases, the other also increases.

In order to statistically determine the influence of M&E on the performance of project, the relationship existing between these two variables was statistically tested using correlation analysis. Spearman’s Coefficient of Correlation at 95 percent confidence interval was utilized.

Data as shown in table 4.7 below showed a positive correlation between M&E plan and project performance with a correlation coefficient of 0.746. M&E skills and M&E Information management system also showed positive correlation with project performance of 0.698 and 0.474 respectively.

*Table 5: Spearman Correlation for the RANA project*

		Project performance	M&E Plan	M&E Skills	Information Management System
Project performance	Spearman Correlation	1.000			
M&E Plan	Spearman Correlation	0.746*	1.000		
	Sig. (2-tailed)	0.025			
M&E Skills	Spearman Correlation	0.698*	0.302	1.000	
	Sig. (2-tailed)	0.034	0.417		
Information Management System	Spearman Correlation	0.474	0.219	0.221	1.000
	Sig. (2-tailed)	0.301	0.601	0.605	

The positive relationship as shown stipulates the availability of a correlation between the M&E system activities and project performance.

Given the significant values of 0.025, 0.034, and 0.301 for the relationship between the different M&E system activities which includes M&E plan, M&E skills, and M&E Information Management System respectively, at 95% confidence level and 5% significance level (p-value –  $P < 0.05$ ), only the Monitoring and Evaluation Plan and M&E Skills were significantly correlated to the performance of projects. This simply implies that the

availability of a project M&E plan coupled with the right M&E skills can significantly influence the performance of projects positively.

### **Discussion of Findings**

Results of the survey, reveals that the studied M&E system activities; M&E plan, M&E Skills, and M&E information management systems influence the performance of projects both individually and collectively as elaborated in this section.

### **Monitoring and Evaluation Plans and Project Performance**

Monitoring and evaluation planning is described by Faniran, Love and Smith (2000) as the systematic arrangement of project resources in the best way so as to achieve project objectives. As part of the objectives, this study assessed the influence of monitoring and evaluation plans on the performance of projects. From the findings, which is consistent with Gray, (2009), the monitoring and evaluation of the RANA project was guided by the M&E plan which was developed immediately after the launch of the project. The direct implication of this is that project staffs have the required skills to systematically arrange project resources in such a way that it leads to the achievement of project objectives. Nuguti, (2009) noted that the identification of the needed data for the tracking of project performance during implementation as well as the project performance indicators are key components of an M&E Plan. 100% of the respondents reported to be acquainted with the M&E plan for the project which contained the project performance indicators. During M&E planning according to Alcock (2009), data collection schedules and well-defined roles and responsibilities for M&E is done. This study showed that data collection schedule as well as well defined roles and responsibilities for M&E were stipulated in the project M&E plan which set the stage for the performance of the project. All these are consistent with the M&E research findings from different scholars as shown in the literature review.

Generally, an M&E plan gives an outline of the underlying assumptions on which the achievement of project goals depended, as well as the anticipated relationships in the logical framework (between activities, outputs, outcomes and impact) (Mackay 2007; Alcock 2009; Nuguti 2009). This study confirmed the development of a project logframe by the RANA project with clear specification of the performance indicators, underlying assumptions on which the achievement of project goals depended as well as the anticipated relationships between inputs, activities, outputs, outcomes and impact. Similarly, these measures ensured that project monitoring and evaluation was realizable achievable and accordingly influence the performance

Findings further agrees with Dvir et al. (2003) that in the developing of the project M&E plans, project objectives were the focal point of every effort and activity. These objectives are important in planning because project M&E plans are derived from them. Project objectives in monitoring and evaluation plans are first defined; then followed by the formulation of strategies to achieving them and then presented as project M&E plans and these are used in evaluating the achievement of the objectives (Dvir et al., 2003).

### **Monitoring and Evaluation Skills and Project Performance**

With regards to the skills for M&E and capacity building, Khan, (2001) noted that it aids in the understanding of the project deliverables, the project reporting requirements and team building. 94% of the respondents affirmed to having the skills for M&E. It was observed during the survey that the capacity building sessions were well participatory and results revealed that project staffs were well familiar with indicator formulation and interpretation, data analysis, communication strategies, survey, performance monitoring skills and generally, the use of the data capture tools. The staff capacities were also built on the monitoring schedules by which they were expected to report. These are some of points regarding training that are also noted by Khan, (2001). Essentially, the skills for M&E noted by Khan, (2001) prepared the project staffs for the task of ensuring project delivery as expected with optimal project performance.

Just as in the literature reviews referred to in chapter two, M&E capacity building activities conducted by the project were tailored to meet staff capacity gaps and equip them with the skills required for M&E. Just as noted by Neuman, (2006), the capacity building sessions included topics that reviews the key project performance indicators, their definitions, how the indicator would be measured and calculated, as well as how data will be collected for each of the the indicators.

### **Monitoring and Evaluation Information Management Systems and Project Performance**

The data collected at baseline as well as the ones collected during the course of implementing the RANA project were captured and stored in an information management system specifically developed for the project. Just like most literature, Hogger, et. al (2011), noted that information management systems are primarily used for storing information in an organized and usable form which would have been impossible to use if not well organized considering the amount of data generated. Naidoo, (2011) further noted that a lot of data is being generated by

projects which when not stored in an organized manner, would be impossible to use. This study also showed that the information management system was also used for data analysis and report generation showing trends of progress towards achieving set project objectives. The reports and evidence generated from the M&E information management system formed the basis for project decision-making.

### **Summary of findings**

The responses given by the respondents gave rise to the findings of this survey. Conclusions and recommendations are therefore made based on the findings in relation to the reviewed literature. With a 100% response rate, this study observed that as a management function monitoring and evaluation systems influenced the performance of projects given that all the M&E system activities were carried out with a clear intention of contributing to the project performance.

The first objective of this study was to assess how monitoring and evaluation plans influence the performance of the TANA project. As supported by the empirical literature, M&E scholars disclosed that M&E plan is regarded as a major aspect of the M&E system. The entire process of project M&E is guided by the formulation of the M&E plan. It provides the opportunity for the review of the entire project design for optimal performance as well as provides measures for strict adherence to the project design. 100% of the respondents reported to be acquainted with the M&E plan for the project. Although the formulation and design of the M&E plan did not have the participation of all the respondents, they all got well acquainted with the M&E plan during the monitoring and evaluation trainings. Study showed that the project M&E plan possessed the most crucial aspects stipulating the performance indicators and required data for measurement of progress as well as delineated the corresponding roles and responsibilities of staffs. The respondents rated the M&E plan highest with an average rating of 8.2 out of 10 among other system activities. The correlation analysis between M&E plan and project performance when compared to other M&E system activities also stipulated the highest magnitude of positive correlation with an approximate average of 0.8.

The second objective of this study was to assess how M&E skills influence the performance of the RANA project. 94% of the respondents affirmed to having the skills for M&E. They reported that the skills for M&E and capacity building are very relevant. Banking on the M&E skills possessed by the project staffs, respondents noted that capacity building sessions were conducted for the project staffs on M&E. They reported the importance of these sessions noting that it provided an opportunity for team cohesion, and understanding of the project indicators, deliverables and data capture and reporting tools. Basically, the skills for M&E and the various capacity building sessions enhanced the clear understanding of roles and responsibilities, which were designed to amplify the performance of project. Therefore, the skills for M&E was cushioned by the various capacity sessions and prepared the staffs for their tasks of ensuring project delivery as expected with optimal project performance. The respondents rated the the influence of M&E Skills second to M&E plan with an average rating of 8.0 out of 10 among other system activities. The correlation analysis between M&E skills and project performance when compared to other M&E system activities also second to M&E plan with an approximate average of 0.7.

The third and last objective of this study was to establish how M&E Information Management systems influence the performance of the RANA project. M&E information management system primarily consists storing information in an organized manner and aids analyses of project data and performance while providing a clear picture of project status and progress towards achieving the set goals. It is so important and bridges the gap and considering the amount of data generated, it would have been impossible to make sense out of or utilize the data. The data collected at baseline as well as the ones collected during the course of implementing the RANA project were captured and stored in an information management system specifically developed for the project. The information management system consists functions and schedule for data collection, cleaning and analysis. The respondents rated 7.8 out of 10 on the average on the influence of M&E information management system to project performance. The correlation analysis showed a positive correlation with an approximate magnitude of 0.5.

The focus of M&E is seeing visible situational changes as the project is being implemented. 94% of the respondents agreed that the project performance is influenced by M&E. This is because monitoring and evaluation ensures that measures/systems are put in place to measure progress and project performance as well as ensure compliance to project plans. It also directs the focus of the project team from just merely implementing activities to intentionally achieving results thereby making them more accountable.

The study statistically, showed a positive correlation between M&E and project performance. Among the monitoring and evaluation system activities studied, M&E plan and M&E skills had a significant correlation with project performance.

## Conclusions

As seen in the study, the direct influence of monitoring and evaluation on project performance is very visible in that monitoring basically simply implies “watching over” of the project as it is being implemented while evaluation on the other hand has to do with ‘judging’ the performance of projects as regards its set goals and targets. This simply implies that it is through monitoring and evaluation alone, that the performance of projects can be effectively assessed and corrections effected in order to improve performance. It is imperative to say that the key M&E systems studied need to be fully implemented for optimal results.

It can be concluded from the findings of this study that the M&E plan is the outline and blueprint of project monitoring and evaluation that leads to influencing project performance. A project without an M&E plan means a project with no organized way of doing things, a project without key performance indicators for tracking progress, no data collection, no data collection schedules, no delineated responsibilities and roles for project staffs, and no plans or methods for data analysis. This simply means that it will be strenuous to carry out relevant project M&E tasks without an M&E plan.

The monitoring and evaluation plan specifies the needed capacities, the required resources and as well as the required data for monitoring progress and project performance. It also stipulates the schedule and methods for data collection, as well as delineates roles and responsibilities for M&E. Using the M&E plan, capacity gaps are identified and trainings or capacity building sessions organized based on the identified gaps and suitable M&E information system is also developed based on the M&E plan. For M&E to influence the project performance, it is pertinent to say from this study therefore, that an M&E plan has to be present to guide project activities and how they are to be conducted in order to keep tabs with the project performance.

Not having the skills or capacities for M&E is as good as not having an M&E plan for the project. Possibilities are that without the M&E skills, there is no understanding of what is expected, no appropriate interpretation and measurement of indicators, unskilled project staffs might not collect the right data in the field from the right sources with a compromised accuracy, etc. M&E skills therefore, are as invaluable as the M&E plan. The skills for M&E and capacity building lays basis for understanding the project expectations well as the roles and responsibilities while dealing with staff attitude and culture. Invariably, this enhances the relationship between M&E and project performance. It can be deduced therefore that skills for M&E is very critical to eradicating far reaching compromises that may result from incapacity.

As mentioned earlier, information management system helps to organize data in an orderly manner. It would be meaningless for a project to generate a lot of data without it being organized in an orderly manner. This means that without an M&E information management system, it is impossible to carry out a comprehensive evaluation of a project, which helps to determine the level of performance of a project. M&E information management system for this reason therefore, significantly contribute to influencing project performance as it provides a platform for generating ‘meaning’ of what is going on with a project being implemented.

In all, for M&E to be an effective management tool that influences the performance of projects, the three M&E system components or activities studied (M&E plan, M&E skills and M&E information management system) need to be fully implemented. As stipulated in the discussion of the results, all the M&E system activities are carried out to track or monitor the progress of the project, as well as produce evidence of performance. The evidence generated in the evaluation of projects serves as the basis for evidence-based decision-making in the bid to improving project performance.

Beneficiaries provide feedback on the project performance while the funders contributes to project planning and financing. It can therefore be said that the set up and implementation of an effective M&E system must be done jointly with both the beneficiary and funders. It was also learnt that moderating variables like skills, project financing, etc. can affect the relationship between M&E and project performance as stated by all the respondents. It is therefore pertinent to have a strong M&E system with clear counter measures in place in order to counter the effects of moderating variables on the M&E-project performance relationship, putting in place counter measures.

From the study, the project performance was rated high (80.0%) and can be ascribed to cleaving to the laid down project plans which obviously is attributed to monitoring and evaluation which addressed the conformity to project plan as well as gave room for regular project performance reviews. Also, the planning and re planning in the project cycle in order to correct anomalies during the course of implementation is necessitated by M&E.

The study showed the existence of a positive correlation between the project performance and M&E and from the M&E system components studied, M&E plan and M&E skills showed a significant correlation with project performance.

### Recommendations of the study

As established on the findings of this study, I have developed recommendations which if implemented would further accelerate the influence of M&E on project performance.

1. M&E plan from the findings had the highest correlation with project performance. If project performance is to be accelerated, it is therefore recommended that a well thought out M&E plan be put in place and implemented fully.
2. From the findings, M&E skills is a function of capacity building which accordingly secure and drive the understanding of the project deliverables and all other aspects of the project performance goals. This study therefore recommends that M&E skills development be promoted and be part of project plan.
3. From the findings, M&E information management systems aids the organization and storage of project data as well as aid the analysis and report generation. This study therefore recommends M&E information management system for all projects for easy storage, retrieval and analysis of project data.
4. This study further recommends the institutionalization of M&E in organizations by ensuring an existence of an M&E unit with adequate staffing owing to the critical influence of M&E on project performance.

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