

**TECHNICAL MONITORING MANAGEMENT SYSTEMS AND PERFORMANCE OF  
CHILD PROTECTION PROJECTS; A CASE OF NON GOVERNMENTAL  
ORGANIZATIONS IN BORNO STATE, NIGERIA**

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**A Research Thesis Submitted In Partial Fulfilment Of The Requirements For The  
Award Of Master Of Arts In Monitoring And Evaluation Degree In The Business  
School Of Africa Nazarene University**

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## DECLARATION

I declare that this research proposal is my original work and that it has not been presented in any other University for academic credit

Signed: \_\_\_\_\_  \_\_\_\_\_

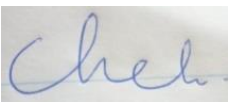
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## **DEDICATION**

This research is a dedication to God Almighty my creator, my strong pillar, my source of inspiration, wisdom, knowledge and understanding. He has been the source of my strength throughout this program and on His wings only have I soared. I also dedicate this work to my Parents and siblings who have encouraged me all the way and whose encouragement has made sure that I give it all it takes to finish that which I have started, Thank you. My love for you all can never be quantified. God bless you.

## ABSTRACT

Project performance and efficiency of Non-Governmental Organisations around the globe and in particular from the developing economies - Nigeria included - are of critical importance not only for Non-Governmental Organisations only but also for Donor communities, leading to value addition towards soliciting for more funding. Considering the ever-fast rate of project activities implementation, it is important for every organization to establish a smooth flow of relevant information and coordination of project activities. Project oriented organizations and their effectiveness largely depend on the success of their projects. Incorporation of technical management systems is cost intensive, but the returns brings significant impact on project success. It is in line with this fact that this study assessed the influence of monitoring and evaluation technical management systems on project performance of child protection organizations in Borno State, Nigeria. The study's specific objectives are to determine the influence of software management systems on project performance of child protection organizations, examine the influence of mobile networking systems on project performance of child protection organizations, and find out the influence of information database systems on project performance of child protection organizations in Borno state, Nigeria. The study was conducted through an exploratory research design. The study was conducted in Borno state Nigeria with a target population of 46 Project Managers, 63 Child Protection Officers and 39 M&E Officers from thirty-nine (39) child protection organisations in Borno state. A purposive sampling technique was utilized in the selection of the study respondents who provided the information required in this study and the sample size was 108 respondents. Structured questionnaires were used to collect data from respondents. Data gotten was analysed quantitatively through content and thematic analysis. This was aided by methodological triangulation as a means of compensating for the biases and possible limitations of the data collection methods employed. The data collected was analyzed through descriptive statistics with findings presented in tabular form with the inclusion of analytical interpretation narratives. Findings from this study shows that M&E technical management systems help manage project risks and hence increase the probability of a project performing well, as quality of the deliverables from projects is a key determinate of the projects performance which M&E technical management systems enhances. Furthermore, every organization aims to implement projects within the allotted budgets and M&E technical management systems supports this. This further shows that incorporation of M&E technical management systems have a positive influence on performance of child protection projects in Borno state Nigeria. Further study ought to be conducted on effectiveness of M&E technical management systems on performance of other projects outside of child protection in other parts of the country. This will improve the body of knowledge provide by pronging more understanding on how the different M&E technical management systems affect performance of non-governmental organizations.

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## **LIST OF ABBREVIATIONS**

**ICT:** Information Communication and technology

**PMS:** Project Management Software

**KPIs:** Key Performance Indicators

**NGOs:** Non- Government Organizations

**TOC:** Theory of Change

**M&E:** Monitoring and Evaluation

**CPSS:** Child Protection Sub Sector

**CP:** Child Protection

## DEFINATION OF TERMS

**Software Management System:** is an umbrella term that covers different software including management software, networking software, customer relationship management, and asset management software.

**Information Database System:** These are structured set of data stored in computers, which are accessible electronically. These kinds of system manage and protect data so that the databases are safe or secure. Data can be easily managed and updated especially in a time bound target based temporary element such as a project. In NGO projects, the information databases have abilities in controlling redundancy, stored information integrity restricting access, date sharing and backing up or recovering information.

**Mobile Networking System:** These are connections which terminal links are wireless. The network is run over land areas referred as cells each serving a minimum of one location fixed-transceiver, but usually three sites cell or base transceiver stations.

**Non-Governmental Organisations (NGOs):** These are non-profit organs working locally in improving residents' life. The focus is building equality within society environment, health care, quality of education, technology access, spaces access and information of disabled.

**Mobile Communication Networks:** These are connections which terminal links are wireless. The network is run over land areas referred as cells each serving a minimum of one location fixed-transceiver, but usually three sites cell or base transceiver stations.

**Information Databases:** These are structured set of data stored in computers which are accessible electronically. These kinds of system manage and protect data so that the databases are safe or secure. Data can be easily managed and updated especially in a time bound target based temporary element such as a project. In NGO projects, the information databases have abilities in controlling redundancy, stored information integrity restricting access, date sharing and backing up or recovering information.

**Project Collaboration:** This is a method by which teams and team leaders plan, coordinate, control and monitor the project they are working on.

**Project Scheduling:** this is a mechanism of listing of activities, deliverables, and milestones within a project. A schedule also usually includes a planned start and finish date, duration, and resources assigned to each activity.

**Project Resource Management:** The resources of a project consist of people, materials, equipment and knowledge and time. Organizations typically have limited resources especially NGO; therefore, tradeoffs on what project resources are expended and when are made every day within organizations. Project resource management ensures that resources required for the project are available when needed.

## **CHAPTER ONE: INTRODUCTION AND BACKGROUND OF THE STUDY**

### **1.1 Introduction**

This chapter highlights the background of the study, problem statement, general objectives specific objectives, research questions, scope, justification, limitations, delimitation and assumptions of the study.

### **1.2 Background of the Study**

In a humanitarian crisis, children pay a very high price as they are most at risk due to their vulnerability. Due to the armed conflict and other emergencies in North-East Nigeria, millions of girls and boys are exposed to unthinkable forms of violence, abuse, exploitation and neglect. Due to the insurgency, millions of children are forced to flee their homes, many torn from their parents and caregivers along the way (UNICEF, 2022). With the insurgency in North-East Nigeria, many children were injured, killed by explosive weapons and remnants of war, including attacks on schools and hospitals. Many have been recruited by armed forces – not only as fighters on the front lines but also as scouts, cooks, messengers and more. Despite the traumatic experience of these children, their mental health and psychosocial needs are often neglected and this can have consequences that can last a lifetime.

Evidence-based monitoring and evaluation (M&E) activities are essential tasks in the development and implementation of humanitarian interventions, mobility initiatives. Due to the effects of COVID-19 globally, onsite M&E of humanitarian interventions has been restricted, this has heightened the need for monitoring and evaluation technical management systems (Independent Development Evaluation, 2021). With monitoring and evaluation technical management systems to facilitate project monitoring as an ongoing process, project stakeholders are provided with early indications of progress towards the achievement of results. While with evaluation the objectives of the project is assessed. According to Silvia and Alexandre (2020), in Brazil the integration of ICT into M&E of projects is essential as M&E greatly enhances the performance of projects.

In South Africa, Mimbi and Bankole are of the opinion that with the use of technology, investing in technological platforms, countries can gradually increase output and productivity (World Bank, 2023). International NGOs in Kenya are supporting community based agencies in seizing the benefits of ICT and incorporating them to accelerate their development. There are a number of factors responsible for the increase in successful implementation of projects and they vary. One of these factors includes the massive reduction in the average cost of a project, creation and availability of advanced tools to monitor and control progress, project managers are improving their skills to better management processes are being utilised.

As we adapt approaches to the new normal, there is a need to find innovative, ethical and safe means to incorporate M&E into programming (Humanitarian Data Solutions, 2020). There is need to know the effect of ICT to facilitate a remote approach to M&E of humanitarian projects by monitoring and evaluation technical management systems, mobile communications network, information databases on achieving objectives on child protection humanitarian interventions in Borno state to effectively monitor and evaluate child protection humanitarian interventions and ultimately increase implementation of these programme. Hence, the need to conduct this study. Technical management systems can enhance approaches to remote monitoring. With the ethical use of technical management tools to support Operating Unit (OU) alignment with the Digital Data Collection mandate in the new remote strategy (USAID, 2020).

Technical management systems to facilitate M&E can be particularly challenging to incorporate for many NGOs in Nigeria since majority do not have access to M&E specialists to facilitate the process full time within their reach (Ogunkunle. T, 2020). Due to this, access to technical M&E expertise is a barrier to creating M&E technical management system framework and then implementing it well. However, it is yet to be determined whether the use of technical management system to facilitate an approach to M&E, provision of adequate capacity building to build skills and developing a M&E

framework to effectively monitor and evaluate child protection projects, thus increasing service delivery of the programme.

### **1.2.1 Project Performance**

With donors, governments increasing their demand for performance of humanitarian projects, child protection NGOs have to now more than ever deliver evidence to show the effectiveness of projects in protecting children from harm and efficiency in their use of resources received to help children and community members (Africa Development Bank, 2021). With the development of policies, perspective of project performance conceptualised and implemented do have major consequences for service delivery. These factors include key issues raised about performance effectiveness and efficiency, the context for its implementation in child protection, how outcomes are defined, and assumptions about 'good performance' (UNICEF, 2021).

NGO interventions can be assessed to determine whether a project is having the intended impact.

M&E is meant to support decision makers in making better decisions. In evaluating a project, the evaluator, 'working closely with the project team would identify the decisions the latter must make and provide data about the relative advantages and disadvantages of each decision alternative to enable the decision maker make a judgment which is best in terms of specified criteria' (Worthen, 2018 p44). As such, M&E is not just to make impact evident but also to bring about an improvement in project implementation. Considering these aspects, this study will take into account assessment of humanitarian interventions as efficiency, attainment of program objectives and implementation decision making. The main purpose of this is to provide a knowledge for decision making and being readily accountable for decisions that result in developing, delivering and making informed use of data in humanitarian projects (Hogan, 2017).

### **1.2.2 Technical Monitoring Management Systems**

Technical management system brought about great benefits which can be exploited in modern project implementation. To enhance durable solution in NGO's maneuvers and greater competitive

advantages, organizations have directed focus on making technical management systems an integral part of project implementation (Oliveira, Faria, Thomas & Popovic, 2014). Internal and external factors according to Soylu and Durmaz, (2013), have contributed to the growth of organizations. The internal factors includes sustainable project outcome, duration of projects and general organisational efficiency. However, effects of project specific variables tend to be more significant than with macro-economic variables.

ICT affects virtually every aspect of human life worldwide. A 40% increase in mobile subscriptions is evident at the global level in 2011, while access and use of affordable devices is growing steadily, according to International Telecommunications Union (ITU) the growth in ICT uptake in the year 2012 was almost global. Cellular subscriptions is at almost 7 billion by the end of the year 2013, with mobile network coverage expanding to more remote communities (ITU, 2013). Organizations in international development are devising a number of ways so as to take advantage of this growth in ICT use and access. With the incorporation of technical management system into development work, the field of M&E is expanding and changing at a rapid pace as technology itself.

#### **1.2.2.1 Software management systems**

The NGO sector worldwide is undergoing a transition from being paper based to a digital one. This transition puts a document management challenge on all members of the team, but most specifically the M&E which has to ensure that the appropriate information reaches the intended party in a usable format. While many NGOs and INGOs may have M&E software, often, they are designed around a results-based framework. The results-based framework is often tightly coupled between different programs and focuses on project management, emphasizing collecting activity and output results. Child protection projects by their nature are complex, typically one-of-a-kind structures built on varied substrates. The multifaceted responsibilities of the donor, implementing organization, project team, M&E team rely on the accuracy and timeliness of data provided. This data can be utilised to the field or up to the design stage from field operations (Jason, 2011). The use of software management systems can accelerate the transmission of information, provide ease of access to routine

documents, and maintain accurate logs of document use and transfer. Many of these advantages relate to the field implementation level, but this also requires adaptation concerning document management at the project level generally (Jason, 2011). There may be capital costs accompanying equipment and software that are needed depending on the current size of the organization.

### **1.2.2.2 Mobile networking systems**

Enhanced quality service and excellent coverage is essential for any installed mobile infrastructure. With innovations in technology, there is an increasing need to rely on seamless mobile services. The evolutionary trend in wireless mobile architecture has changed over the years due to the increasing demand of the world's growing population. While the Key Performance Indicators (KPIs) of individual telecommunication infrastructure is benchmarked on customer demand, the impact of the terrain and mobile network congestion rate are also considered to be contributory to the overall performance. Now that global linkages rely on an efficient wireless mobile network, the need to improve the quality of service is necessitated by improved planning, equipment tuning or swapping to attain the expected delivery of service.

### **1.2.2.3 Information database systems**

Information database system as a performance measuring tool is involved not only in horizontal project-donor type of interaction, but also in vertical interactions between project staffs, administration and government bodies. Motivation for information database system implementation is not only driven by expectation of improvement of service but simply by wish to satisfy the funding bodies and by increasing pressure of performance measurement (Bach-Mortensen, 2018). To meet requirements of managers to record data strictly according to structure and vocabulary of information database system tools, practitioners tend to modify initial information about work with donors and adapt input to standards of the software or paper-based data collection tool (Gillingham, 2013). Information database system have some ethical issues within an organization if it is used as a tool in hands of higher-level managers to control and monitor project activities of frontline practitioners,



seeking to ensure compliance with minimum standard practices or claiming responsibility of practitioners for their actions in critical situations (Gillingham, 2015).

### **1.3 Statement of the Problem**

Despite the obvious value of M&E technical management systems in describing organization operations, the influence of technical management systems on performance is still confused for two major reasons: first, lack of awareness of the generators of innovation; and second, the influence of innovation on organization performance remains untested (Mabrouk & Mamoghli, 2017). A research by De Young *et al.* (2017) adopts an approach to performance relations that does not take into consideration the antecedents of technical management systems inside and outside organization institutions, both of which may affect this relationship.

According to (Dube T, 2021) the emergence of COVID-19 as a global pandemic presented a novel challenge to monitoring and evaluation in the NGO and development sectors. Measures taken to contain the spread of COVID-19 disrupted the traditional way of operation in both the programming and M&E departments. In particular, restrictions on movement in order to reduce the spread of the virus meant that M&E work had to transform from the traditional approaches. The aim of previous studies was to investigate how monitoring and evaluation practice has evolved under the COVID-19 pandemic, document lessons learned from different organisations and practitioners and to share best practice, using an integrated model, the Donabedian Quality and Logic Model. According to Raftree (2013), technical management systems help to better make use of resources to design, collect and analyse data and more so in project management processes. To measure NGO project's performance which are evident by tangible and intangible results, outcome and impact of these project, then technical management systems have an integral role in the project management. Considering the ever-dynamic rate of project activities in implementation, it is essential that each organization establish a smooth flow of relevant information and coordination of project activities, which nowadays is almost impossible without the use of technical management systems (Kristina, 2022). Technical

management systems utilised in planning, design, implementation and M&E of humanitarian interventions can give that extra to deliver quality services.

Having consulted the available literature in the field of M&E, some literature show the usage of technical management systems and supporting software tools in project management. Previous research done by Baljkas (2000) shows that technical management systems are utilised globally. Omazić and Baljkas (2005), refer to the international research made by Fox, L.Terry (2000) under the title ‘Do the Features Support the Functions?’ Project Management Network. These studies made several recommendations for best practice and learning. However, as good as these studies were, the influence of monitoring and evaluation technical management systems on project performance were not addressed. Also, there is no study conducted in Borno state Nigeria on the subject matter. It is from this background that this study intends to provide evidence on Technical Monitoring Management Systems and Performance of Child Protection Projects.

#### **1.4 Objectives of the Study**

This study was guided by the following general and specific objectives.

##### **1.4.1 Purpose of the study**

The general objective of the study is to assess technical monitoring management systems and performance of child protection projects in Borno State, Nigeria.

##### **1.4.2 Specific Objectives**

The specific objectives of the study is:

1. To determine the influence of software management systems on project performance of child projects in Borno state.
2. To examine the influence of mobile networking systems on project performance of child protection projects in Borno state.
3. To assess the influence of information database systems on project performance of child protection projects in Borno state.

## **1.5 Research Questions**

1. Does software management systems have any influence on project performance of child protection projects in Borno state, Nigeria?
2. Does mobile networking systems influence project performance of child protection projects in Borno state?
3. Does information database systems influence project performance of child protection projects in Borno state?

## **1.6 Significance of the Study**

With the increasing need for durable solutions in humanitarian programme, contributing agencies, NGOs are reflecting on effective M&E systems to check the gaps in practice of the implementation of child protection projects in Nigeria and other countries. This study is anticipated to assist NGOs (humanitarian organizations), M&E personnel, Donors, International Agencies on how to sustain child protection programmes through effective monitoring and evaluation technical management systems. Also, the government via the Ministry of Health is able to support humanitarian organisations design and modify tools that can easily assimilate technical management systems once they see how M&E technical management systems contributes to project performance of child protection projects.

## **1.7 Scope of Study**

The scope of this study is about technical monitoring management systems and performance of child protection projects. This work is limited to the study of M&E technical management systems to influence project performance of child protection projects in Borno state, Nigeria.

It is enlightening to see there have been technical management systems already in use by these humanitarian organisations, if monitoring and evaluation of technical management systems is being utilised, how then it is contributing to performance of these projects being implemented. The study will concentrate on the project performance of child protection projects for a period of ten (10) years from 2012 to 2022. The study will also target Child Protection Project Managers, Child Protection

Officers and M&E Officers in the selected organizations who are believed to have the relevant information regarding the research problem.

### **1.8 Delimitation(s) of the Study**

The study covered only the humanitarian organisations in Borno state because majority of humanitarian organizations are implementing projects in the state as Borno state has the highest number of child protection projects and thus child protection organizations in the country. This study aimed at M&E technical management systems of child protection projects and no other area of the project or the organisation's daily operating procedures. This study also explored purposive sampling with gender inclusivity among the respondents that was applied from humanitarian organisations. The study also confined itself to questioning each employee as one unit of measure as opposed to all the participants in the organisation involved in the projects.

### **1.9 Limitations of the Study**

The primary method used in this study is the use of questionnaires. Some of the humanitarian workers are out of the capital city and in remote areas and as such these are areas that are challenging to reach and at this point the researcher had to use other means of communication, such as emails, google forms and telephone conversations. Where the study conducted qualitative study on technical management systems, findings were subject to other interpretations. Non-commitment and willingness of humanitarian workers and management committees to respond to questionnaires due to concerns of privacy and confidentiality did delay data gathering. This was countered by the researcher assuring the respondents that information given will be confidential and will be used only for research and academia study purpose only.

### **1.10 Theoretical Review**

This study was guided by the theory of human service delivery based on the effective service delivery of child protection projects and theory of change in the context of M&E. The theory of human service delivery explains how people work to deliver services within systems either existing or newly formed. Despite the human service delivery theory been attributed to a number of researches over the years

and in spite of the apparent significance of rendering services to people, there is no much concepts to help researchers clarify the proponents under which service delivery is important in meeting human needs (Cusumano, Kahl, & Suarez, 2018). However, human service delivery cuts across a variety of systems such as education, social welfare services, hospitality, health care services.

Reader (2017) service delivery is subjective, so the quality varies based on who takes delivery of the service. Human is centred on service delivery despite it being unquantifiable. Designing a system for high quality service delivery requires incorporation of the human factor not only to receive the service but also the provision of feedback. With the increase rate of poverty, out-of-school children in rural communities have resulted in an increased need for child protection services. Violence and increased tensions have worsened the situation due to the lack of social and economic opportunities in the rural areas leading to higher need for human services and social safety net programs, including food stamps, job training, and direct financial assistance (Gutierrez, Belanger, Clark, Friedman, Redfern, Weber Richgels). This theory could be used to link community context of human service delivery in meeting the needs of the pupils attending schools, child protection concerns, through monitoring and evaluation of these projects.

### **1.10.1 Roger's Innovation Diffusion Theory**

Rogers founded the theory by considering the procedure of innovation diffusion as one that is dictated by uncertainties in reduction behaviour amongst probable adopters in the introduction of technical management systems. Though with innovation there are new ways of tackling problems, the uncertainties of if the innovations will be superior to existing ones becomes a challenge to adopting project process to enhance project performance. To mitigate these uncertainties, potential adopters are motivated in seeking additional information, specifically from their workplace cohorts. Technical management systems take time from availability to adoption, the shared problem amongst individuals and entities are the rate of speed in diffusion of technical management systems and utilising it to monitor project performance.

There are a number of reasons why an organisation decide to invest in M&E technical management systems. These reasons include making the work of the M&E team more efficient and easier, providing applications to support in planning, managing costs, tracking activities and monitoring project schedules (Marti & O'Brien, 2015). The benefits gotten from the use of information technology can be underrated by user's reluctance in adopting new technologies available. M&E technical management systems benefits are only realised if the users utilise the system in a way that will enable successful project completion and thus contribute to the operational and strategic objectives of the organisation.

The innovation diffusion theory is relevant to the study in that it addresses the first research question, which asks to what extent the use of M&E technical management software in project management influences successful project performance. The diffusion of innovation theory also explains the rate at which a new product or service will be adopted. Therefore, the theory helps to understand how trends occur, and helps in assessing the likelihood of success or failure of the new introduction (M&E technical management system).

### **1.10.2 Systems Theory**

Established by Ludwig, Anatol Rapoport and Ralph as quoted by Cristina & Francesco, the theory shows a method to organise the interaction among component sections of a larger organism, according to Boulding. A system is organised, totally containing a number of components interacting in a manner distinct from their interactions with other entities and lasting over a given period for instance, influence of technical management systems to achieve project performance. According to Brandell (2010) systems theory helps in understanding the components and dynamic of client systems to helps in interpreting problems and developing balanced intervention strategies between individuals/persons and their environments are maintained. According to Tao and Tan (2013) the behaviour of definite complex systems depends on interaction of components and their relation to each other. This helps to understand the fundamental structure of numerous systems that apply the same underlying issues

(Groves, 2013). In a project, the principal factor is the same for project manager, funding agency, M&E team, consumer, budget time, and communication practice. The manner in which these factors relate with each other makes a project to be unique dynamically. Kishore, Abraham and Sinfield (2011) states that individuals taking part in a project understands that impacts take longer time to be noted and mainly small causes greatly influence the people and projects themselves, for example technological innovations.

System theory is relevant to this study in that it recognizes the interrelation and interactions among subsystems for the synergetic effect. In addition, it implies that decisions and actions take in one project area will affect others and vice versa. It recognizes that projects are not self – contained, therefore the link between the independent variables and project's performance can be established.

### **1.10.3 Theory of Change**

The theory of change (ToC) approach originated in community development programmes in the United States in the 1990s and was recommended for evaluating community engagement, government and government institutions programmes to support effective implementation (Kubisch & Connell, 1998; Aggett, Dunn & Vincent, 2012; MacQueen, Bhan, Frohlich, Holzer, & Sugarman, 2015). Published by Carol Weiss in 2015, ToC was defined as the concept of how and why an initiative works. It links the sequence of immediate outcomes as a result of project resources utilised for outputs and it depicts the 'if, then' assumptions causal linkage between levels of outcomes (Mayne & Johnson, 2017). Mostly used for internal planning, availability of resources is necessary for change to occur in order for some assumptions to hold in ToC (Pius, 2017). The theory is mostly used to evaluate design. These are difficult to develop and update in a participatory manner when there are multiple stakeholders who are geographically dispersed in locations. Moreover, TOCs quickly become outdated or do not have mechanisms to incorporate new information to change contexts, thus technical management system is vital in project performance and information about projects can be collected through the mobile database. ToC makes it possible to constantly test and revise the conventions built into the theory and the assumed links between various levels of the theory. Majority

of NGO projects do not have the capacities to constantly update the ToC and, thus become outdated, they flop in making their potential contribution to implement and interpret the evaluation hence, technical management systems (Funnell & Rogers).

The complexity of projects and the delicate design of monitoring and evaluation framework allows the deployment of a programme Theory of Change. Its analytical and logical features ensure project planning is unambiguous, objectivity to context and adaptation to changing environment (Barnett & Gregorowski).

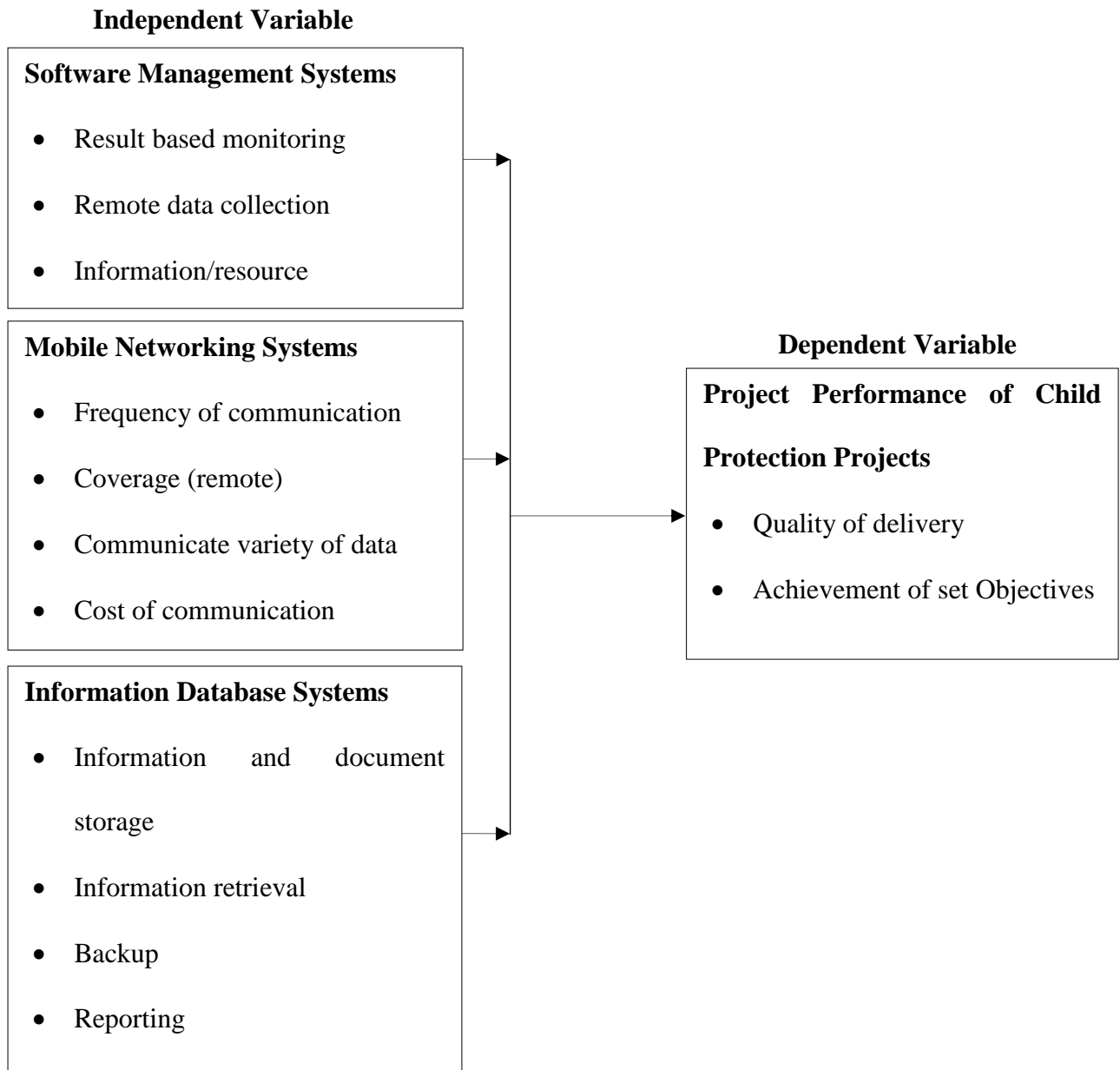
Theory of change relevant to this study because ToC provides a visual representation that serves as basis for explaining how different components of project implementation contributes to achieving the objectives of the project, planning and monitoring a programme such as child protection projects by ensuring that services are provided to intended beneficiaries. A theory of change also helps to identify the underlying assumptions and risks that will be vital to understand and revisit throughout the process to ensure the approach will contribute to the desired change.

### **1.11 Conceptual Framework**

The conceptual framework shown in figure 1.1 below illustrates the relationship between the dependent variable, which is project performance of child protection projects as the outcome of the independent variable, monitoring and evaluation technical management systems - Software management system, mobile networking system, information database systems.



**Figure 1.1: Conceptual Framework on Technical Monitoring Management Systems and Performance of Child Protection Projects in Borno State, Nigeria.**



Source: Researcher (2022)

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter presents the literature review of an overview of the theories that support the effect of technical monitoring management systems and performance of child protection projects. It reviews the literature looking at how technical management systems affect project performance. This approach is adopted in line with current practice in grounded research work. It focuses on the service delivery of child protection programme, development of monitoring manual framework, monitoring and evaluation capacity building, summary of the literature reviewed and knowledge gap.

### **2.2 Empirical Review**

This section reviews empirical evidences of both the dependent and independent variables of this research study. The following variable findings were indicated to describe technical monitoring management systems and performance of child protection projects.

#### **2.2.1 Software Management Systems and Performance of child protection projects**

Social protection programmes such as child protection programme being implemented in Nigeria and other African countries require quality service delivery to have an impactful wider reach. The turning of recent crisis that has pushed more people into poverty, resulted to lower incomes and caused global child protection issues especially in poor communities thereby increasing the vulnerability of children and exposes them to further harm, keeping vulnerable children safe from harm is a critical issue around the world. In every country, every culture, at every social and economic level, children are at risk of violence including physical and emotional abuse, sexual harm and exploitation, and neglect or deliberate deprivation (Save the children, 2022). This has made it imperative for countries to scale up its child protection programmes. However, the complexity involved with designing an effective child protection program to attain set objectives while reaching its targets amidst funding challenges and child protection approaches makes such projects require systematic management to meet minimum standard of service delivery (Alderman & Bundy, 2011).

Stallman and Greene (2014) established that software data collection easier and in a cheap manner. There is potential that technical management system, rather than the project design or required data, will influence the types of data that will be collected enhancing performance of the project. According to Trigg (2013), when using technical management systems for large data set depends on automating, quantitative data is likely to be gathered. Some technical management software and procedures have been created to gather large scale qualitative data, like videos tagging, stories and narratives, using critical terms in sorting and organising responses that influence the project performance.

M&E technical management software like Wrike are being utilised in helping to bring project team members up to speed with the external environment changes and addressing some of the actual world and methodological hindrances hence, influencing the project performance. Chapelier and Shah (2013) discovered that project teams experiment with technical management systems in including the voices of participants/beneficiaries of development programs, to allow them weighing in on what success appears to be like and through collaboration thus, making it possible a more realistic way of evaluating whether success has been achieved in projects. Stallman and Greene (2014) study in the United Kingdom indicated that M&E teams use of technical management systems helps improve efficiency and quality of data, hence, reducing sample bias by constructing the sample frame, to reach vulnerable and difficult to reach groups that are mostly under-represented and to improve quality control and hence, project performance.

Raftree and Bamberger (2014) discovered that innovation is wider involvement in consulting and decision-making procedures about the project itself. In Nigeria, dispersed managing teams and implementing teams are required in any development in the project that extends beyond a local site. Thus, each project is associated with a cost that is included in the budget along with contingency. The study indicated that tools like Skype and Microsoft Teams offer cheap voice calls, conferencing calls and screen sharing, Dropbox, and Google Drive allow large files sharing, and Trello, is a free task managing application helping teams in coordinating and broadening participation in the stages of planning and managing project budgets. There is need to highlight some of the ways that M&E

technical management systems are helping overcome common M&E challenges, including “real-world” challenges and methodological and conceptual challenges. There are also untested areas where software management systems could play a role in evaluation, and an in-depth discussion of some of the new challenges, problems and risks that arise when incorporating M&E technical management systems into the M&E process as a whole. Finally, it offers a checklist for thinking through the incorporation of software management systems into M&E. These software support greater voice and engaging people and organisations dispersed across sites, nations and regions thus, project directions and decision-making in budget is not centralised in one place.

### **2.2.2 Mobile Networking System and performance of child protection projects**

According to Linda Raftree and Michael Bamberger (2014), a trend happening globally in parallel to the changes in the international development and evaluation space is the explosive growth of mobile phones and other information and communication technologies (ICTs) at all levels of society around the globe. Greater access to digital devices, especially the mobile phone, is changing how people access information, how they communicate, and how they engage with services and each other. Increasing attention to and sophistication of digital tools is permeating the sphere of development as well. New tools and approaches are rapidly making their way into the area of M&E, yet many M&E practitioners have not explored their potential. Letouzé (2014) study investigated the use of technical management systems on the growing capacity to collect data and increasing frequency of communication relating to people’s actions and behaviours prompting efforts in harnessing data used in predicting and tracking behaviours and planning interventions in a speedier manner than previously possible. In the past, by the time a full-scale diagnosis of a challenge was done it became late for effective response or the data became outdated. Yu et al. (2009) discovered that mobile data collection is the most known use of ICT in project processes. In addition, the study found that it is free from errors and data entry, validation and cleaning can be done to enhance the data collection process. In support, Boyera and Alonso (2012) indicated that data collected from mobile phones from their study in India that project managers found to be effective, hence, influence project performance.

A study conducted in Vietnam on data gathering tools in monitoring forest management with the adopting of remote sensor monitoring of forest disturbances. It found that between fourteen (14) and thirty six (36) percent of the events identified through local community people were not detected by remote sensors and that, in some cases, remote sensors indicated a delay of 1 to 2 years in events capturing. The role of remote mobile data gathered by community members was highlighted as important to ongoing forest managing and monitoring (Pratihast et al., 2012). Another study utilising mobile used Frontlines SMS to send bulk text messages to participants/clients who signed for participating in research to remind them of their appointments. Instead of making 150 to 200 individual/people calls a day, a process that usually takes two field officers a full day in completing, with one field officer requiring only 30 minutes to send out the initial invitation to participants as well as a reminder closer to the date (Kuruvilla, 2013). Demombynes et al. (2013) found that collecting data by mobile phones given to survey participants was a potential approach. It was tested in 2011 as part of an experimental phone surveying project done by the World Bank in Southern Sudan. In this pilot, 1,000 households/people in ten (10) state capitals of Southern Sudan were issued mobile phones. In Vietnam, The role of mobile data collection by community members was highlighted as key to ongoing management and monitoring (Pratihast et al., 2012)

Mobile communication networks can be used to improve project performance by offering file sharing on the go, document collaboration, and many different applications and software that allow project team access to project information in real time. There are also many additional options, like platforms to track stakeholders and resources. Mobile communication networks can be used to organise project tasks and who they are assigned to. In addition, Funnell and Rogers (2011) found that the increased importance of complex projects and the hindrances of their organisation increased interest in new and broader applications of case studies. Case studies have traditionally been viewed as a qualitative approach that uses a moderately small number of cases to show the different typologies produced in quantitative research. For example, each member of each element affecting the project-related results in its own distinct manner. In addition, the interaction among all members also influences the results.

Cases also interact with other elements of the system being studied. Byrne (2009) investigated that technology should be integrated in project processes to enhance the organisation of projects that contribute to project performance.

In Nigeria, the competitive mobile communications market with the influx of new service providers constantly entering the field, driving down the rates of subscription. This results in the reduction of cost of project communication and hence enhancing project performance as more time can be gotten with less resource. According to Kits (2018), this reduction in subscriber rate has made creative technologies come to seem simple and even necessary, especially mobile cellular networks. According to Corici (2018), mobile cellular networks have increased their support for data exchange with diverse applications. The increasing complexity of development coupled with the increasingly wide range of public, actors of not-for-profit and private sector and the demand for more timely and effective feedback has challenged the utility of conventional approaches to M&E in a number of development contexts. Despite the great strides attained in rapid adoption and proliferation of technical management systems globally, evaluation as a practice has still remained largely paper-based. As a result, traditional evaluation methods and approaches to learning, feedback and accountability have often not kept pace with the significant advances in technology.

### **2.2.3 Information Database System and Performance of child protection projects**

According to Kumar (2002) when projects use reconstructing baseline data under projects', it is usually the case that no baseline data was collected to make it difficult in applying pre-test-post-test project designs. The techniques and tools used were to review available secondary data, asking respondents in recalling the circumstances at the inception of the project, conducting vital key informant interview, to hold focus groups discussion and use group participatory consultation methods. There is need for storage of data and applications providing the ability of storage of these data types is important. It is essential that numeric, alphabetic, audio and video files have a way to be stored and technical management systems are providing different ways of doing this.

In Africa, information databases are utilised to increase information retrieval throughout the entire project cycles from project planning, through project design and project implementing, project evaluating and the dissemination of project data. Much data is collected and stored throughout the entire lifespan of the project. This data is supposed to be easily mined and presented to map out patterns of the project. Retrieval of data is essential to stay within the duration of the project. This is further enhanced if the database is online and easily accessible by all project members. Newer information databases are coming into light with the latest ways of backup, including online and offline backups. Backups secure against information loss of a project and thus enhance project performance. In Nigeria, information databases or management information systems (MISS) can allow data to be inputted into the theory of change from variety of sources, such as the program M&E system, agency records or records from other agencies. An integrated database may enhance the collection of contextual data, for example, migration patterns, economic indicators, school enrolment rates or disease rates

Forss et al. (2014) investigated the process of complex programs is a hastily emerging topic in development of projects. Complex projects frequently involve multiple funding and implementing agencies, multiple components, multiple results and multiple causal paths. All these items depend on well-articulated reporting methods from a centralised database. The method pronounces the interrelation with the project performance.

#### **2.2.4 Project Performance**

According to Mbogo (2016) a well performing project is one that achieves deliverables that were agreed upon prior to satisfy the project consumer. Krzysztof, Potkańsk, and Stanisław, (2014) made it evident that project M&E is key in planning how a project should be implemented at the planning life cycle of projects. While a few argue that it should be incorporated after the planning stage but before the design stage of the project or intervention, technical management systems can offer substantive benefits to this. Nyonje, Ndunge and Mulwa (2012) found that in the study of qualities of

projects that are deemed to have performed well, is when all the stakeholders' interests are met (Tonea, 2013).

The use of indicators to evaluate project performance is very popular. Many NGOs use project-specific KPI systems to measure process performance that is essential to the success of a project. Mir and Pinnington (2014) showed that despite normality or popularity, KPIs indicate to be a better appropriate for assessing performance of project levels. As a result, in their study the KPIs were adapted to consider the accessibility of data collection because of the diversity of project outcome (Carvalho, Patah, & Bido, 2015). This method to determine performance indicators is considered to be a reasonable approach in assessing the performance quality and success of a project (Sage, Dainty, & Brookes, 2014).

### **2.3 Summary of Literature Review**

From the literatures above, it is evident that technical management systems have an influence on project performance. First, the literature has presented the theories of Rogers's innovation diffusion theory, systems theory and theory of change (TOC) to support the topic of influence of technical management systems on project performance. Also, the literature on influence of technical management systems in terms of collaboration and planning, scheduling, resource, budget management so that the organisation can attain project performance. Further, influence of mobile communication networks to promote remote communication, enhance frequency of communication and reduce cost of communication so that the organisation has a better chances of projects performing better. Finally, the influence of information databases assists in storage, retrieval, backup and reporting so that organisations can achieve project performance.

### **2.4 Knowledge Gap**

With technical management systems being a relatively new field, there is enormous need to harness its benefits. Integrating technical management systems into project is costly and requires staff training, additional equipment and more involved database management. However, there is no study



done in determining the influence of monitoring and evaluation technical management systems on child protection projects performance to humanitarian organisations and seeing how great an epidemic (COVID) is, there seemed to be a relevance for this study. The study will therefore determine the influence of technical monitoring and evaluation management systems in relationship to project performance of child protection projects. The following research questions were addressed; what is the influence of monitoring and evaluation technical management systems on project performance on child protection projects in Borno state?

## **CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY**

### **3.1 Introduction**

This chapter presents the research methodology with focus on research design to be used, the target population, the research site, sample size, sampling and procedures for data collection, research instruments for data collection, data analysis procedures and the ethical considerations in obtaining data. The chapter will also be addressing validity and reliability.

### **3.2 Research Design**

Research design is a structure that holding all the elements in a research (Kombo & Delno 2013). This study will use descriptive design that involves the gathering of data through interview or questionnaire administered to the sample of respondents (Orodho, 2013). It will also be used to collect data on the respondent's individual opinions and habits. The research design will also provide the researcher with the appropriate mechanism to collect data from the respondents on technical monitoring management systems and performance of child protection projects.

### **3.3 Research Site and Rationale**

Borno state has been at the centre of protracted armed conflict for more than a decade now with more than 300,000 children killed in Nigeria's north-east region, while over one million children have been displaced from their homes. In Borno state, more than 330,389 children are out of school as a result of the armed conflict according to the report from Universal Basic Education Commission. In Adamawa and Yobe states in north-east Nigeria, the conflict has impacted necessary health and child protection services which are very essential for these children, and for far too long children in north-east Nigeria have suffered the consequences of the protracted conflict. Thousands of children have died from explosive devices, been kidnapped, forcefully recruited and used by armed groups. Girls have been especially impacted due to their vulnerability, including sexual abuse and violence.

Due to the COVID-19 pandemic resulting in nationwide lockdown, closure of organizations and movement restriction, on-site monitoring and evaluation of humanitarian interventions has been

difficult, there is restriction on gatherings to contain the virus. Hence the need for monitoring and evaluation technical management systems for humanitarian interventions. NGOs are now faced with new challenges in implementing project activities, monitoring project progress, collecting data, and tracking indicators. As we modify approaches to fit in with the new normal, there is a need to find creative, accountable, ethical, and safe ways to monitor and evaluate humanitarian programming. Borno state is the preferred site because it is the state with the largest humanitarian interventions in the country and this serves to provide the necessary site for the study on technical monitoring management systems and performance of child protection projects.

### 3.4 Target Population

According to Mugenda (2003) population contains a group of persons, or items that have the same attributes that fits the sample of the study. But according to (Johnston & VanderStoep, 2009), the target of respondents can be more generalised. However, Kothari noted that target population is the entire number of people that can provide data that is essential for attaining the objectives of a study. The target of this study is 46 Project Managers, 63 Child Protection Officers and 39 M&E Officers from thirty-nine (39) child protection organisations in Borno state.

**Table 3.1 Target Population**

<b>Child Protection Humanitarian Workers</b>	<b>Size</b>
Child Protection Project Manager	46
Child Protection Officers	63
M&E Officer	39
<b>Total</b>	<b>148</b>

### 3.5 Sampling Procedures

In accordance with Orodho this is a study plan indicating how target population will be selected. This study explored stratified random census to ensure subgroups (strata) of the population are adequately represented within the entire sample population of the study, gender equality was factored in among

the respondents targeted from the child protection organisations. Stratified random sampling is preferred for this study because it ensures that representativeness of the study sample are obtained while also enhancing accuracy in consonance with Chandran (2014). Thus, employing a stratified random sampling gives the avenue to capture views from members of the varying target subgroups as each subgroup is allocated a quota in the study's sample size. To eliminate further bias, elements in each subgroup were sampled randomly to obtain the actual study participants. Every subgroup in this study population will have a chance of representation.

### 3.6 Sample Size

Data from the Child Protection Sub Sector was used to select the participants. With 39 Child Protection Project module partners and 148 Child Protection Project staffs in Borno state, the child protection organizations staffs are the participants, these include; forty-six (46) project managers, sixty-three (63) Child Protection Officers, thirty nine (39) from monitoring and evaluation departments. A representative sample was calculated using the Yamane formula, as it is an ideal formula for sample size calculations in situations where the target population is large because it gives a representative sample size with a reliability of 95% confidence level and allowable error of 5% (Ngechu, 2004).

$$n = \frac{N}{[1 + N(\epsilon)^2]}$$

Where N= population size,  $\epsilon$  = allowable error, n = sample size. With a total population of 148, allowable error of 5%, calculation of the sample size is as follows;

$$n = \frac{148}{[1 + 148(0.05)^2]} = 108$$

As such, the sample size for this study is 108 respondents. Table 3.2 below shows how the respondents will be distributed across each subgroup.

**Table 3.2 Sample Size**

Study population			Size	Sample size Proportion= 56/65	Actual Respondents
Child Protection Project	46				
Manager				0.73	34
Child Protection Project	63				
Member				0.73	46
M&E Officer			39	0.73	28
<b>Total</b>	<b>148</b>			<b>0.73</b>	<b>108</b>

### 3.7 Data collection Method

This study confined itself to questioning each employee as one unit of measure as opposed to all the participants in organisations involved in the projects in accordance with Saunders et al (2011) who noted that data collection procedures is to gather data to serve or prove some facts.

### 3.8 Research Instruments

The tool for this study is questionnaire. The questionnaire adopted the five-point Likert-scale ranging from 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree. The questionnaire was made of five parts with Part A as the Demographic Background, Part B as Influence of software management system, Part C as Influence of mobile networking system while Part D will be the Influence of information databases and Part E is Project performance.

#### 3.8.1 Piloting of Research Instruments

A pilot study was conducted with questionnaires to teste if the tool is not only accurate but also free from errors. The piloting was also used to estimate the total time taken to fill the study's questionnaire. This is in accordance with Johnston and VanderStoep who indicate that piloting is done to determine whether the research tool is free from error and is able to gather the necessary data for attaining the research objectives.

### **3.8.2 Validity of Findings**

A research tool validation is to ensure that items are representative of characteristics and skills that it is meant to measure according to Mugenda. This was assured through random sampling as it will enhance checking the influence of the variables. This was implemented via random choosing of the respondents from the target population to the final sample. Random sampling is suitable as it ensures that the sample chosen is a representative of the population.

### **3.8.3 Reliability of Research Instruments**

The reliability of a research instrument is the consistency to which it gives the same outputs when administered over and over again to the same group within different time periods Saunders et al. A Cronbach Alpha was the chosen measure of reliability as Cronbach's Alpha coefficient indicates how constructs correlate positively to one; it is between 0.1 and 0.9. According to Salkind the minimum acceptable coefficient is 0.60: Distribution of Cronbach's Alpha coefficient is as follows, alpha coefficient > 0.9 = excellent, alpha coefficient > 0.8 = good, alpha coefficient > 0.7 = acceptable, alpha coefficient > 0.6 = questionable, alpha coefficient greater than 0.5 = poor and alpha coefficient < 0.4 = unacceptable.

### **3.9 Data Analysis and Presentation**

Data analysis for this study was done using Microsoft Excel, Statistical Package for Social Scientist (SPSS) software. In accordance with Salkind, data analysis involves the method of encoding data, data entry then analysis to interpret the data before then presenting the data collected as per the objectives of the study. Data outputs of this study consisted of inferential and descriptive statistics.

### **3.10 Ethical Consideration**

Contains norms governing the objectives of study data falsification, study data misrepresentation, promoting the truth with facts and avoiding errors as much as possible according to Salkind. Respondent's participation in this study was voluntary and they are free to withdraw from the study at any point in time as they so desire. It was also made clear that the respondents can opt out of any

of the study procedures. In adhering to these principles of ethics, participants were informed that the study is purely for academic purposes only and they can withdraw their rights from the study as they so desire if they do not feel comfortable. Study participants were also assured that the data obtained from the study will be anonymous. Should there be any expression of discomfort during the course of the interview, respondents were reminded that s/he is not under any compelling to answer any of the questions that makes him/her uncomfortable. Sufficient time was given to the respondent to recover (whenever there is need) before proceeding with data collection. The result from this study was reported with integrity and objectivity.

## CHAPTER FOUR: DATA ANALYSIS AND FINDINGS

### 4.1 Introduction

This chapter provides data analysis and discussion of results. The chapter is divided into parts guided by the objectives; to determine the influence of software management systems on project performance of child protection projects, to examine the influence of mobile networking systems on project performance of child protection projects, to assess the influence of information database systems on project performance of child protection projects in Borno state. The analysis used data obtained from the questionnaires. The results were presented in the form of description statistics, percentages and frequencies.

### 4.2 Reliability Statistics

The Cronbach's Alpha coefficient, alpha coefficient was determined from the constructs of the questionnaires. The results were indicated in table 4.1

**Table 4.1 Reliability Statistics**

Cronbach's Alpha	N of Items
1.959	25

Source: The Researcher

As shown in Table 4.1 above, the Cronbach's Alpha coefficient (alpha coefficient) was 1.959, this indicates that the internal consistency of the survey is excellent and it was good for further statistical manipulations.

#### 4.2.2 Response Rate

Out of a target of one hundred and forty eight (148) questionnaires administered by the researcher to the targeted child protection Non-governmental Organizations, one hundred and twenty seven (127) questionnaires were returned during the course of data collection. The respondents included 41 Child Protection Managers, 56 Child Protection Officers and 30 M&E Officers. This represents a response rate of 85.8%, which is considered sufficient data to make conclusions for the research as according



to Mary Frank Fox (2020), a response rate of 60% is strong enough and it meets the acceptable standard. Therefore, the 85.8% response rate of is good enough.

**Table 4.2: Response rate**

<b>Categories</b>	<b>Sample size</b>	<b>Responded</b>
Child Protection Project Manager	46	41
Child Protection Officers	63	56
M&E Officer	39	30
<b>Total</b>	<b>148</b>	<b>127</b>

### **4.3 Presentation of Research Analysis and Findings**

#### **4.3.1 Demographic Information**

Basic characteristics of the respondents included in the study, how and why they were appropriate as study samples. This research study took into consideration the respondents' education level, years of years on child protection projects and the years of which respondents have worked at their present organization. The responses are presented in Table 4.2.

#### **Demography of respondents**

The demography of respondents for the study involved the analysis of gender, the position held by the respondents in the organization, number of years the respondents had worked for the organization and the level of education. The analyses are presented in the following sections.

##### **4.3.1.1 Gender of the Respondents**

The study incorporated gender into the study to provide an insight into patterns among the different gender categories. This helps to determine how gender influences the choices of an individual, thereby having an impact on the survey - influence of technical monitoring management systems on projects performance. The results were presented on the table 4.3.1 below:

<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Male	44	34.65%
Female	83	65.35
<b>Total</b>	<b>127</b>	<b>100</b>

**Table 4.3.1: Respondent’s gender.** Source: Researcher

Findings from the survey data shows that majority of the respondents 83 (65.35%) were male with 44 (34.65%) female. In addition, those who were male made up most of the respondents who gave their opinion on the influence of M&E technical management systems on performance of child protection projects.

#### **4.3.1.2 Education Level in the Organization**

The study sought to determine whether there was significance of education level that plays a part in the influence of technological innovations on projects management software on project performance. The education levels were from certificate to doctorate level. The results were presented on the figure 4.4 below.

<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Graduate	66	51.97
Master’s degree	52	40.94
Undergraduate	4	3.15
PhD Level	5	3.94
<b>Total</b>	<b>127</b>	<b>100</b>

**Figure 4.3.2: Source: Researcher**

Knowledgeable participants were targeted for this study, this is made evident with 51.97% (66) of the study respondents having the graduate degree as their highest level education, while only 3.15% (4) of the respondents are undergraduate. A good percentage of the sample size 42.52% (54) have their master’s degree while 3 (2.36%) are PhD holders as at the time this survey was conducted.

#### 4.3.1.3 Number of Years Worked in the Organization

The study incorporated the number of years worked in the organization into the survey. The year of service in the organization for the respondents was between 1 year to above 10 years. The results were presented on the figure 4.3.3 below.

Number of Years Worked in the Organization	Frequency	Percent
Below 1 year	7	5.51
Between 1-5 years	71	55.91
Between 6-10 years	48	37.80
Above 10 years	1	0.79
<b>Total</b>	<b>100</b>	<b>100.0</b>

**Figure 4.3.3;** Source: researcher

The year of service in the organization for the respondents were between 1 to 10 years. Majority of the respondents have been working for their organization between 1-5 years. The results were presented on the figure 4.3.3 above.

#### 4.3.1.4 Position Held in the Organization

The position of respondent's in child protection organization determines the extent to which one is aware of the issues sought by the study. The study therefore sought to establish the length of time that the respondents had been involved in the organization. The position held was categorized into child protection project manager, child protection officers and M&E officers. The results were presented on the figure 4.3.4 below;

Respondent's position in the Organization	Frequency	Percent
Child Protection Officer	56	44.09
Child Protection Project Manager	41	32.28
M%E Officer	30	23.62
<b>Total</b>	<b>100</b>	<b>100.0</b>

**Table 4. 1 Respondents' position in the organization**

Child Protection Officer had the highest at 56, followed by Child Protection Project Manager at 41 and M&E Personnel at 30. Child Protection Officers accounted for 44.09% of study.

#### 4.3.1.5 Number of years working with child protection projects

Years of experience working with child protection projects was incorporated into the study to show if respondents are knowledgeable on child protection projects so as to be able to determine the relationship of technical monitoring management systems and child protection projects. Results of this analysis is presented in figure 4.3.5 below;

Respondent's work experience in child protection projects	Frequency	Percent
Below 1 year	4	3.15
Between 1-5 years	47	37.01
Between 6-10 years	59	46.46
Above 10 years	17	13.39
<b>Total</b>	<b>100</b>	<b>100</b>

**Figure 4.3.5:** Source: researcher

With majority of the respondents (46.46%) having between 6 - 10 years' experience working with child protection interventions (projects), 37.01% have 1-5 years of child protection experience, 13.39% with over 10 years of experience in child protection while only 3.15% have less than 1 year of experience in child protection. This shows that experienced humanitarian staffs were targeted for this study and hence understood the how software management systems, mobile networking systems, information database systems influences project performance of child protection projects in Borno state Nigeria.

#### 4.3.2 Software Management Systems and Performance of child protection projects

The study examined the influence of software management systems on performance of child protection projects by investigating whether software management systems positively affects (enhances) result based monitoring. It also test if software management systems has a positive impact

on remote data collection and if information/resource had contributed to monitoring and implementation of child protection projects.

**Table 4.3: Influence of Software Management system**

Influence of software management systems on project performance of child protection projects	SA (5)	A (4)	N (3)	D (2)	SD (1)	Mean	Std. Deviation
Software Management system makes it easier to collaborate between project managers, project team and stakeholders	118 (92.91%)	8 (6.30%)	0	1 (0.79%)	0	4.91	0.36
Software Management system enhances result based monitoring	116 (91.34%)	10 (7.87%)	1 (0.79%)	0	0	4.91	0.32
Software Management system enhances to bring project schedules up to speed with the changing project environment and to address some of the real-world, methodological challenges	111 (87.40%)	14 (11.02%)	1 (0.79%)	1 (0.79%)	0	4.85	0.44
Software Management system is providing proper resource management helping avoid hitches that are brought about by missing tools and equipment.	106 (83.46%)	17 (13.39%)	4 (3.15%)	0	0	4.80	0.47
Each project comes with a cost, which is included in a budget along with contingencies. Software Management system plays a key role in in budget management.	108 (85.04%)	19 (14.96%)	0	0	0	4.85	0.36
Software Management system enhances remote data collection	111 (87.40%)	12 (9.45%)	4 (3.15%)	0	0	4.84	0.44
Composite Mean and standard deviation						4.86	0.05

Six (6) statements were developed to measure the extent to which software management systems influences project performance of child protection projects. Statement (1) Software Management system makes it easier to collaborate between project managers, project team and stakeholders, out of 127 respondents who participated in the study, 118 (92.91%) of respondents strongly agreed with the statement, 8 (6.30%) Agreed, 1 (0.79%) Disagreed. This finding shows that 126 (99.21%) respondents Agreed with the statement, while 1 (0.79%) Disagreed. This item had a mean of 4.91 and a standard deviation of 0.36, which is higher than the composite mean of 4.86 with standard deviation of 0.05, implying that majority of respondents agree that software management systems positively influences project implementation of child protection projects. Majority of the respondents agree that with software Management system it easier to collaborate between project managers, project team and stakeholders.

Statement 2 - Software Management system enhances result based monitoring, of the 127 total respondents for this study, 116 (91.34%) Strongly agreed with the statement, 8 (6.30%) Agreed and 1 (0.79%) Disagreed. This statement had a mean of 4.91 and a standard deviation of 0.32, which is higher than the composite mean and standard deviation of 4.86 and 0.05 respectively. This implies software management systems positively influences project implementation of child protection projects. A massive 98.42% of the respondents agree that software management system helps to bring project schedules up to speed despite the changing environment of project implementation and to address some of the real-world, methodological challenges.

Statement 3 - Software Management system enhances to bring project schedules up to speed with the changing project environment and to address some of the real-world, methodological challenges according to 111 (87.40%) of the total respondents who strongly agreed, 14 (11.02%) of the total respondents agreed, 1 (0.79%) neutral while 1 (0.79%) disagreed. This statement with a mean of 4.85 and a standard deviation of 0.44 is lower than the composite mean of 4.86 and standard deviation of 0.05. This implies software management systems does not positively affect the influence of software management systems on project implementation of child protection projects.

Statement 4 - Software Management system is providing proper resource management helping avoid hitches that are brought about by missing tools and equipment. Of the 127 respondents of the study 106 (83.46%) Strongly agreed, 17 (13.39%) agreed, while 4 (3.15%) are neutral. 96.85% agrees that software management system is providing proper resource management that helps avoid hitches that are brought about by missing tools and equipment. This result shows that with a mean of 4.8 and standard deviation of 0.47, the composite mean of 4.86 and standard deviation of 0.05 is higher. This shows that Software Management system is providing proper resource management helping avoid hitches that are brought about by missing tools and equipment does not positively affect the influence of software management systems on project performance of child protection projects.

Statement 5 - Each project comes with a cost, which is included in a budget along with contingencies. Software Management system plays a key role in in budget management. Out of the total 127 respondents for this study, 108 (85.04%) Strongly agreed and 19 (14.96%) Agreed, resulting in a mean of 4.85 and a standard deviation of 0.36. All respondents (100%) software management system plays a key role in budget management that each project comes with a cost, which is included in a budget along with contingencies This mean is lower than the composite mean of 4.86 and a standard deviation of 0.05. This shows that each project coming with a cost, which is included in a budget along with contingencies does not positively affect the influence of software management systems on project performance of child protection systems.

Statement 6 - Software Management system enhances remote data collection. 111 (87.40%) Strongly agreed, 12 (9.45%) Agreed while 4 (3.15%) are neutral. 96.85% of the respondents are of the opinion that software management system enhances remote data collection. This results in a mean of 4.84 and a standard deviation of 0.44 which is lower than the composite mean of 4.86 and a standard deviation of 0.05. This implies that the statement does not positively influence software system systems on child protection systems.

### 4.3.3 Mobile networking systems and performance of child protection projects

The study also examined the effect of mobile networking systems and performance of child protection projects by investigating whether mobile networking systems positively affects (enhances) result collaboration, networking in implementation of child protection projects. It also helps to assess the influence of mobile networking systems on child protection projects be it positive or negative.

**Table 4.4: Influence of Mobile Networking System**

Influence of Mobile Networking System	SA (5)	A (4)	N (3)	D (2)	SD (1)	Mean	Std. Deviation
Mobile networking system have enabled more capacity to collect data and increasing frequency of communication than previously possible in project implementation	104 (81.89%)	22 (17.32%)	1 (0.79%)	0	0	4.81	0.41
Mobile networking system have played a significant role in collecting remote data by community members, beneficiaries and other stakeholders involved in a project.	108 (85.04%)	19 (14.96%)	0	0	0	4.85	0.36
i.) Mobile networking system assist in communicating different and varying data types. Like images, videos and geographical information.	107 (84.25%)	20 (15.75%)	0	0	0	4.84	0.36
ii.) Mobile networking system are reducing cost of communication for projects hence assisting project performance	105 (82.68%)	19 (14.96%)	3 (2.36%)	0	0	4.80	0.45
iii.) Mobile networking system reduces the rate of errors in communication by providing a variety of ways of communicating	103 (81.10%)	17 (13.39%)	6 (4.72%)	1 (0.79%)	0 (0%)	4.75	0.57
Composite mean and standard deviation						4.81	0.09



Five (5) statements were developed to measure the extent to which mobile networking system influences project performance of child protection projects.

Statement (1) Mobile networking system have enabled more capacity to collect data and increasing frequency of communication than previously possible in project implementation, out of 127 respondents who participated in the study, 104 (81.89%) of respondents strongly agreed with the statement, 22 (17.32%) while 1 (0.79%) was neutral. This finding shows that 126 (99.21%) respondents Agreed with the statement, with 1 (0.79%) respondent neutral. Of the reasons for this is the massive (99.21%) response rate in agreement that mobile networking system have enabled more capacity to collect data and increasing frequency of communication than previously possible in project implementation. This statement had a mean of 4.81 and a standard deviation of 0.41, which is equal with the composite mean of 4.81 but with a standard deviation of 0.09, showing no relationship between the statement and influence of mobile networking on project performance of child protection projects.

Statement 2 - Mobile networking system have played a significant role in collecting remote data by community members, beneficiaries and other stakeholders involved in a project. Of the 127 total respondents, 108 (85.04%) Strongly agreed and 19 (14.96%) Agreed, showing that all respondents agree with the statement. This results in a mean of 4.85 and 0.36 standard deviation, implying that there is a positive relationship between the statement and performance of child protection projects as the mean and standard deviation of the statement is higher than the composite mean and standard deviation.

Statement 3 - Mobile networking system assist in communicating different and varying data types. Like images, videos and geographical information. Out of a total of 127 respondents for this study, 107 (84.25%) Strongly agreed, 20 (15.75%) Agreed, showing that all respondents (100%) agrees with this statement. This results in a mean of 4.84 and a standard deviation of 0.36 which is higher than

the composite mean of 4.81 and standard deviation of 0.09, implying that the statement positively influences the performance of child protection projects.

Statement 4 - Mobile networking system are reducing cost of communication for projects hence assisting project performance – 105 (82.68%) Strongly agreed with this statement, 19 (14.96%) Agreed while 3 (2.36%) are neutral. Mobile networking system are reducing cost of communication for projects hence assisting project performance according to 97.67% of the respondents, this results in a mean of 4.8 and standard deviation of 0.45 which is lesser than the composite mean of 4.81 and standard deviation of 0.09. This implies that the statement does not positively influence the performance of child protection projects.

Statement 5 - Mobile networking system reduces the rate of errors in communication by providing a variety of ways of communicating - 103 (81.10%) Strongly agree with this statement, 17 (13.39%) Agrees while 6 (4.72%) are neutral and 1 (0.79%) disagrees, showing that 94.49% agrees that mobile networking system reduces the rate of errors in communication by providing a variety of ways of communicating. With a mean of 4.75 and standard deviation of 0.57, the mean of the statement is lower than the composite mean and standard deviation, implying that the statement does not have a positive relationship with the performance of child protection projects.

#### **4.3.3 Influence of Information Database System**

Of the aims of this study is to probe the influence of information database systems by examining if information database systems enhances data retrieval, dissemination, backup. Evident based monitoring and evaluation is enhanced by information man agent, thus this is an area that cannot be overlooked in project implementation.

**Table 4.5: Influence of Information Database System**

Influence of Information Database System	SA (5)	A (4)	N (3)	D (2)	SD (1)	Mean	Std. Deviation
Information database system focuses on enhancing the participation information storage and quick retrieval	111 (87.40%)	16 (12.60%)	0	0	0	4.87	0.33
Information database system enhances increase of information retrieval though out the project cycle from planning, through design and implementation	104 (81.89%)	21 (16.54%)	2 (1.57%)	0	0	4.80	0.44
i.) Information database system integrated in project processes help stakeholders' access information, markets, healthcare, financial documents.	105 (82.68%)	20 (15.75%)	2 (1.57%)	0	0	4.81	0.43
ii.) Information database system enable generation of backups and these backups can be stored to prevent project data loss	112 (88.19%)	13 (10.24%)	2 (1.57%)	0	0	4.87	0.38
iii.) Information database system assist on project reporting activities, visualization of data for course correction and resource allocation.	109 (85.83%)	17 (13.39%)	1 (0.79%)	0	0	4.85	0.38
Composite mean and standard deviation						4.84	0.04

Five (5) statements were developed to measure the relationship of information database system influence on project performance of child protection projects.

Statement 1 - Information database system focuses on enhancing the participation information storage and quick retrieval – 111 (87.40%) of the total respondents Strongly agree with the statement and 16 (12.60%) Agree, this results in a mean of 4.87 and standard deviation of 0.33 which is higher than the composite mean of 4.84 and standard deviation of 0.04 implying that the statement positively influences project performance of child protection projects.

Statement 2 - Information database system enhances increase of information retrieval though out the project cycle from planning, through design and implementation – 104 (81.89%) Strongly agree, 21 (16.54%) Agree while 2 (1.57%) respondents are neutral. This shows that 125 (98.43%) of the respondents agree with the statement. This statement has a mean of 4.8 and standard deviation of 0.44 which is lower than the composite mean of 4.84 with a standard deviation of 0.04. This implies that the statement does not have a positive relationship with the project performance of child protection projects.

Statement 3 - Information database system integrated in project processes help stakeholders' access information, markets, healthcare, financial documents – 105 (82.68%) Strongly agree with this statement, 20 (15.75%) Agree while 2 (1.57%) are neutral. With 125 (98.43%) in agreement with this statement, there is a mean of 4.81 and a standard deviation of 0.43 which is lower than the composite mean of 4.84 with a standard deviation of 0.04, this implies that the statement does not have a positive relationship with the performance of child protection projects.

Statement 4 - Information database system enable generation of backups and these backups can be stored to prevent project data loss – 112 (88.19%) Strongly agree with this statement, 13 (10.24%) Agrees while 2 (1.57%) are neutral. This shows that 125 (98.43%) of the respondents are in agreement with this statement, thus having a mean of 4.87 and a standard deviation of 0.38 which is higher than the composite mean of 4.84 and a standard deviation of 0.04. Thus, implying that the statement has a positive relationship with performance of child protection projects.

Statement 5 - Information database system assist on project reporting activities, visualization of data for course correction and resource allocation.-0 109 (85.83%) Strongly agree with the statement, 17 (13.39%) Agree and 1 (0.79%) neutral. 126 (99.22%) if the respondents are in agreement with this statement, thus having a mean of 4.85 and standard deviation of 0.38 which is higher than the composite mean of 4.84 and standard deviation of 0.04. This shows that the statement has a positive relationship with project performance of child protection projects.

#### **4.3.4 Project Performance**

Of the objectives of this study is to probe the influence of technical monitoring management systems on performance of child protection projects. To achieve this, respondents of this study were probed on their level of agreement with the following statements related to technical monitoring management systems and project performance of child protection projects. Findings from their response is shown in the table below;

**Table 4.6: Technical monitoring management systems and project performance of child protection projects**

Project performance	5 (SA)	4 (A)	3 (N)	2 (D)	1	Mean	Std.
					(SD)		Deviation
Well performing project is one that stays within the scope and was implemented within the time frame	100 (78.74%)	20 (15.75%)	5 (3.94%)	2 (1.57%)	0	4.72	0.61
A project that delivers what was prior agreed upon and meets stakeholders' interests is considered as a successful project.	108 (85.04%)	15 (11.81%)	3 (2.36%)	1 (0.79%)	0	4.81	0.50
i.) M&E technical management systems help manage project risks and hence increase the probability of a project performing well	107 (84.25%)	19 (14.96%)	1 (0.79%)	0	0	4.83	0.39
ii.) Quality of the deliverables from projects is a key determinate of the projects performance which M&E technical management systems enhances	113 (88.98%)	14 (11.02%)	0	0	0	4.89	0.31
iii.) The organization aims to have projects stay within budgets and M&E technical management systems supports this.	107 (84.25%)	16 (12.60%)	4 (3.15%)	0	0	4.81	0.47
Composite mean and standard deviation						4.81	0.11

Five (5) statements were developed to measure project performance.

Statement 1 – Well performing project is one that stays within the scope and was implemented within the time frame - 100 (78.74%) Strongly agree with this statement, 20 (15.75%) Agree, 2 (1.57%) disagree while 5 (3.94%) respondents are neutral. This shows that 120 (94.49%) of the respondents agree with the statement while 2 (1.57%) disagree. This statement has a mean of 4.72 and standard deviation of 0.61 which is lower than the composite mean of 4.81 with a standard deviation of 0.11. This implies that the statement does not have a positive relationship with project performance.

Statement 2 - A project that delivers what was prior agreed upon and meets stakeholders' interests is considered as a successful project – 108 (85.04%) of the respondents Strongly agree with this statement, 15 (11.81%) Agree, 1 (0.79%) disagree while 3 (2.36%) are neutral. This statement has a mean of 4.81 and a standard deviation of 0.5. This mean is equal with the composite mean of 4.81 and standard deviation of 0.11, implying that the statement has no relationship with project performance.

Statement 3 - M&E technical management systems help manage project risks and hence increase the probability of a project performing well – of the total respondents of 127 for this study, 107 (84.25%) Strongly agree with this statement, 19 (14.96%) Agree and 1 (0.79%) are neutral. This shows that 126 (99.21%) are in agreement with this statement. Also, with a mean of 4.83 and standard deviation of 0.39, which is higher than the composite mean of 4.81 and standard deviation of 0.11. It is evident that the statement has a positive relationship with project performance.

Statement 4 - Quality of the deliverables from projects is a key determinate of the projects performance which M&E technical management systems enhances – 113 (88.98%) of the respondents Strongly agree with this statement and 14 (11.02%) Agree, giving a mean of 4.89 and standard deviation of 0.31. This is higher than the composite mean of 4.81 and standard deviation of 0.11, implying that there is a positive relationship between the statement and project performance.

Statement 5 - The organization aims to have projects stay within budgets and M&E technical management systems supports this – 107 (84.25%) Strongly agree, 16 (12.60%) Agree while 4

(3.15%) are neutral. This shows that 123 (96.85%) of the total respondents of this study agree with this statement and having a mean of 4.81 which is equal with the composite mean of 4.81 and a standard deviation of 0.47. This made it evident that there is no relationship between the statement and project performance.

According to Denis Hill (2015), project performance is the overall measurement of whether a project has met objectives and requirements of scope, cost, and schedule. A periodic measurement during the monitoring and controlling phases of a project performed to observe project execution and identify variances from the Project Management Plan for proactive mitigation. Findings from the analysis of data collected shows that technical monitoring management systems has a positive influence on project performance, this is evident with a mean response rate of 4.82 showing that respondents attest to this.

With a mean of 4.72 and standard deviation of 0.61, respondents agree that a well performing project is one that stays within the scope and was implemented within the time frame. A project that delivers what was prior agreed upon and meets stakeholders' interests is considered as a successful project according to the respondents, this was supported with a mean of 4.81 and a standard deviation of 0.5. Also, with a mean response of 4.83 and standard deviation of 0.39 respondents agree that M&E technical management systems help manage project risks and hence increase the probability of a project performing well. The quality of the deliverables from projects is a key determinate of the projects performance which M&E, this is evident with a mean 4.89, 0.31 standard deviation. In addition, every organization implementing child protection projects aims to have projects stay within budgets and M&E technical management systems supports this, this is attested to by the respondents and with a mean of 4.81 and standard deviation of 0.47.



## **CHAPTER FIVE: DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Introduction**

This chapter provides data analysis and discussion of results. The chapter is divided into sessions guided by the objectives; to determine how software Management Systems, mobile networking systems, information database systems influences Performance of child protection projects in Borno state, Nigeria. Questionnaires were used for data collection and the analysis of the data collected were presented in the form of description statistics, percentages and frequencies.

### **5.2 Summary of Main Findings**

The summary and conclusion are presented according to themes derived from the research questions that guided the study. The section shows the discussion that was guided by the three (3) specific objectives of this study;

#### **5.2.1 Software management systems and performance of child protection projects**

Findings from the survey showed that software management systems have a positive influence on the performance of child protection projects in Borno state. Buttressing Stallman and Greene (2014), this study established that software data collection is easier and in a cheap manner. There is potential that technical management system, rather than project design will influence the type of data that will be collected in enhancing performance of the project. According to Trigg (2013), when using technical management systems for large data set depends on automating, quantitative data is likely to be gathered but this study made it evident further that software management system enhances remote data collection. Most of the respondents attested that software Management system makes it easier to collaborate among project team members (project managers, project officers, M&E team) and stakeholders. This aligns with Raftree and Bamberger (2014) who discovered that innovation is wider involvement in consulting and decision-making procedures about the project itself. A massive 98.42% of the respondents of the survey agreed that software management system enhances project scheduling despite the dynamic context in which project implementation is done to address some of the real-world, methodological challenges. This clarifies in addressing the complexity involved with

designing an effective child protection program to attain set objectives while reaching its targets amidst funding challenges and child protection approaches makes such projects require systematic management to meet minimum standard of service delivery, thus addressing the concern raised by Alderman & Bundy.

With the ever increasing need for evident based reporting and durable solutions, software management system enhances result based monitoring, this is according to 99.21% of the respondents. A massive 96.85% of the respondents of this study agreed that software management system is providing adequate, resource management that helps avoid hitches that are brought about by missing tools and equipment. Furthermore all respondents (100%) agreed that software management system plays a key role in budget management that each project comes with a cost, which is included in a budget along with contingencies. This further expatiates on the study conducted by Stallman and Greene (2014) which established that software data collection easier and in a cheap manner. 96.85% of the respondents are of the opinion that software management system enhances remote data collection.

### **5.2.2 Mobile networking systems and performance of child protection projects**

Findings from the survey shows that there is a positive relationship between mobile networking system has a positive influence on project implementation of child protection project, this is evident with a mean response rate of 4.82. In alignment with (Pratihast et al.), the role of remote (mobile) data collection by community members was highlighted as key to ongoing management and monitoring. Of the reasons for this is the massive (99.21%) in agreement that mobile networking system have enabled data collection (remote data collection included) and increasing frequency of communication than is previously possible in project implementation without the incorporation of mobile networking systems.

Explaining further Raftree and Bamberger (2014), discovered that innovation is wider involvement in consulting and decision-making procedures about the project itself. This contradicts with the study conducted in Vietnam on data gathering tools in monitoring forest management with the adopting of

remote sensor monitoring of forest disturbances. It found that the events identified through local community people were not detected by remote sensors and that, in some cases, remote sensors indicated a delay of 1 to 2 years in events capturing. 100% agreed that mobile networking system have played an important role in collecting remote data by community members, beneficiaries and other stakeholders involved in a project and that mobile networking system assist in communicating different and varying data types.

Like images, videos and geographical information; Mobile networking system reduces cost of communication in project implementation and hence improves project performance according to 97.67% of the respondents; while 94.49% agreed that mobile networking system reduces the rate of errors in communication by providing a variety of ways of communicating.

### **5.2.3 Influence of Information Database System**

Findings from data collection for this study shows that majority of the respondents agreed that information database system influences performance of child protection projects positively, this is supported with a mean response rate of 4.84. Considering the increasing emphasis on durable solution and with evidence based reporting in project implementation, all respondents (100%) agreed that information database system enhances information storage and quick retrieval.

Information database system also enhances increase of information/data retrieval though out the project cycle from planning, through design, implementation, evaluation and the integration of information management system into project processes help stakeholders' access information, markets, healthcare, financial documents as 98.43% of the respondents attests to this. Furthermore, information database system enable generation of backups and these backups can be stored to prevent project data loss in project implementation of child protection projects with 98.43% of respondents agreeing to this while a massive 99.21% of respondents agrees that information database system assist on project reporting activities, visualization of data for course correction and resource allocation.

#### **5.2.4 Project Performance**

Findings from the analysis of data collected shows that technical monitoring management systems has a positive influence on project performance, this is evident with a mean response rate of 4.82 showing that respondents attested to this. With a mean of 4.72 and standard deviation of 0.61, respondents agree that a well performing project is one that is within the scope and was implemented within the time frame. This further the study of Byrne (2009), investigated that technology should be integrated in project processes to enhance the organisation of projects that contribute to project performance. A project that delivers what was prior agreed upon and meets stakeholders' interests is considered as a successful project according to the respondents, this was supported with a mean of 4.81 and a standard deviation of 0.5. Also, with a mean response of 4.83 and standard deviation of 0.39 respondents agree that M&E technical management systems help manage project risks and hence increase the probability of a project performing well. The quality of the deliverables from projects is a key determinate of the projects performance which M&E, this is evident with a mean 4.89, 0.31 standard deviation. In addition, every organization implementing child protection projects aims to have projects stay within budgets and M&E technical management systems supports this, this is attested to by the respondents and with a mean of 4.81 and standard deviation of 0.47.

#### **5.3 Discussion**

Findings from this study has shown that Technical monitoring management systems influence performance of child protection projects in Borno state Nigeria. In alignment with the study of Stallman and Greene (2014) that found that software make it easier in data collection of data and in a cheap way. This is also shown the potential of the use of technical monitoring management systems rather than the project designs or data required, will influence the types of data that are gathered, thus enhancing project performance. Furthermore, according to Trigg (2013) use of software for a large data set depends on automating, this increases the likelihood that quantitative data is collected. There are a number of software developed and procedures made to assist the gathering of large qualitative data, for example video tagging, case studies, narratives, use of critical words in sorting and

organizing responses that influences project performance. In addition, findings of Boyera and Alonso (2012) aligns with the findings of this study showing that collecting a wider perspective from a broad network in learning to experiment through outcome testing, setting up and learning from lessons and have the ability in capturing the value of both successes and failures have been identified as vital elements of organizations with strong capacities to innovate.

This study also made it evident that mobile networking systems influence the performance of child protection projects. In alignment with the research study of Letouzé (2014) which made it evident that the use of innovations on growing capacity for data collection, increasing frequency of communication relating to people's actions and behaviours prompting efforts in harnessing data used in predicting and tracking behaviours and planning interventions in a speedier manner than previously possible. In past time before the use of technical management systems, by the time a full-scale analysis of challenges is completed, it is already late for effective response or the data becomes outdated for effective and efficient use. In addition, this study found that with the use of technical monitoring systems, data collected is free from errors and entry of data, data validation and cleaning can be conducted to enhance data collection process. In support, Boyera and Alonso (2012) indicated that data collected from mobile phone from their study in India that project managers found it to be effective, thus influencing project performance.

A research study done in Kenya utilizing mobile data collection in Busara center for Behavioral Economics, a laboratory research in Nairobi, used SMS to send bulk text messages to participants who signed for participating in research to remind them of their appointments. Rather than making 150 to 200 individual calls a day, a process that usually takes two (2) field officers a full day in completing, with a (one) field officer requiring only 30 minutes to sending out the initial invitation to participants as well as a reminder closer to the date (Kuruvilla, 2013). Demombynes et al. (2013) showed that collecting data by mobile phones (remote data collection) has given to survey participants. The implementers of the experiment determined that mobiles phones could be a viable means of data collection, that calling people on their own phones is preferable to handing out phones,

and that attention needs to be given to the potential for bias due to selective non-response (Demombynes). This was tested as the World Bank in Southern Sudan conducted a portion of an experimental phone-surveying project. In their pilot, 1,000 households in ten (10) state capitals of Southern Sudan were issued mobile phones to facilitate the process. These thus facilitates that mobile networking systems influence project performance of child protection projects.

Findings from this study also shows that information databases influence the performance of child protection projects. This is emphasized by the study of Kumar that projects use reconstructing baseline data under common projects' scenarios, the case usually is that no baseline data was gathered, thus making it difficult in applying pre-test mad post-test project designs. The need for storage of all project data and applications providing ability of storage of these data types cannot be over emphasised, and technical management systems provides different means of achieving this. These further shows that mobile networking systems influence project performance of child protection projects.

Furthermore, it was emphasised from this study that information databases are utilised to increase information retrieval all through project management cycle from planning, through design and implementing, dissemination of project knowledge, evaluation, use of evaluation data/information. Project data collected and stored throughout the life span of projects is a large one, and these data is to be easily made available, easily mined and presented to show patterns, trends of project implementation. Retrieval of data is vital to ensure that the project is on tract, objectives are achieved within the timeline of the project. All project members further enhance data retrieval and storage if the information/data databases is online and accessible. This is enhanced by including online and offline backups. Backups are vital to project success as they secure against information loss of a project and hence enhance project performance.

The findings leads to the following conclusion according to the study objectives. Findings from this study showed and made it evident that software management system, mobile networking system,

information database system have a positive influence on performance of child protection projects in Borno state Nigeria. It was made evident that these factors enhance project implementation, which in turn influences positively project performance of Non-governmental organizations.

## **5.4 Conclusions**

With the findings from this study, the following conclusions can be made;

### **5.4.1 Software management systems and performance of child protection projects**

With findings from the survey, it can be concluded that software management systems positively influences (increase) collaboration, result based monitoring, remote data collection, project scheduling. This has resulted in improved project implementation of child protection projects across the state.

### **5.4.2 Mobile networking systems and performance of child protection projects**

With findings, it can be concluded that mobile networking systems positively impacts data collection with enabling capacity and increasing frequency of communication than previously possible in project implementation. Findings from the study explains better Chapelier and Shah, who discovered that project teams experiment with technical management systems in including the voices of participants/beneficiaries of development programs to allow them weighing in on what success appears to be like and through collaboration. Thus, making it possible a more realistic way of evaluating whether success has been achieved in projects Incorporation of mobile networking systems has also played a significant role in collecting remote data by community members, beneficiaries and other stakeholders involved in a project; enhances communicating different and varying data types (images, videos and geographical information). It is also worthy of note that cost of communication for projects is reduced with mobile networking systems, hence assisting project performance. Furthermore, mobile networking system reduces the rate of errors in communication by providing a variety of ways of communicating, this is in agreement with Stallman and Greene who established that software data collection easier and in a cheap manner. Also, the study of

Stallman and Greene in the United Kingdom aligns with findings indicated that M&E teams use of technical management systems helps improve efficiency and quality of data. Hence, reducing sample bias by constructing the sample frame, to reach vulnerable and difficult to reach groups that are mostly under-represented and to improve quality control and hence, project performance. With these factors enhanced in project implementation, performance of child protection projects is improved for quality implementation.

#### **5.4.3 Information database system and performance of child protection projects**

Expatriating on the study of Kumar, it was made evident that information database systems enhances participation, information storage and quick retrieval of data while also increasing information retrieval though out the project cycle from planning, through design implementation and evaluation. Thus, information database system when integrated in project processes help stakeholders' access information, markets, healthcare, financial documents, enable generation of backups and these backups can be stored to prevent project data loss and assist on project reporting activities, visualization of data for course correction and resource allocation.

#### **5.4.4 M&E technical management systems and Project performance**

A well performing project is one that stays within the scope and was implemented within the time frame and a project that delivers what was prior agreed upon and meets stakeholders' interests is considered as a successful project. Findings from this study shows that M&E technical management systems help manage project risks and hence increase the probability of a project performing well, as quality of the deliverables from projects is a key determinate of the projects performance which M&E technical management systems enhances. Furthermore, every organization aims to implement projects within the allotted budgets and M&E technical management systems supports this. This further shows that incorporation of M&E technical management systems have a positive influence on performance of child protection projects in Borno state Nigeria.



## **5.5 Contribution to the body of knowledge**

Although this study was grounded on technical management systems and project performance, advanced by USAID (2020) which postulates that digital tools can support novel approaches to remote monitoring, use of digital tools also supports Operating Unit (OU) alignment with the Digital Data Collection mandate in the new remote strategy. As applied to this study the theory holds that independent variables software management systems, mobile networking systems and information database systems would influence performance of child protection projects, findings from this study indicate that project implementation is improved by technical management systems. Findings from this study indicates that being able to really understand what data collected means and how it can be used to project any future scenarios, is extremely useful, building on Lilian Kamau (2021). Collection of data for improved project is good but this aim will be defeated without analysis of the data. This would build upon the data provided to allow to clearly see trends and patterns specifically linked to the intervention and its ramifications in order to adapt responses to violations and learn from COVID crisis.

Analysis of data collected is what drives recommendations. Technical management systems enhances remote data analysis, which aims to make sense of available information and to identify significant facts, trends and anomalies to inform efficient and effective decision-making (Humanitarian Analysis Programme, 2021). With advance in technology (in terms of computing, communications, and the ability to process, and analyse large data), ability to respond to child protection is at an inflection point. There is great optimism that technical management systems can be leveraged to process large amounts of related data (in the form of user generated data in addition to traditional humanitarian data) to provide an insight into the fast-changing situation and help drive an effective disaster response (Junaid Qadir, Anwaar Ali, Raihan ur Rasool, Andrej Zwitter, Arjuna Sathiaseelan & Jon Crowcroft, 2019). With technical management systems, data analysis can be harnessed to analyse the vast amount of data and to distil lessons learned. The gained insights out of big datasets may not only

be used for monitoring and evaluation purposes but can also contribute to better prevention and preparedness, thus improving project implementation.

This study made evident that technical management systems enable efficient data collection, analysis as well as communication and information management that can improve the entire humanitarian programme cycle (Technological innovation for humanitarian aid and assistance, 2019). Data collected and the analysis throughout the entire process can be stored on data platforms with information database systems. Moreover, data analysis support risk assessments and facilitate the identification of vulnerable cases, based on previously identified patterns and personal characteristics. In as much as these studies are related to remote data analysis, studies that addressed the changes in monitoring and evaluation of child protection humanitarian interventions were not addressed. Findings from this study also shows that M&E technical management system will remedy shortcomings in traditional monitoring and evaluation (Sanga et all), especially the delayed reporting and extra expenses resulting from manual operations to establish performance indicators and gauge success. Despite the obvious value of M&E technical management systems in describing organization operations, the influence of technical management systems on performance is still confused for two major reasons: first, lack of awareness of the generators of innovation; and second, the influence of innovation on organization performance remains untested (Mabrouk & Mamoghli, 2019). However, findings from this study shows that humanitarian organizations are aware of monitoring and evaluation technical management systems and while not all are implementing it due to budget constraints and technical expertise. In addition, this study has been able to make evident the influence of software management systems on project performance.

Utilising technical management systems in monitoring and evaluation processes does not come without challenges. Firstly, integrating technical management systems into an organisation's operation requires budget. Furthermore, employees need to be trained, otherwise low capacity and resistance to change will cause problems. Secondly, monitoring and evaluation processes should be adapted to using technical management systems tools to fully exploit the potential. Furthermore, an

overreliance on digital tools that gather oftentimes-quantitative data can result in disconnection with context. When data is electronically and remotely gathered, project visits are not necessary and this may cause a lack of contextual understanding. What is more, if data and privacy are not fully protected, participants being evaluated could be at risk. Lastly, people without access to technical management systems or who are digitally illiterate might be left out from participation. This can be potential for selectivity bias according to Raftree and Bamberger. Also, a research by De Young et al. (2019) adopts an approach to performance relations that does not take into consideration the antecedents of technical management systems inside and outside organization institutions, both of which may affect this relationship. However, findings from this study shows that if integration of technical management systems in monitoring and evaluation processes is carefully planned rather than forcing technical management systems into monitoring and evaluation, it could be of great benefit to monitoring and evaluation activities. Especially in insecure environments – as evident in the case study for this study - it is deemed vital to assess whether the aid reached the right people or not. While gathering data remotely has its limits, in this context – and Nigeria - it would be helpful. Nevertheless, a prerequisite remains that people have access to devices and electricity, which is not always the case in those contexts. Using technological solutions in monitoring and evaluation is emerging. However, there are monitoring and evaluation technical management systems with potential that have not yet been fully explored. This process would benefit from greater documentation on evidence of utility and impact of remote monitoring and evaluation, this was also supported by Raftree and Bamberger.

## **5.6 Recommendation**

With findings, this study makes the following recommendations;

- i. Findings from this study leads to recommending that M&E technical management systems should be enhanced since it positively influences performance of not only implementation of child protection projects but also non-governmental organizations.

- ii. Incorporation of software management systems should be encouraged in project implementation as it positively influences project implementation. This can be achieved by training project staffs on these software to enhance project implementation.

## **5.6 Areas of Further Research**

This study had researched the influence of M&E technical management systems on project performance, however, further research need to be done in the following areas:

Further study ought to be conducted on effectiveness of M&E technical management systems on performance of other projects outside of child protection in other parts of the country. This will improve the body of knowledge provide by pronging more understanding on how the different M&E technical management systems affect performance of non-governmental organizations.

This study was cantered only on three variables, software management systems, information database systems and mobile networking systems in examining the influence of M&E technical management systems on performance of child protection projects in Borno state Nigeria. As such, there is need for a study to be done on the influence of other M&E technical management systems innovations that affect project performance of non-governmental organizations. This could be a significant input for feedback for non-governmental organizations to enhance project implementation.

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## APPENDICES

### APPENDIX I: REQUEST LETTER

Dear, Prof/DR./Mr./Mrs/Ms.....

My name is Oluwafemi Samuel David, a student at the Africa Nazarene University pursuing a master's degree in Africa Nazarene University carrying out a research on "Technical Monitoring Management Systems and Performance of Child Protection Projects". I would like to ask you to participate in this research. The research is aimed at identifying influence of technical monitoring management systems and performance of child protection projects. I would like to assure you that the information you provide in this questionnaire will be used for research purposes only and will be treated strictly anonymously and confidentially. The information you provide will be used within the research and help to learn about organizations needs and for research purposes only. Please feel free to speak openly and to refuse to answer any question if you feel uncomfortable.

Any questions regarding the study can be directed to Oluwafemi David on 09032723394. Thanking you as you take your time to fill in the questionnaire.

Oluwafemi David.

## APPENDIX II: RESEARCH QUESTIONNAIRE

My name is Oluwafemi David and I am a Masters student at Africa Nazarene University pursuing a Masters' Degree in Arts of Monitoring and Evaluation, and undertaking a research entitled "Technical Monitoring Management Systems and Performance of Child Protection Projects in Borno state". It is in this regard that I humbly request for your participation in filing this questionnaire. Thank you in advance.

### Instructions

This questionnaire consists of five parts; kindly answer all the questions by ticking in the appropriate box or filling in the spaces provided.

### Part A: Demographic Background

1. What is your gender?

Female [ ] Male [ ]

2. Your level of education

Certificate [ ] Diploma [ ] Undergraduate [ ] Master Degree [ ] PhD Level [ ]

3. Please indicate the name of your organization in the space provided

[ ]

4. Please indicate your position in the organization in the space provided

Child Protection Project Manager [ ] Child Protection Officer [ ] M&E Officer [ ]

5. Choose the number of years you have worked for the organization

Above 10 Years [ ] Between 6-10 Years [ ] Between 1-5 Years [ ] Below 1 Year [ ]

6. For how long have you been working with child protection projects?

Above 10 Years [ ] Between 6-10 Years [ ] Between 1-5 Years [ ] Below 1 Year [ ]

7. **Kindly rate the following on how you agree or disagree** that monitoring and evaluation technical management system’s effect on the performance of child protection projects. Base your answer on a five point Likert scale: 5) Strong Agree 4) Agree 3) Neutral, 2) Disagree and 1) Strongly Disagree

**Part B: Influence of Software Management system**

	5 (SA)	4 (A)	3 (N)	2 (D)	1 (SD)
B1. Software Management system makes it easier to collaborate between project managers, project team and stakeholders					
B2. Software Management system enhances result based monitoring					
B3. Software Management system enhances to bring project schedules up to speed with the changing project environment and to address some of the real-world, methodological challenges					
B4. Software Management system is providing proper resource management helping avoid hitches that are brought about by missing tools and equipment.					
i) Each project comes with a cost, which is included in a budget along with contingencies. Software Management system plays a key role in in budget management					
ii) Software Management system enhances remote data collection					

**Part C: Influence of Mobile Networking System**

8. Rate whether you agree that mobile networking system influence the performance of child protection.  
 Base your answer on a five point Likert scale: 5) Strongly Agree 4) Agree 3) Neutral, 2) Disagree and 1) Strongly Disagree

	5 (SA)	4 (A)	3 (N)	2 (D)	1 (SD)
C1. Mobile networking system have enabled more capacity to collect data and increasing frequency of communication than previously possible in project implementation					
C2. Mobile networking system have played a significant role in collecting remote data by community members, beneficiaries and other stakeholders involved in a project.					
iv.) Mobile networking system assist in communicating different and varying data types. Like images, videos and geographical information.					
v.) Mobile networking system are reducing cost of communication for projects hence assisting project performance					
vi.) Mobile networking system reduces the rate of errors in communication by providing a variety of ways of communicating					

**Part D: Influence of Information Database System**

9. Rate whether you agree that information database systems influence project performance. Base your answer on a five point Likert scale: 5) Strongly Agree 4) Agree 3) Neutral, 2) Disagree and 1) Strongly Disagree

	5 (SA)	4 (A)	3 (N)	2 (D)	1 (SD)
D1. Information database system focuses on enhancing the participation information storage and quick retrieval					
D2. Information database system enhances increase of information retrieval though out the project cycle from planning, through design and implementation					
iv.) Information database system integrated in project processes help stakeholders' access information, markets, healthcare, financial documents.					
v.) Information database system enable generation of backups and these backups can be stored to prevent project data loss					
vi.) Information database system assist on project reporting activities, visualization of data for course correction and resource allocation.					

**Part E: Project Performance**

10. Rate whether you agree or disagree that M&E technical management systems influence project performance. Base your answer on a five-point Likert scale: 5) Strongly Agree 4) Agree 3) Neutral, 2) Disagree and 1) Strongly Disagree

	5 (SA)	4 (A)	3 (N)	2 (D)	1 (SD)
E1. Well performing project is one that stays within the scope and was implemented within the time frame					
E2. A project that delivers what was prior agreed upon and meets stakeholders' interests is considered as a successful project.					
iv.) M&E technical management systems help manage project risks and hence increase the probability of a project performing well					
v.) Quality of the deliverables from projects is a key determinate of the projects performance which M&E technical management systems enhances					
vi.) The organization aims to have projects stay within budgets and M&E technical management systems supports this.					

.....**Thank you for your participation**.....

## APPENDIX III: ANU LETTER OF RESEARCH AUTHORIZATION



AFRICA NAZARENE UNIVERSITY

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24<sup>th</sup> Feb 2023

E-mail: [researchwriting.mba.anu@gmail.com](mailto:researchwriting.mba.anu@gmail.com) / [monitoringandevaluation@anu.ac.ke](mailto:monitoringandevaluation@anu.ac.ke)

*Our Ref: (21S01DMME009)*

The Director,  
Ministry of women Affairs,  
Maiduguri, Borno state.

Dear Sir/Madam:

**RE: RESEARCH AUTHORIZATION FOR: Mr. Oluwafemi Samuel David (21S01DMME009)**

Oluwafemi Samuel David is a postgraduate student of Africa Nazarene University in the Master of ARTS IN MONITORING AND EVALUATION (MME) program.

In order to complete his program, Oluwafemi David is conducting a research entitled: **Technical Monitoring Management Systems and Performance of Child Protection Projects: A Case of Non-Governmental Organizations in Borno State, Nigeria**

Any assistance offered to him will be highly appreciated.

Yours Faithfully,

Dr. Wanjiru Nderitu

MME, Coordinator,

School of Business Studies, Monitoring and Evaluation Coordinator.

Africa Nazarene University.



**APPENDIX IV: MINISTRY OF WOMEN AFFAIRS (MOWA) LETTER OF RESEARCH AUTHORIZATION**

**MINISTRY OF WOMEN AFFAIRS AND SOCIAL DEVELOPMENT**

*All Correspondence to be addressed to:  
The Honourable Commissioner*

**Our Ref:**

**Your Ref:**



Musa Usman Secretariat  
P.M.B 1222  
Maiduguri  
Tel: 232416,232355

19<sup>th</sup> May 2023

**Subject: Letter of Authorization to Conduct Research in Borno state.**

Dear Office of Research Integrity – Africa Nazarene University:

This letter serve as authorization for Africa Nazarene University, Kenya, that Oluwafemi Samuel David has been authorized to conduct the research study “*Technical Monitoring Management Systems and Performance of Child Protection Projects; A Case Of Non-Governmental Organizations In Borno State, Nigeria*”.

The Ministry acknowledges that it has reviewed the request letter presented by the researcher and authorizes the research study to proceed. Should we have any concerns or require additional information, we will contact the researcher and/or Africa Nazarene University.

Sincerely,