ST. MARY'S UNIVERSTIY

SCHOOL OF GRADUATE STUDIES

ASSESMENT OF MONITORING AND EVALUTION PRACTICE AND CHALLANGES: A CASE OF CAPACITY DEVELOPMENT FOR HEALTH PROFESSIONALS AND BIOMEDICAL TECHNICIANS PROJECT AT GIZ

A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY, SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ART IN PROJECT MANAGEMENT

BY

FREZER MENGISTU LEMMA

IDENTIFICATION NUMBER: SGS/0610/2011A

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JUNE, 2020

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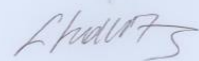
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DEDICATION

This thesis is dedicated to my late beloved father, Mengistu Lemma, and my lovely mother Dawiti Tolosa. And also to all my families and supporting friends who were with me in all my way.

DECLARATION

I, the undersigned, declare that this thesis is my original work; prepared under the guidance of Abdurezak Mohammed (Ph.D.). All resources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

ENDORSEMENT

This thesis has been submitted to St. Mary's university, School of Graduate studies for examination with my approval as university advisor.

Abdurezak Mohammed(Ph.D)

Advisor   Signature

St. Mary's University, Addis Ababa   **June, 2020**

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ACKNOWLEDGMENT

LIST OF ACRONYMS AND ABBREVIATIONS

BS: Baseline Study

CaNBMET: Capacity building for biomedical technicians and health professionals

EPSA: Ethiopian Pharmaceuticals Supply Agency

EFMOH: Ethiopian Federal Ministry of Health

EFMOFEC: Ethiopian Federal Ministry of Finance and Economy Commission

HTM: Health-care Technology

ICT: Information and Communication Technology

GIZ: Deutsche Gesellschaft für Internationale Zusammenarbeit

M&E: Monitoring and Evaluation

MEMS: Medical equipment management system

TVET: Technical and Vocational Education and Training

USAID: United States Agency for International Development

WHO: World Health Organization

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Abstract

The practice of project monitoring and evaluation in Ethiopia faces a significant gap. Researches show that, although government and donors funded projects intensively apply project monitoring and evaluation the practice is not producing satisfactorily the required benefit. This paper aims to assess the practice of monitoring and evaluation and the challenges hindering the process at GIZ. The research employed a mixed method of research (with a descriptive approach) to analyze the data collected through close-ended questionnaires, open-ended questions, and secondary data.29 participants were selected to respond to the questions. And the response rate was 93.1%. The result shows GIZ applies a practice of baseline studies, M&E planning, and allocates an adequate amount of budget for the M&E process. The overall result indicates the M&E practice at GIZ (capacity building for biomedical technicians and health professionals) is effective. But there are limitations in managerial commitment and effectiveness in monitoring and evaluation process. Besides, failure in selecting indicators for evaluation is challenging. Thus it is recommended that the indicators for evaluation should be selected properly. Further, the effectiveness and commitment of the management should be improved for a better result. For further research, the impact of the project on the medical equipment management system of the institutions can be assessed. Also, other factors that affect the monitoring and evaluation process are not included in this research can be evaluated. Plus other knowledge areas of project management can be reviewed concerning project success.

Key words: Monitoring and Evaluation, Medical equipment, Baseline study, Midterm and End term evaluation.

CHAPTER ONE

INTRODUCTION

1.1. Background of the study

This chapter discusses the basis of the study including the background of the study, the background of Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Statement of the problem, the research questions, and objectives of the study, definition of terms, and significance of the study and finally, delimitation of the study was discussed.

Among the major success factors of a project, project monitoring and evaluation contribute highly to project success. In contemporary project management M&E is not seen as an only management tool for project appraisal, identifying and correcting in planning and implementation, but as a requirement for success. (Armstorng & Baron, 2013) PMBOK presents the importance of project monitoring and evaluation in project success. Despite the increase in the understanding and implementation of project monitoring and evaluation, projects are still facing failure (Project management institute, 2008).This is also true that for medical equipment management improvement related projects Ethiopia. In recognition of the benefits these project has to the overall improvement of healthcare delivery, the practice and challenges in the M&E process of the project will be analyzed.

According to world health organization medical devices are used to ensure access to safe, effective, and high-quality health services to prevent, diagnose, and treat disease and injury, and assist patients in their rehabilitation (WHO, 2011). Medical devices are health care innovations that enable effective treatment using less invasive techniques, and they improve healthcare delivery and patient outcomes (Julie, Jeffery, & Rana, 2014). Now a day without medical devices healthcare delivery is nearly impossible. Therefore, to have the

necessary benefits of medical device the health-care management system should function properly.

However poor health-care technology management causes resource loss, and physical and mental damage on the patients and users. Additionally, it can also cause death to the patients. Researches on the area show that poor medical equipment management causes serious risk for the staff and patients. (Estevão Maria, Eloísa Helena, & Ester Eliane, 2017) As a result, it needs serious attention from all the concerned stakeholders. Studies show that 70% of medical equipment and hospital equipment is not functional due to several factors. Due to this, the health-care delivery system of the countries is highly affected, in turn causing patients to suffer because of the service.

In the case of Ethiopia, there are governmental and private organizations working in medical equipment management. But they are limited and they operate separately. Besides due to several factors the management is not strong. Therefore, healthcare delivery of health institutions is restricted due to poor medical equipment management system in the country. Even though the ratio of the medical devices is low for the population of the country, around 61% of the existing medical devices are not functional at any given time. (EFMOH, 2017) There are researches in Ethiopian based organizations assessing the practice and challenges in project monitoring and evaluation. But there is no research conducted; in order to assess medical equipment related projects and this project specifically.

The project by GIZ focuses specifically on commissioning a supra-regional biomedical workshop, improving vocational training and development of a national policy related to the medical device. This project was launched in March 2018 and has three-year duration until February 2021.

Therefore this research will focus on the practice of GIZ's project monitoring and evaluation practice, which is one of the major success criteria for a project. Hence the paper will identify the challenges and the possible solutions in project monitoring and evaluation practice of the organization.

1.2. Background of GIZ GmbH

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH is a German organization working on behalf of German federal ministry for economic cooperation. Since 1964 GIZ has been performing different projects in Ethiopia. German development cooperation currently focused on three priority areas. These are labor market-oriented education and training, sustainable land management, agriculture, and food supply and biodiversity. Besides, these activities GIZ also works on urban governance and decentralization, quality infrastructure, renewable energies, and conflict management together with civil peace service. Moreover, GIZ supports vocational training adapted to labor market needs, fund management, development partnership with the private sector and stakeholder dialogues are also the focuses of the organization.

GIZ is the implementing partner, working with the Ethiopian ministry of health on capacity development for health professionals and biomedical technicians, which was launched in February 2019. Germany is supporting the Ministry of Health and the Ministry of Science and Higher Education to strengthen Technical and Vocational Education and Training (TVET) in biomedical technology, with 5.5 million Euros from funds earmarked for health systems strengthening in Africa.

GIZ performs three major activities target to improve the framework conditions for practice-oriented training for health specialists and biomedical technicians. The first activity is improving vocational training. In this activity the organization targets on improving the availability and quality of training given to biomedical technicians and health professionals. The organizations in the project are Tegbare-id Polytechnic College in Addis Ababa and, at the regional level in Nekemte, Specialized Hospital, Health Science Colleges, and the Polytechnic College.

The second major activity is commissioning a supra-regional workshop. In this activity, the project upgrades regional workshops for medical equipment maintenance. Besides, the project expands the workshop's capacity to train health staff and biomedical technicians. Thus in order to enabling maintenance of more medical de vices both on-site and in health facilities. Over time, this

will reduce the need for repairs as more health staff is trained in the correct use of equipment. Plus the necessary tools and equipments for medical equipment maintenance are also provided by the organization. The third activity is participating in the development of a national strategy on biomedical equipment management strategy, inventory management, and monitoring system.

1.3.   Statement of the problem

The success of a project is essential for the organization and the beneficiaries of the project. Even though researches show project monitoring and evaluation increases the efficiency of planning, management, and implementation of a project, little emphasis is given for project monitoring and evaluation as success criteria. Literature indicates proper M&E practices have a significant effect on the successful delivery of projects. In contrary projects that lack proper evaluation, the framework tends to fail. Projects in developing countries, in Africa especially, are complicated due to lack of skill in project management, political and community or societal demands. Most of these projects are government or donor-funded projects (Charles, Kamau, & Human Bin Mohammed, 2015). Even though proper M&E contributes to project success, there is still a high rate of project failures in Ethiopia.

Donor or government-funded projects have intensive rules in the existence of monitoring and evaluation in the projects. But the projects still fail despite of the existence of project monitoring and evaluation. This shows there is an issue in the effectiveness of the project's monitoring and evaluation practice. As literature indicates some factors hinder the practice; like lack of skills and knowledge of staff, incorrect methodology or approach and lack of management support.

World health organization's development of medical device health policy guidelines states that a medical device plays the most important role in the prevention, diagnosis, and treatment of diseases. Also, the health care system is highly dependent on health-care technologies (WHO, 2011). In accordance, health care technologies need effective and efficient management. Hence ministry of health and international organizations is working on medical device management improvement projects in Ethiopia. But the projects are not generating the expected results.

Literature recognized the major challenges in medical equipment management that should be resolved. These challenges include policy, strategic management, and planning and technology assessment and selection, enabling inputs in HTM and installation and commissioning, training, and skill development and procurement. GIZ's CaNBMET project aimed at supporting the eradication of some of the challenges in the field. An effective and efficient project M&E play an important role in project success.

A STEEP (Safe, Timely, Effective, Efficient, Equitable, and Patient-Centered) criterion is the most common method used to assess the quality of health care delivery. But researches show that most developing countries have a low-quality healthcare delivery system .Despite of a huge investment in the sector, medical device management is a challenging portion of the healthcare system. Consequently, the health-care system and the population in many developing countries are suffering from the accessibility of health-care technologies. Also, due to the lack of proper management of the existing medical equipment the system is challenged to fulfill the demand. (Solomon, Winifred, & Tse, 2018)

Ethiopia is also highly suffering from the availability and proper management of health-care technologies. Sixty-one percent (61%) of medical equipment at any level of the health tier does not work properly at a given time (EFMOH, 2017). Even though the country invests billions of dollars in the annual procurement of medical devices, the management is so poor. Ethiopian Pharmaceutical supply agency has procured medical devices, that worth 2.8 million dollars, in 2008 E.C. But the service and utilization management after the acquisition is highly challenged by enormous factors. Due to these factors, the management of medical equipments has been weak in Ethiopia (EFMOH, 2017). Moreover, a medical device supporting projects in Ethiopia is very limited; by local and international organizations. Unfortunately, the projects are not producing the expected benefit. Even though numerous factors hindering the project success, lack of efficient and effective project monitoring and evaluation contributes a lot.GIZ projects in also have practical gaps in the process of monitoring and evaluation. There is no research conducted on this specific project and the practices of monitoring and evaluation and on the existing challenges at the organization.

This research will focus on the assessment of the monitoring and evaluation practice of the Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH project. The project selected for this study is "capacity development of health professionals and biomedical technicians in Ethiopia". Also, the paper aims to locate the major challenges in project monitoring and evaluation practices at that specific project. Therefore it is important that to assess the currently enrolled projects that support the health-care management system. The research will have a case study approach and will have both qualitative and quantitative approaches, mixed- method, to answer the research questions.

1.4. Research questions

1.4.1. How are project monitoring and evaluation practiced in Capacity Development for Health Professionals and Biomedical Technicians project at GIZ?

1.4.2. What are the main challenges GIZ facing in monitoring and evaluation process in Capacity Development for Health Professionals and Biomedical Technicians project?

1.5. Objectives of the study

1.5.1. General objective

The aim of this paper is to study the project monitoring and evaluation practice of Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH of capacity development for health professionals and biomedical technician project.

1.5.2. Specific objective

- To assess the project monitoring practice of CaNBMET project at GIZ.
- To assess the evaluation practice of CaNBMET project at GIZ.
- To assess the existing challenges on monitoring and evaluation CaNBMET project at GIZ.

1.6. Definition of Terms

1.6.1. Conceptual definition of terms

A guide to the project management body of knowledge (PMBOK®) defines a project as a temporary endeavor undertaken to create a unique product, service or result. (Project management institute, 2008)

Program is a group of related projects managed in a coordinated way to obtain benefits and control not available from managing them individually. (Project management institute, 2008)

Monitoring is a systemic and continuous process of collecting, analyzing and using of information for the purpose of management and decision making. (EMOFEC, 2008)

Evaluation a process that attempts to determine, as systemically and objectively as possible, the achievement of results in the light of relevance, efficiency, effectiveness, impact and sustainability of activities. (EMOFEC, 2008)

Project life cycle is a collection of generally sequential and sometimes overlapping project phases whose name and number are determined by the management and control needs of the organization or organizations involved in the project, the nature of the project itself ,and its area of application.

Indicators: an indicator is said to be a quantitative standard of measurement or an instrument which gives us information.

Input: This includes the resources that are available or allocated for the project. Input resources may be natural, human, and financial, depending upon the nature of the project. For example, funds allocated, human resources deployed, laptops allotted etc.

Activities: Activities are actions undertaken using the resources. In simpler terms, this is the work performed that converts inputs into outputs.

Outputs: Outputs are the immediate effect of the activities of a project. Outputs are also defined as the short-term results and often form the deliverables of the project.

Outcomes: The mid-term results likely to be achieved from outputs are called outcomes. Outcomes are generally the objective which the project aims to achieve.

Impact: The final desired goal or the macro level goal that the project envisages to achieve is defined as its impact. Impact is what the project aims to contribute towards rather than trying to claim that it is what it would achieve by itself.

Health technology defined as "the application of organized knowledge and skills in the form of devices, medicines, vaccines, procedures and systems developed to solve a health problem and improve quality of life. It is used interchangeably with the term health care technology." But in this paper the terms refers only maintainable hardware devices excluding medicines, vaccines, and procedures.

Medical device is "an article, instrument, apparatus or machine that is used in the prevention, diagnosis or treatment of illness or disease, or for detecting, measuring, restoring, correcting or modifying the structure or function of the body for some health purpose (WHO, 2011)

Medical equipment is "Medical devices requiring calibration, maintenance, and repair, user training, and decommissioning activities usually managed by clinical engineers (WHO, 2011).

1.7.   Significance of the study

This study will have the following significance on project monitoring and evaluation process.

- Presents a practice of project monitoring and evaluation in the organization.
- Used as an information for future programs in the area.
- This research can be used as a secondary source of data for future studies in the area.

1.8.   Delimitation/Scope of the study

GIZ has different projects in Ethiopia. But the research selected capacity development for health professionals and biomedical technicians project,

specifically. Therefore, this study will be limited to the project which focuses on improving medical equipment management.

1.9. Organization of the Study

This study is composed of five chapters. In chapter is the introduction of the paper presented. It includes the background of the study, the background of the organization, statement of the problem, the objective of the study, the significance of the study, definition of terms and scope/Delimitation, and limitation of the study. The next chapter discussed a review of related literature regarding the topic of the study. Then the research methodology and methods used were compiled in the third chapter. Chapter four presents the data analysis results and their interpretation. Finally, in line with the data analysis and interpretation in chapter four, the last chapter presents the summary, conclusion, and recommendation.

CHAPTER TWO

LITERATURE REVIEW

2.1. Overview

The Twenty- first century is the age of technology. Everything is getting automated. This is also true for the health sector. The health care delivery system is highly dependent on technological products and systems. Even though, technology made the service much easier than before, it also brought several risks to the sector. These risks can range from simple damage to the death of users and patients. Besides to have the maximum benefits from medical equipment concerns should be given for the proper management of devices. Ethiopian government and partners are investing to fulfill the demand. In contrary limited numbers of projects are implemented in the sector. Besides, the projects fail for a variety of reasons. In this study project M&E, as success criteria, will be the focus.

2.2. Theoretical Literature

2.2.1. Project Monitoring

Monitoring is defined as the concurrent process of tracking the implementation of activities of the project and attaining its planned outputs (Singh, chandurkan, & Dutt, 2017). From the view of Herro et. Al. (2012, continuously implementing monitoring ensures that the implementing staff should keep the project activities on schedule, they should review and update the project plan and costs as necessary and they should review timelines and deliverables, which will help clarify any differences that are not in line with the original project plan (Herro, et al., 2012). The Logical Framework, the implementation schedule, activity schedules, and project budget provide the basis for this monitoring. There are several different levels of monitoring, each related to what kind of information is relevant, and the regularity of monitoring. (European Comission Civil Society Fun in Ethiopia, 2017)

Progress monitoring is one of the common approaches in project monitoring. In this approach, the project progress is monitored compared to the objectives and target milestones of the project. It is mostly performed during the project implementation intermittently. Whereas in the process monitoring is the process and activities, which are undertaken in the project implementation, are monitored. Here the focus is not only on the achievement of the milestone rather it focus on the quality of the implementation process.

2.2.2. Project Evaluation

Evaluation is defined as systematic research to see if a programme can achieve its intended outcomes and impacts. Evaluation is done firstly to see whether the envisaged objectives and goals have been achieved or not, and secondly, to see whether the achievement is because of the project interventions. (Singh, chandurkan, & Dutt, A practitioner's manual on Monitoring and Evaluation of development projects, 2017)

Project Evaluation is an assessment, as systematic and objective as possible, of an ongoing or completed project, program or policy, its design, implementation, and Results. Therefore, it is expected that the relevance and fulfillment of objectives, developmental efficiency, effectiveness, impact, and sustainability of a project can be determined using evaluation result. Besides evaluation should provide information that is credible and useful, enabling the incorporation of lessons learned into the decision-making process of both recipients and donors. (European Comission Civil Society Fun in Ethiopia, 2017)

2.2.3. Benefit of monitoring to project success

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2.2.4. Monitoring and evaluation practices

Monitoring and evaluation practice are the useful guide contributing in improving project performance. These practices are widely exercised by practitioners as an effective way to implement M&E in projects (Webb & L.Elliot, 2000).

The practice of M&E involves monitoring and evaluation planning, monitoring and evaluation framework, M&E budget, M&E specification and frequency (MESF), ICT usage (ICTS), Midterm and end term evaluation (MEE) and Role of external evaluators (REE).Baseline data collection which is derived from the basic information gathered about the project. (Estrella & J.Gaventa, 2010). The data collected will be used to compare for assessing the overall effect of the project.

M&E planning is the second practice. M&E planning involves resource resources of budget, capacity, feasibility, timeline and ethics. The third practice discussed by Muzinda M&E structural framework. M&E structural framework is targeted at identifying the reasons behind performance measurement and project elements, how related they are, and their underlying fundamentals (Muzinda, 2007).The next practice is M&E budget. (Kelly & B.Magongo, 2004).For the project monitoring and evaluation to be efficient and effective adequate amount of budget is necessary.

The fifth practice as discussed by (L.McCoy, L.Ngari, & Krumpe, 2005), monitoring and evaluation activities should be properly scheduled. M&E scheduling is highly important so that each activities are carried out with the

knowledge of the project manager. And also from the schedule the frequency of data collection can be specified. (Gyorkos, 2003)Stated that a clear specification should be made on how often M&E data collection should be done. Moreover stakeholders should be involved the process. The involvement of stakeholders creates sense of ownership of a project. Then ICT usage is stated as the seventh practice. Due to the growth in technology usage, project M&E is also supported by information and technology, which increases the benefit of M&E for the project. The usage of computer and computer aided programs increases the efficiency and performance of project M&E (Kelly & B.Magongo, 2004) .

Midterm evaluation is the other practice. This practice helps to appraise the output of the project in relation to the invested inputs of the project. (Gilliam, et al., 2003).Therefore using midterm evaluation the project impact can be measured and how this contributes to the general objective of the project. (Gyorkos, 2003). Utto suggests there should be documentation of lessons from subsequent projects and these lessons should be shared among the staffs of the project. (Uitoo, 2004)

The last practice is the role of external evaluators. In this practice, according to the need the findings of the M&E process should be forwarded to all stakeholders. Donors take it in the form of report and benefices are informed while for the internal customers (Staffs) the results improve their implementation practices and strategies. (Kissi, et al., 2019)

2.2.5. Monitoring and Evaluation Approaches

Among the various factors that affect the success of a project, monitoring and evaluation are given less emphasis by project managers and other stakeholders. M&E team may be a very important tool in ensuring that projects are being implemented within the confines of achieving business objectives. M&E team may be a very important tool in ensuring that projects are being implemented within the confines of achieving business objectives. In order to achieve this value for the organization, the M&E team should employ an approach or a combination of approaches which suits the organization and/or the projects being monitored and evaluated. Literatures indicated numerous approaches of project monitoring and evaluation. These approaches are followed by different

organization in order to track the progress of their project and evaluate the expected benefits of their programs.

The project approach used for monitoring and evaluation of project works influence the effectiveness of a project. Literatures identified a variety of approaches used for tracking, reviewing, and regulating the progress to meet the performance objectives defined in the project management plan. According to Stem the approaches used to monitor and evaluate a project includes basic research; accounting and certification; status assessment; and effectiveness measurement. (Stem, Margolius, Salafsky, & Brown, 2005) ; (Abdul-Rahman, Wang, & Muhammed, 2011); (Alotaibi, 2011); (Mladenovic, Vajdic, Wundsch, & Salaj, 2013); (Alhyari, Alazab, Venkatraman, Alazab, & Alazab, 2013).Whereas Mladenovic presented private-public partnership projects into two layer approach. In this approach projects are evaluated from the perspective of profitability for the private sector, effectiveness and value for money for public sector, and level of service for users. Logical frame work (Log frame) is also another commonly used approach for project planning and evaluation. Despite the common use of log frame, there are many critics on the approach. Hummel brunner stated it is commonly used by many organizations in contrary to the critics. According to Hummel brunner simplicity, efficiency in data collection, recording and reporting are the benefits of the approach. Earned value analysis (EVA) is an approach which has flexibility, accuracy and adaptability for complex project. Balanced score card has four perspectives. These are the financial perspective, customer perspective, Internal Business Process, and Learning &Growth. (Alhyari, Alazab, Venkatraman, Alazab, & Alazab, 2013)A other approach includes stochastic methods, Fuzzy logic model, and miscellaneous methods.

In addition to the discussed approaches and methods of project monitoring and evaluation. There are also other perspectives on project monitoring and evaluation approaches and methods. The approaches used by organizations to M&E the progress and benefits of their projects are discussed below.

In participatory M&E, the monitoring and evaluation is performed with the concerned stakeholders in the project. These stakeholders share control over the process, content and activities of the project M&E. Besides the stakeholders also

involve in taking corrective measure if any variation from the preset targets is observed during the M&E process.

Experimental design involves two groups of people who will receive the intervention (treatment group) and who will not receive the intervention (control group). Then the project will evaluated in comparison with the control group.

Pipeline evaluation is applied for programs that are implemented in different phases, which have nationwide or universal coverage. The target is found out if there is any delay in the project implementation, using treatment and control groups to compare with the next project implementation in next phase of the project.

Quasi-experimental Design is another type of experimental type of evaluation in which the allocation to treatment and comparison groups is not randomized. Mostly it is applied when the progrmme intervention area is pre-decided. The quasi- experimental design used depends upon the type of progrmme, the stage of progrmme implementation, data availability and resources available for evaluation.

Difference in difference (DID) compares the change in outcome over time between the treatment group and the comparison group. In a situation where the progrmme implementation area is pre-decided but the progrmme has not started, DID can be used as a powerful statistical tool to measure and attribute the impact of the progrmme to the intervention. Difference of difference design require two cross sections of data, viz., the baseline or the pre-progrmme data for both the treatment and the control group and the post-progrmme data for the treatment and the control group.

Propensity Score Matching involves using statistical techniques to construct an artificial comparison group which is comparable in essential characteristics to the treatment group. Both groups should be matched on the basis of observed characteristics that are believed to influence project outcomes. It can be rightly said that matching is as good as the characteristics used for matching (Gertler, Martinez, Patrik Premand, Rawlings, & Vermeersch, 2016).This method is applied in the context of almost any programme assignment rule, as long as there is a group that has not participated in the programme. Matched comparison

groups can be selected before project implementation (prospective studies) or afterwards (retrospective studies).

The Regression Discontinuity (RD) design is used to evaluate programmes in which an index or a continuous variable is used to decide the eligibility of participation in a programme. In such programmes, all potential participants are ranked based on a continuous index or variable and the eligible participants are selected based on a cut-off point.

The instrumental Variable evaluation design is used to evaluate programmes which have universal coverage and voluntary or open enrolment. For such programmes, the programme administrators do not have control over who will and who will not participate in the programme. Comparing people who have enrolled in the programme and those who did not enroll in the programme is not appropriate for attributing the impact, as both these sets of people are not similar. There are some endogenous factors like motivation, talent, access to information, opportunity cost etc., because of which participants who enrolled in the programme and those who did not enroll in the programme are different.

Non-Experimental designs are impact evaluation designs that do not include a matched comparison group. Since development programs are escalating highly, it is difficult to apply conventional designs like experimental and quasi-experimental designs. In situations when the development programmes are complex and it is not possible to define a comparison group, non-experimental designs seem to be potentially the best possible and feasible designs that can be adopted (M . C. Richard, 2000).

Comparison matrix is another approach used for project evaluation. As discussed above, each impact evaluation design has its own merits and demerits. It is important for an evaluator to understand the project and the present condition and then consider the availability of critical resources like time, data, and financial resources. Based on these factors, an evaluation expert can choose the best possible design (Singh, Chandurkar, & Dutt, 2017).

2.2.5. Challenges in project monitoring and evaluation

According to Tengan Callistus and Aigbaboa challenges related to project monitoring and evaluation can be leveled in three classes. These are technical level challenges, organizational level and project level challenges. In technical level, week linkage between planning and M&E, and lack of comparable operational definitions are stated. Project based challenges include on the effective planning for M&E at the management level, limited financial resource, approach implemented for data collection, challenges in data collecting and analysis and communication are the common challenges at project level (Tengan & Aigbavboa, 2016).

Guidelines for monitoring and evaluation of public sector projects by MOFED listed challenges that exist in project monitoring and evaluation. These factors are inadequate attention to monitoring and evaluation during project design and subsequently insufficient resource allocation for the same monitoring and evaluation units are usually under-staffed or staffed with insufficient skill and experience. Then unclear role and responsibilities of the monitoring and evaluation units is the other challenge projects facing in Ethiopia. And also Lack of commitment. Project managers and concerned professionals consider monitoring a form of data collection for writing report. M&E system initiated by the donors are sometimes seen collapsed following the termination of donor assistance. (EMOFEC, 2008)

Monitoring system that has been introduced too hurried, and hence deficient with relevant issue are also challenging the process. Besides over ambitious monitoring and evaluation system that demands collection of too much information and poor quality and irrelevant information produced through monitoring, such information could focus on finical and physical aspects of the project, while ignoring project outreach, effect and impact are affecting monitoring and evaluation negatively. Lack of feedback/insufficient and untimely feedback is also the challenges on many projects. Other challenges stated on the guideline includes: overlooking the monitoring and evaluation needs and potentials of stakeholders (like beneficiaries, community based and other local cooperating institutions), Lack of integration and cooperation

between project M&E and project management are challenges in the area. Plus poor accountability for failures is also affecting the practice. Differentiation of monitoring from evaluation activities with being contracted out. This leads to monitoring and evaluation not being an integrated system for improvement – oriented critical reflection. In addition problem of mainstreaming lessons drawn monitoring and evaluation findings of previous periods are not often considered in the design of new projects. (EMOFEC, 2008)

2.2.6. Challenges in medical equipment management system

There are many challenges in managing health-care technology management systems in developing countries. A research conducted in Benin identified five major challenges that should be resolved to improve the management. These are policy, strategic management and planning, technology need assessment and selection. (Thierry, et al., 2017).The major causes are primarily the technologies are imported from developed countries. Secondly a high level of bureaucracy renders the system. Furthermore, administrative misconduct and corruption are also the factors that affect the system

2.3. Empirical Literature

According to Serawit, the challenges on Ensaro Wayu project was lack of sufficient budget, donors different monitoring and evaluation reporting format, lack of feedback, lack of management support and inadequate number of human resource. In contrary, the project stakeholder participation and lesson learning and collaboration between different stakeholders were the strengths of the project monitoring and evaluation practice. (Serawit Neberegn, 2017) A study conducted by Abera on the practice of monitoring and evaluation of development projects at Addis Ababa bureau of finance and economic development, concluded the M&E practices such projects are not studied adequately. The finding of the research showed that, although the project has the strength of a good evaluation indicators and a practice of conducting evaluation on the predetermined frequency, the practice of monitoring and evaluation of development interventions in Ethiopia has the following challenges; such interventions have no separate plan and separate budget dedicated to M&E activities. In additions the involvement of stakeholders in project M&E activities

is limited. Also these projects lack well qualified and experienced professionals or experts for the monitoring and evaluation process. (Regassa, 2017)

A study conducted in Botswana on the monitoring and evaluation practice of NGOs implementing HIV/AIDs projects; show that most of projects implemented by NGOs are not as effective as they are expected. There are many hindering factors contributing to the week project monitoring and evaluation process. These include lack of funding and lack of expertise. NGOs in Botswana lack the use of the recommended best practices of project monitoring and evaluation. According to the author for instance the projects do not exercise a qualitative indicator for the project evaluation (Mark, 2007).Alex et al. a research of comparison on feedback system, participatory monitoring and evaluation and logical framework of development interventions. Concluded that over engineered and complex monitoring system that are developed by top-down approach are not effective. The author recommends feedback can be used as manageable level and gives appropriate response to the beneficiaries. (Jacobs, Barentt, & Ponsford, 2010)

The overall objective of this study is to assess the monitoring and evaluation practice of GIZ projects in Ethiopia. In this study a practice presented by Ernest Kissi et al. will be used to assess the monitoring and evaluation process of the organization. The M&E practices presented by the author have ten major practices with a number of sub practices on each practice. (Kissi, Agyekum, Kofi Baiden, & Agyei nTannor, 2019)

The key findings of the review the well recognized approach of project monitoring and evaluation includes Baseline studies,monitoring and evaluation planning,monitoring and evaluation framework,monitoring and evaluation budget,M&E frequecy and specifiication,ICT usage,midterm and endterm evaluation,and the role of external evaluaors on the effective and efficient process of project M&E.

2.4. Conceptual Framework

As Kombo and Trombo defined conceptual framework is a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation. (Kombo & L.A.T, 2002) The conceptual framework of this study is constructed on the assessment of the approach used by GIZ for monitoring and evaluating it projects, specially its project on capacity

development for health professionals and biomedical technicians. In this study a practice presented by Ernest Kissi et al. will be used to assess the monitoring and evaluation process of the organization. The M&E practices presented by the author have ten major practices with a number of sub practices on each practice. The major practices are indicated in the figure below. This paper will try to find the challenges in monitoring and evaluation practice of the project. Therefore, the GIZ major activities will be assessed to find out the major challenges and recommended solutions for the challenges.
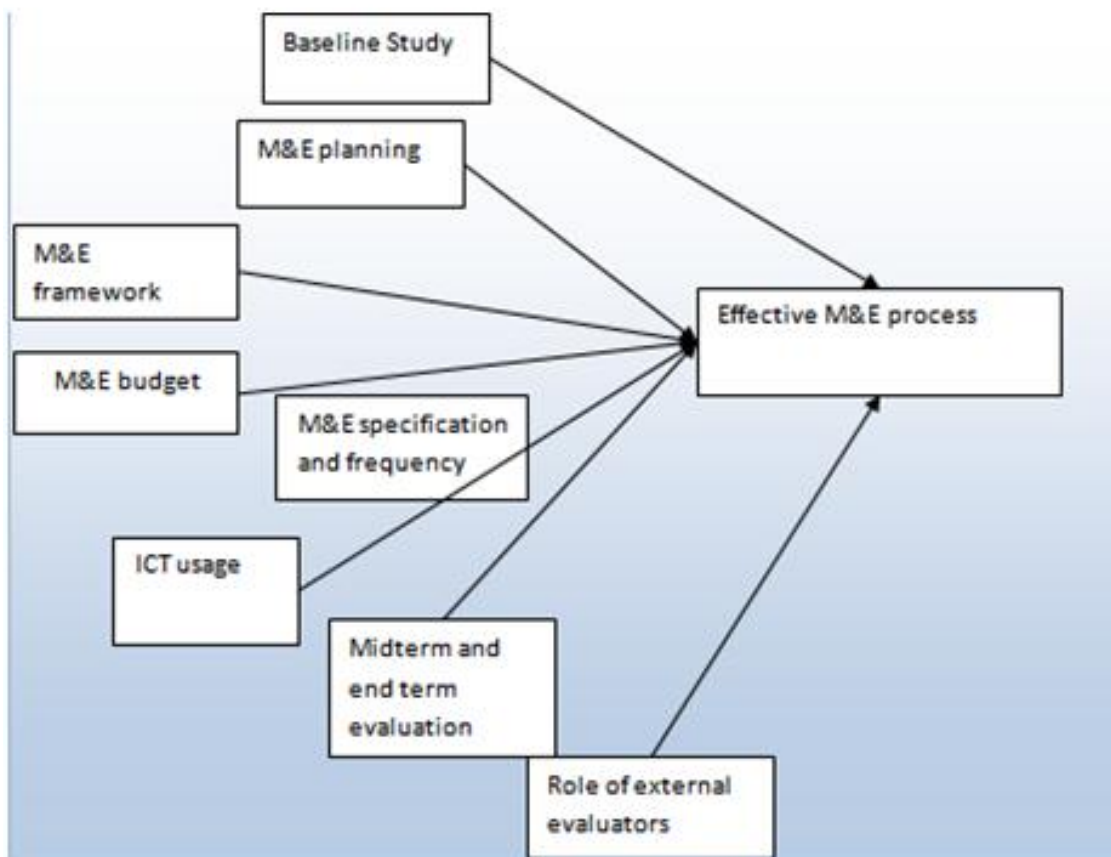
Figure 1: Conceptual framework of the research

Source: With modification from Taddese. M, (2019). Assessing Monitoring and Evaluation practice of UNDP: A case of conflict prevention and peace building project, Addis Ababa University, Addis Ababa, Ethiopia. Retrieved from http://10.6.20.92/xmlui/handle/123456789/19834

CHAPTER THREE

RESEARCH METHODOLOGY

3. Research design and Methodology

In this chapter, the research used throughout the study will be used will be discussed. According to Jhon Cresswell, the research framework includes philosophical worldview, research design, and the specific research approach or methods. A mixed-method of research design will be used in this research. (Creswell J. W., 2014)

3.1. Research design

John Adams et. al. (2007) stated the research design used as a blueprint to achieve the research aim. There are three research designs commonly used in researches. (John, Robert, Hafiz, & David, 2007)From the different research approaches, a descriptive research approach was used in this paper. Since this method examines the situation, in its current state .And it also involves identification of attributes of a particular phenomenon based on an observational basis or the exploration of the correlation between two or more phenomena. Therefore it enables us to examine the existing situation of the project monitoring and evaluation practices, and the existing challenges. It helped to assess the status of the projects M&E practice in the organization, the challenges that hinder the practice   were using descriptive design for the research. Besides, a mixed research method was used, which is a combination of qualitative and quantitative approach was used to answer the basic research questions raised (Williams, 2007). This method was used because it enables us to understand the problem in a better way than either approach alone. (Creswell, 2014)
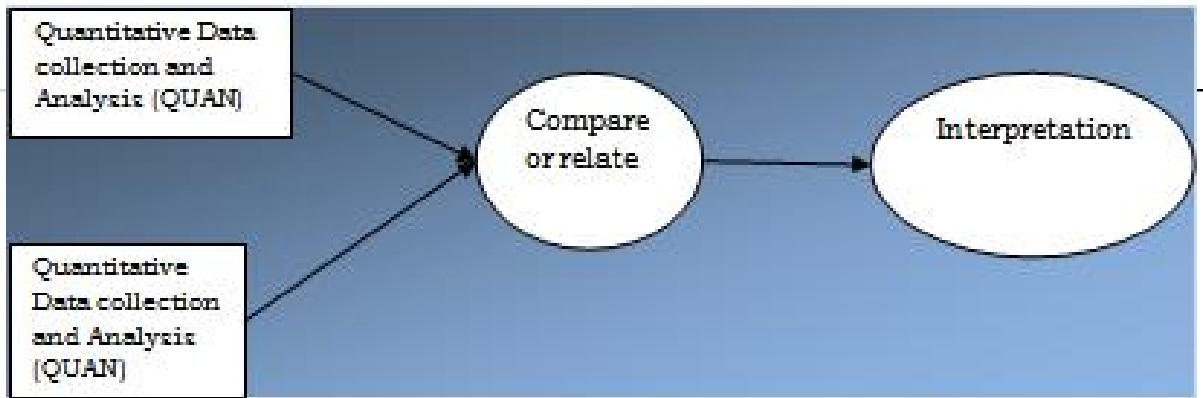
Figure 2: Convergent mixed method of data analysis (Creswell, 2014)

3.2. Sample and Sampling Techniques

Among the various techniques of sampling, purposive sampling is selected for this specific study. Purposive sampling is used because the participants need to know how one the field. There are 16 members of the CaNBMET project at GIZ. But the aim of this study is to assess only the practice at the CaNBMET project, all the project employees and employees at GIZ who are close to the project were selected. Thus, in order to get more accurate data 29 employees of GIZ projects involved in the study. The study area and the study population are few; there was no sample size determination. The respondents were project managers, project members, and staff of from GIZ GmBH working on other related projects. As well as employees in the project management system from the organization were involved in the study.

3.3. Source and tools/Instruments of data collection

The data for the research was acquired from primary and secondary data sources. For the primary data source, close- ended questioner and open-ended questions were used. As a secondary data source literature reports and other unpublished documents were used .In mixed research methods design both qualitative and quantitative data are collected. The qualitative data were collected using different instruments having open-ended and close-ended questions. For the primary category, a questioner with open ended questions and statements with Likert's scale was used.

3.4.   Procedure of data collection

In this study, explanatory sequential mixed method was used for data collection and analysis. Therefore, quantitative data was collected in the first then qualitative data was collected using questioner. Respondents from the GIZ project have responded to the questioner.
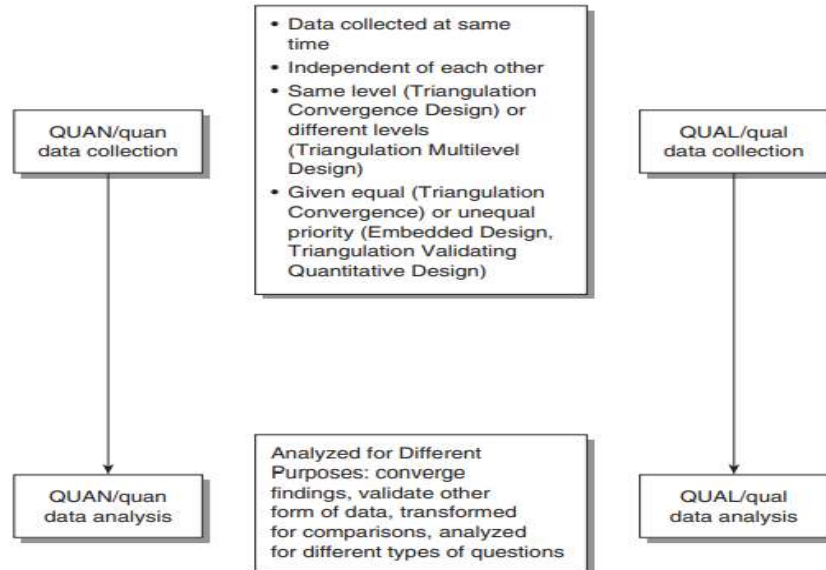
Figure 3: Data collection procedure source (Creswell, 2014)

3.5.   Reliability and Validity of the instrument

3.5.1.   Reliability

According to Sekeran, 2003 reliability measures stability and consistency across time and the various items in the instrument. It indicates the extent to which the instrument is free from error or bias. The closer the Cronbach's alpha to 1 is the higher the reliability of the instrument. Thus a scale is said to have a good reliability, if the Cronbach"s value is higher than 0.7. (Sekaran, 2003).As shown in the table below the Cornbrash"s Alpha for each item is presented. Cornbrash"s Alpha value is 0.852, 0.87, 0.715, 0.74, 0.945, 0.709, 0.71 and for the baseline study, M&E planning, M&E framework, M&E budget launching, M&E specification and frequency, ICT usage, midterm and end-term evaluation and role of external evaluators and major challenges in the M&E process respectively.

Table3. 1: Reliability of the instrument. Source own (Survey, 2020)

Items	Cronbach's Alpha	N of items	Overall Crobach's Alpha
BS	0.852	9	
MEP	0.87	7	
MEF	0.715	3	
MEB	0.74	6	0.803875
MESF	0.945	2	
MEE	0.709	5	
REE	0.71	2	
MCs	0.89	12	

3.5.2. *Validity*

Validity is used to measure the goodness of the measures and the accuracy of the results that can be obtained from the collected data. There are three broad validity tests: content validity, criterion-related validity, and construct validity. Content validity ensures that the measure includes an adequate and representative set of items that tap the concept. While Criterion-related validity tests when the measure differentiae individuals based on criteria it is expected to predict. The other form of validity test is construct validity measures to how well the results obtained from the use of the measures fit the theories around which the test is designed. Therefore, Validity of the instrument was done following these principles and in consultation the advisor feedback to minimize errors due to improper design elements question wording, sequence and adequate coverage of questions (Sekaran, 2003).

3.5.Methods of data analysis

Uma Sekaran stated getting a feel for the data, testing the goodness of the data and testing the hypothesis are the aim of data analysis. (Sekaran, Research method for buisness a skill build approach , 2003)In order to obtain answer for the basic research questions and to fulfill he specific research objectives, descriptive statistics (mean, median, frequency and percentage etc) was used to analyze the general information. The quantitative and qualitative data was analyzed using different method of analysis separately. The qualitative section of the data was analyzed using content analysis. The quantitative section of the

data is analyzed using mean, standard deviation, tabulation, graphs. The analysis was conducted using statistical package for social science (SPSS) version 20. The two (qualitative and quantitative) analyses were compared or related using side by side comparison technique.

3.6. Ethical consideration

The respondents were not forced to participate in the research. And every respondent was informed about the research topic and the expected goal of the research. Besides, the respondents were kept anonymous and there response is handled confidentially. They was also informed that their response will be analyzed scientifically to recommend the possible solutions for the research problem.

CHAPTER FOUR

RESULT AND DISCUSSION

4.1. Introduction

In this chapter, the research analysis and discussion of the monitoring and evaluation practice of GIZ's capacity building of health professionals and biomedical technician projects are discussed. The data obtained through questioner as well as secondary data from the project evaluation document was used in the analysis and discussion of the research. The data was analyzed based on the research objectives and questionnaire items

The primary data collected using questioner and interview was analyzed using Statistical Package for Social Science (SPSS) Version 20.Ninety (90%) of the total questionnaires was valid from the number of questionnaires distributed. But, most of the questionnaires were distributed using electronic medias due to COVID-19 outbreak in the world and country.

4.2. Findings of the study

4.2.1. Response Rate

According to Biemer et. al. (2003) response rates are considered to be the most widely used to compare statistics for judging the quality of surveys. It also indicates the extent to which the final set of data includes sample members. The response rate value can be obtained from the number of people with whom the data filled and returned the questionnaires divided by the total number of people in the entire sample, including those who refused to participate and those who were unavailable. (Biemer, 2003)The participants of the research were 29; from which 1 respondent did not return the paper and 1 questionnaire was not properly filled. Therefore, 27 questionnaires were correctly filled and returned. From this, the response rate was calculated which equals to 93.1 %.

Therefore the response rate 93.1% is categorized as excellent for analysis and reporting, (Mugenda & Mugenda, 2003).Accordingly a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of

70% and above is excellent for data analysis and for the conclusion in a research. (Mugenda & Mugenda, 2003)

4.2.2. Demographic Characteristics of Respondent

4.2.2.1. Gender

In the instrument of data collection, respondents were asked to indicate their gender. From the data, there are 43 % of female workers and 65% of the workers are male. Thus in the project, the number of female workers is low compared to male staffs.
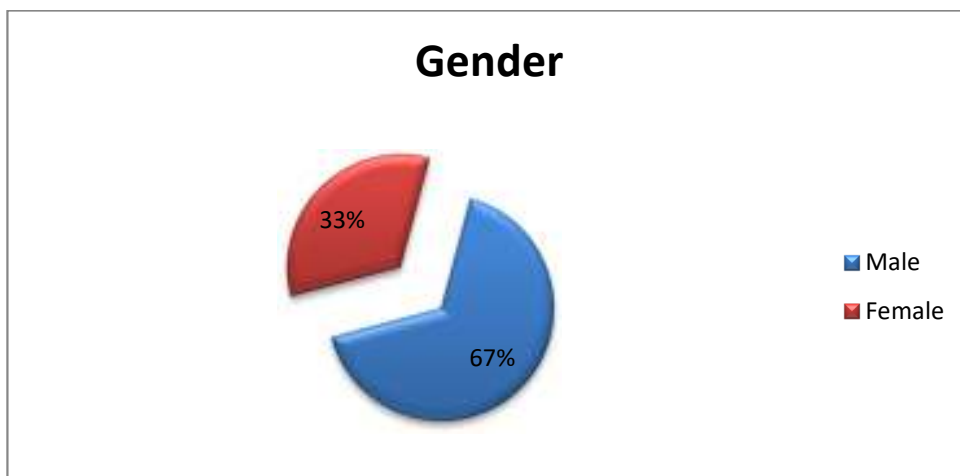
Figure4. 1: Gender percentage of the respondents

Source: Own survey (2020)

4.2.2.2. Age Group

According to the data collected, 21.2% of the participants are below 25 years of age, 42.9 % are 26 to 35, 21.4 % are between 36 to 50 years of age and 14.3 % of the respondents are above 50 years. From this majority of the employees are between the age of 26 to 35.It is concluded from that majority of professionals involved in the project are youths.
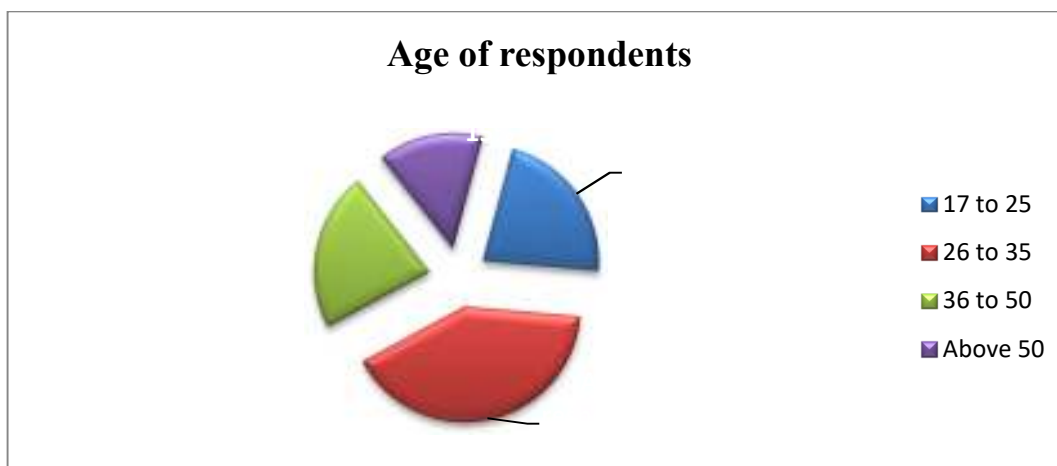
Age of respondents

Figure 4.2: Age of respondents

Source: Own survey (2020)

4.2.2.3. Work Experience of Respondent's in the project

The level of work experience of the respondents in the GIZ project is shown below. The result shows that 3% of the respondents had 6 and above years of experience in GIZ projects and involved in the project since the project started, and 48.5% of the respondents had 3 to 6 years experience and 48.5 % had below 3 years experience. This shows that 51.5 % of the respondents had above 3 years of experience in the GIZ projects. Therefore, respondents are experienced enough to review the project's monitoring and evaluation practice and to identify the changes they are facing in project monitoring and evaluation.

4.3. Data Analysis of how project monitoring and evaluation practiced in capacity development for biomedical technicians and health professionals at GIZ's

The participants of the research were asked to give their opinion on the monitoring and evaluation practice, challenges encountered and the possible proposed solution for the existing system. The respondents were given options on a rate of 5-point likert's scale with 1= Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5= strongly Agree.

The collected study data was analyzed using descriptive statics such as Frequency, mean and Percentage and standard deviation as shown below in the table.

Where: Frequency (f) = Number of respondents who agreed on the corresponding rating.

Mean = Average rating given by respondents.

Percentage (%) = Percentage of respondents to be agreed from total respondents

Standard deviation= tell how measurements for a group are spread out from the mean.

Table 4.1: Baseline studies data result of the project

Baseline studies	Frequency of respondents		Percentage	Mean	S.D
The Organization performs comprehensive BS before the implementation of project.	SD	0	0	4.037	0.9798
	D	3	11.1		
	N	3	11.1		
	A	11	40.7		
	SA	10	37		
	Total	27	100		
The project team designs the plan for performing the BS.	SD	4	14.8	2.4815	1.1559
	D	14	51.9		
	N	3	11.1		
	A	4	14.8		
	SA	2	7.4		
	Total	27	100		
The BS is done in accordance with the designed plan.	SD	7	25.9	2.7037	1.4091
	D	7	25.9		
	N	3	11.1		
	A	7	25.9		
	SA	3	11.1		
	Total	27	100		
Organization designs research materials for undertaking BS.	SD	1	3.7	3.1111	0.7510
	D	2	7.4		
	N	18	66.7		
	A	5	18.5		
	SA	1	3.7		
	Total	27	100		
There are adequate collections and capturing of data on project demands.	SD	0	0	3.1852	1.0014
	D	9	33.3		
	N	6	22.2		
	A	10	37		
	SA	2	7.4		
	Total	27	100		
Data are captured on project beneficiaries.	SD	2	7.4	3.5385	1.3922
	D	7	25.9		
	N	9	33.3		
	A	8	29.6		
	SA	1	96.3		

	Total	27	100		
Data are captured on the environment and impact of project on environment	SD	0	0	4.1852	1.0391
	D	4	14.8		
	N	0	0		
	A	10	37		
	SA	13	48.1		
	Total	27	100		
Data collected and captured are analyzed and results are reviewed.	SD	6	22.2	3.9615	1.18257
	D	0	33.3		
	N	9	40.7		
	A	11	96.3		
	SA	1	3.7		
	Total	27	100		
The baseline reports are formulated, and the results are shared among stakeholders.	SD	6	22.2	3	1.44115
	D	2	7.4		
	N	12	44.4		
	A	0	0		
	SA	7	25.9		
	Total	27	100		
Total N=27, Aggregate Mean (u)= 3.35596667					

Source: Own survey

The mean value for the statement in which the organization performs comprehensive BS before the implementation of the project is calculated 4.037 and the standard deviation is 0.97.For this statement 57 % agreed, 11.1 selected neutral and 11.1% disagreed. This indicates most of the respondents strongly agreed that the organization conducts a comprehensive BS before the implementation of the project. Therefore, it is concluded that the organization has a practice of a holistic baseline study before the project implementation. Therefore, the practices of performing a base line study at the organization that is used to generate a comparison for evaluating the effect of the project.

For the statement the project team designs the plan for performing the BS, statement 22.2 % of respondents agreed while 11.1%of respondents chose neutral and 66.7% disagreed with the statement. The mean value of this is 2.48 and the standard deviation value is 1.15. The result shows that most percentages of the respondents disagreed .This entails that, the practice of designing the plan before performing baseline studies is loose. A plan for baselines should be

performed for any survey while developing a baseline for project monitoring and evaluation. (European Comission Civil Society Fun in Ethiopia, 2017)

Fifty-one point eight percent (51.8%) of the respondents strongly disagreed that the baseline study is done per the design plan. And 11.1% of the respondents selected neutral and 37 % of the professionals agreed that a baseline study is done in accordance with the design plan. The mean value is 2.7 and the standard deviation is 1.4.This mean value is less than the likert's mean value of 3, Therefore, it is concluded that the organization lacks performing the baseline study following the pre designed plan.

The other statement given to the respondents was, the organization designs research materials for undertaking BS. For this specific statement 7.1 % of the participant disagreed and 71.4% selected neutral. Accordingly, the mean value is 3.11 and the standard deviation value is 0.75.Therefore the mean value is more than the 3 in Likert mean value. It implies the organization designs research materials for undertaking BS.

The other statement posed to the respondents was, there are adequate collection and capturing of data on the project demand. From the total respondents 33.3 % agreed with the statement while 44.4 % disagreed that adequate collection and capturing of data on the project demand exists in the organization. While the remaining 22.2% of the professionals stayed neutral for the statement. The mean value and the standard deviation value generated by SPSS is 3.18 (which is more than likert's mean value of 3)and 1.00 respectively. This implies that the organization gathers data on the project demand.

For the project data are captured on the beneficiaries, 66.6 % agreed and 33.3 % disagreed with mean value of 3.53 and standard deviation of 1.39.This implies that data are captured on the project beneficiaries.

Out of twenty seven participants 85.1 % strongly agree, and 14.8 agree that the data are captured on the environment and impact of the project on the environment, but 14 % disagree with this statement. The mean value and standard deviation is 4.18 and 1.03 respectively. So that the mean value indicates that the practice at the project involves data capturing on the environment and impact of the project on the environment.

The other statement given for the participants was, data collected and captured are analyzed and results are reviewed. For this statement 77.7 % agreed that the project data collected are analyzed and results are reviewed. But 22.2% of the respondents do not agree with the statement. The mean and standard deviation is calculated 3.96 and 1.22, respectively. This value indicates there is a practice of data collection and captured for the project monitoring and evaluation analysis and result reviewing.

The mean value for the time in which the baseline reports are formulated and the results are shared among stakeholders data of the project, is 3.00 and the standard deviation was 1.44.Since 25.9% strongly agreed, 29.6 % disagreed and 44.4% stayed neutral for this statement. From the mean value most of the respondent selected neutral for the given statement. Therefore, it is concluded with that the practice baseline reports are formulated, and the results are shared among stakeholders.

The aggregated mean for the practice of base line studies gives 3.559. This value compared with the Likert's mean value is greater than 3. Therefore, the practice of baseline study in the organization's capacity building for biomedical technicians and health professionals is strong. An introduction manual of M&E by European commission civil society fund in Ethiopia recommends that projects should have information about initial starting point or situation before any intervention. These initial basis helps to compare any change over a period of time and if these changes are the projects objective or not. (European Comission Civil Society Fun in Ethiopia, 2017).In agreement with Kissi et al. baseline practices, midterm and end term reviews of M&E practices has direct relationship with project scope management and remain as a success criterion for project execution. (Kissi, Agyekum, Kofi Baiden, & Agyei nTannor, 2019)

Table 4.1: Monitoring and Evaluation planning data of the project

Monitoring and evaluation planning (MEP)	Frequency of respondents		Percent	Mean	S.D
The Project team also undertakes comprehensive	SD	0	0	4.1111	1.2195
	D	6	22.2		
	N	0	0		
	A	6	22.2		
	SA	15	55.6		

planning for all projects.					
	Total	27	100		
The project members actively take part in planning so as to have all details of project.	SD	0	7.4	4.4074	0.84395
	D	2	7.4		
	N	0	22.2		
	A	10	48.1		
	SA	15	14.8		
	Total	27	100		
There is a comprehensive planning of project cost.	SD	0	0	3.6667	1.14354
	D	6	22.2		
	N	5	18.5		
	A	8	29.6		
	SA	8	29.6		
	Total	27	100		
There is planning of the capacity of project team to execute project.	SD	2	7.4	3.5556	1.08604
	D	2	7.4		
	N	6	22.2		
	A	13	48.1		
	SA	4	14.8		
	Total	27	100		
The plan covers the feasibility of the proposed project activities.	SD	4	14.8	3.5556	1.39596
	D	2	7.4		
	N	4	14.8		
	A	9	33.3		
	SA	8	29.6		
	Total	27	100		
Timeliness of project is put into project plan.	SD	5	18.5	3.5185	1.55342
	D	3	11.1		
	N	2	25.9		
	A	7	22.2		
	SA	10	37.0		
	Total	27	100		
There is a risk assessment and mitigation planning.	SD	3	14.8	3.0370	1.19233
	D	5	22.2		
	N	11	37		
	A	4	7.4		
	SA	4	18.5		
	Total	27	100		

Total N=27, Aggregate Mean =3.6931

The mean value for the statement the project team also undertakes comprehensive planning for all projects is 4.11 and the standard deviation is 1.21.These are calculated from the number of respondents who strongly agreed with the statement, which is 57.8% and disagreed with the statement and 44.4% respectively. From the mean value, it is concluded that the project team undertakes comprehensive planning for all projects.

According to the data collected 88.6% of the respondents agreed the project members actively take part in planning to have all details of the project. But the remaining 7.4% disagreed with that. Then mean value and the standard deviation were generated by SPSS, 4.04, and 3.66 respectively. This mean value shows there is a practice of involving project members in the planning process of the project monitoring and evaluation.

The mean value for the statement, there is comprehensive planning of project cost, are 3.66 and the standard deviation 1.14. This was calculated using SPSS; having 59.2 % of respondents agree, 18.5 % staying neutral and 22.2 % of the respondent disagreed with the given statement. The mean value is greater than likert's mean value of 3.Therefore it is concluded that most of the respondents believe there exists comprehensive planning of project cost.

The mean value for the statement, there is planning of the capacity of the project team to execute the project, is 3.55 and the standard deviation value are 1.08.These were derived from the data that 64.3% of the respondents agreed while 14.2% disagreed and 21.4% selected neutral. The mean value compared to likert's mean value of 3 indicates that most of the professionals agreed with the given statement. Therefore the project has a practice of planning the capacity of project team to execute projects.

The mean value for the plan covers the feasibility of the proposed project activities is 3.55 and 1.39 for the standard deviation. For this statement out of 27 respondents 52.9% of respondents agreed that the plan covers feasibility of the proposed project activities, while 22.2 percent of participants strongly disagreed.

And 14.8 percent of respondents stayed neutral for the statement. Therefore most of the employees in the project believe that the project monitoring and evaluation plan covers feasibility of the proposed project activities.

Thirty seven percent of the respondents selected strongly agreed for the timeliness of the project is put into project plan. The remaining 11.1 percent disagreed with the statement and 25.9 percent agreed timeliness of the project is put into project plan. Calculating the mean value and standard deviation value for this statement gives 3.5 and 1.5534.From this value that most of the respondent preferred neutral for the given statement.

Eighteen point five percent of the participants disagreed that there is risk assessment and mitigating plan in the project. While 29.6 % agreed and 40.7 % stayed neutral for the given statement respectively. The mean value is 3.0370 and the standard deviation is 1.19233
. The mean value (2.92) indicates disagreement in Likert's scale. This implies that the organization lacks a risk assessment and mitigation planning practice.

The aggregated mean for the monitoring and evaluation practice is 3.6931. This value compared with the Likert scale mean value is greater than 3. Therefore, the project executes a practice of monitoring and evaluation planning. A project plan that lacks to incorporate a planning of M&E elements is likelihood not to be as effective and negatively affect the project process and outcome. (European Comission Civil Society Fun in Ethiopia, 2017).

Table 4.3: M&E framework result data of the project

M&E framework (MEF)	Frequency of respondents		Percent	Mean	S.D
The project is aided by a structured conceptual framework.	SD	3	11.1	3.037	1.1923
	D	5	18.5		
	N	11	40.7		
	A	4	14.8		
	SA	4	14.8		
	Total	27	100		
The framework helps to identify reasons behind project performance.	SD	1	3.7	4.00	1.1435
	D	3	11.1		
	N	2	7.4		
	A	10	37.0		
	SA	11	40.7		
	Total	27	100		

Project framework is put in place for planners to measure performance from beginning to end of the project.	SD	2	7.4	3.9630	1.2241
	D	2	7.4		
	N	2	7.4		
	A	10	37.0		
	SA	11	40.7		
	Total	27	100		
Total N=27, Aggregate Mean (u)= 3.6667					

Source: Own survey (2020)

Forty point seven of the respondents selected neutral for the statement the project is aided by a structured conceptual framework .Whereas 29.6 % selected disagree and the remaining 29.6% said they agree. Therefore, the mean value and standard deviation are 3.0370 and 1.19233 respectively. This indicates the project is aided by a structured conceptual framework or not. A project evaluation document of GIZ's CaNBMET project shows a logical framework is used in the organization for project evaluation.

From the total number of respondent, 77.7% of participants answered that the organization has framework helps to identify reasons behind project performance. But 14.8 % of the respondents disagreed. The calculated mean and standard deviation value is 4.00 and 1.1435, respectively. This mean value indicates that the organization monitoring and evaluation a framework helps to identify reasons behind the project performance.

The other question given was about the project framework. The framework is put in place, to measure performance from beginning to end e project, or not. As the result shows, the majorities of the respondents selected agree and strongly agree. These are 77.7 % of the respondents agreed and 11.1% disagreed that the project framework is put in place for planners to measure performance from beginning to end of the project. The mean value is 3.9630 and the standard deviation is 1.2241.Theses implies that the project M&E framework is put in place for planners to measure performance beginning to end of the project.

The aggregated mean for the practice of M&E framework gives 3.6667.This value compared with the Likert's mean value is greater than 3.Therefore, the practice of M&E framework in the organization's CaNBMET project is strongly exercised. Researches state that M&E framework is targeted at identifying the

reasons behind performance measurement and project elements, how related they are, and their underlying fundamentals (Mark, 2007).

Table 4.4: M&E budget result data of the project

M&E budget (MEB)	Frequency of respondents		Percent	Mean	S.D
There is always a project budget that makes adequate provisions for all project activities.	SD	2	7.4	3.1852	1.039
	D	3	11.1		
	N	13	48.1		
	A	6	22.2		
	SA	3	11.1		
	Total	27	100		
The M&E budget is defined within the total project budget.	SD	0	0	3.7037	0.912
	D	4	14.8		
	N	4	14.8		
	A	15	55.6		
	SA	4	14.8		
	Total	27	100		
The M&E budget covers at least 5–10 percent of total project budget.	SD	0	0	3.7037	0.912
	D	4	14.8		
	N	4	14.8		
	A	15	55.6		
	SA	4	14.8		
	Total	27	100		
M&E scheduling (MES) M&E activities are included in the overall project schedule.	SD	0	0	3.8889	0.974
	D	4	14.8		
	N	2	7.4		
	A	14	51.9		
	SA	8	29.6		
	Total	27	100		
Individuals are specifically assigned to project M&E.	SD	0	0	3.9259	0.997
	D	0	0		
	N	1	3.7		
	A	12	44.4		
	SA	14	51.9		
	Total	27	100		
Different personnel are assigned to M&E activities such as data collection, analysis and report writing.	SD	0	0	3.4815	0.975
	D	5	18.5		
	N	8	29.6		
	A	10	37		
	SA	4	14.8		
	Total	27	100		
Total N=27, Aggregate Mean (u)= 3.648					

Source: Own survey (2020)

The result collected from the participants of the research shows that 33.3 percentages of the total respondents believe that the budgets for monitoring and evaluation activities are defined with the total project budgets in the organization. The descriptive statics analyzed using SPSS gave a mean value is 3.1852 and the standard deviation is 1.0391.This shows the organization includes a budget plan for project monitoring and evaluation activities.

To find out the M&E budget coverage from the total project budget, participants were asked whether the budget covers at least 5-10% of the total project budget or not. Thus 70.4 % believe that the M&E budget is at least 5-10% of the total project budget. But 29.6 % of the participants disagreed with this statement. Then mean was calculated to give 3.7037 and the standard deviation is 0.912. The mean value clearly shows that the organization allocate an adequate amount of budget for the M&E activities of the project.

To assess the M&E scheduling, the participants of the research agreed that (with 70.4% of the respondents) agreed that the overall project schedule incorporates the monitoring and evaluation activities of the project. But 14.8% of the participants disagreed and 7.4 percent selected neutral. Thus calculating the mean and standard deviation gives 3.8889 and .974 respectively. This implies that the professionals believe that the overall project schedule includes monitoring and evaluation activities in its monitoring and evaluation schedule.

From the data, 96.3% of the respondents agreed that individuals are assigned to project monitor and evaluation. But 3.7% of the respondents said that they selected neutral. The mean and standard values are 3.9259 and 0.9971 respectively. From this, it is concluded that the organization assigns concerned professionals for project monitoring and evaluation.

For the statement, personnel is assigned to M&E activities such as data collection, analysis and report writing, 51.8% of the respondents agreed that different personnel are assigned to M&E activities such as data collection analysis and report writing. The remaining 18.5% and 29.6% selected disagree and neutral. Therefore the mean value is 3.4815 and standard deviation 0.97548.This result shows that the concerned personnel are assigned to M&E activities.

The aggregated mean of the project for the practice of M&E budget is 3.648. This value compared with the Likert's scale mean value is greater than 3.Therefore, the practice of M&E budget in the organization's capacity building for biomedical technicians and health professionals is strong. To ensure proper M&E, it is important for the budget of the project to make a clear and adequate provision for the activities (Muzinda, 2007).

Table 4.5: M&E specification and frequency data of the project

Statement	Frequency of respondents		Percent	Mean	S.D
Specification is made for how often M&E data are collected.	SD	2	7.4	3.037	1.28547
	D	11	40.7		
	N	2	7.4		
	A	8	29.6		
	SA	4	14.8		
	Total	27	100		
Project stakeholders can be a part of M&E process.	SD	2	7.4	2.9259	1.01835
	D	12	44.4		
	N	2	7.4		
	A	8	29.6		
	SA	3	11.1		
	Total	27	100		
Total N=27, Aggregate Mean (u)= 3.5					

Source: Own survey (2020)

Regarding the frequency of monitoring and evaluation, 44.4% of the respondents agreed that specification is made by the project for how often data are collected. On the contrary, 47.8% of the professionals disagree that specifications are made for the frequency of monitoring and evaluation. The remaining 7.4% of participants selected neutral. Therefore, the calculated mean is 3.07 and 1.28 standard deviation values. This shows the organization has a practice of defining the frequency of its project monitoring and evaluation period on its plan.

The response of the participants regarding stakeholder participation in monitoring and evaluation of the project was rated by respondents. The obtained result was 40.7% agreed stakeholders participate in the process of project monitoring and evaluation. However, 51.8 percent disagreed with this statement. The remaining 7.4 % of the professionals selected neutral. As a result, the mean

value is 2.925 and the standard deviation is 1.01835. Hence this result shows GIZ involves the concerned stakeholders in project monitoring and evaluation.

The aggregated mean for the practice of monitoring and evaluation specification and frequency gives 2.981.This value compared with the Likert scale mean value is less than 3.Therefore, the practice monitoring, and evaluation specification and frequency in the organizations capacity building for biomedical technicians and health professionals are loose.

Table 4.6: ICT usage result data of the project

Statements	Frequency of respondents		Percent	Mean	S.D
M&E team employs the use of computers and computer-aided programs in data collection.	SD	0		3.8889	0.97402
	D	2	7.4		
	N	10	37		
	A	13	48.1		
	SA	2	7.4		
	Total	27	100		
M&E team employs computer and computer-aided programs in data analysis, which reduces too much paper work.	SD	0	0	3.4074	1.00099
	D	4	14.8		
	N	4	14.8		
	A	19	70.4		
	SA	0	0		
	Total	27	100		
Total N=27, Aggregate Mean (u)= 3.6481					

Source: Own survey (2020)

The other question is on the use of computer and computer- aided programs in data collection by the project. For this statement 55.5% agreed that on the project uses computer aided programs for project monitoring and evaluation data collection. Nevertheless, 7.4 % disagreed and the remaining 37% of participants selected neutral on the issue. The mean value is 3.8889 and the standard value 0.974.From these mean result, it is concluded that GIZ utilizes computers and computer -aided programs in data collection by the M&E team.

From the total number of respondents, 70.4% agreed that the M &E team employs computer and computer-aided programs in data analysis. On the contrary, 14.8% disagreed and the remaining 14.8% selected neutral. The descriptive analysis from SPSS gave a mean value of 3.4074 and a standard

deviation of 1.00099.The mean value indicates the computer is used in data analysis for the M&E process at the project.

In general, the aggregated mean for the practice of supporting the monitoring and evaluation process by ICT gives 3.64.This value compared with the Likert's mean value is greater than 3. Therefore, the organization has a practice of applying of ICT for the project M&E activities. Literatures suggest that the use ICT provides numerous benefits in generating real time information and analyze data throughout a project or a program cycle from planning to evaluation. (Sismister & James, 2019).

Table 4.7: Midterm and End term evaluation practice result data of the project

Statements	Frequency of respondents		Percent	Mean	Standard deviation
There is a performance of a midterm project evaluation.	SD	1	3.7	3.4815	0.89315
	D	4	14.8		
	N	3	11.1		
	A	19	70.4		
	Total	27	100		
There is a performance of end of project evaluation to ascertain how project performed.	SD	0	0	3.4444	0.8472
	D	2	7.4		
	N	9	59.3		
	A	12	18.5		
	SA	2	7.4		
	Total	27	100		
There is Documentation of lessons learnt (DLL).	SD	2	7.4	3.1111	0.93370
	D	2	7.4		
	N	16	59.3		
	A	5	18.5		
	SA	2	7.4		
	Total	27	100		
After project implementation, lessons are captured and documented for subsequent projects.	SD	2	7.4	2.8148	0.87868
	D	5	18.5		
	N	18	14.8		
	A	0	66.7		
	SA	2	7.4		
	Total	27	100		
Lessons learned from evaluation are shared with project	SD	1	3.7	3.7037	1.10296
	D	4	14.8		
	N	3	11.1		

implementing staff as well as stakeholders	A	13	48.1	
	SA	6	22.2	
	Total	27	100	

Total N=27, Aggregate Mean (u)= 3.311

According to the data collected from the respondents, GIZ implements a performance of midterm project evaluation. For this specific question 70.4% agreed, 18.5% disagreed and 11.1% selected neutral. The mean and standard deviation value 3.481 and 0.893 respectively. This implies the practice of GIZ on project monitoring and evaluation has a midterm project evaluation on its project.

The view of the respondents shows that GIZ has a performance evaluation practice at the end of its projects. From the total participants, 25.9 % of agreed, while 7.4% and 59.3 % selected disagree and neutral, respectively. Therefore the mean and standard deviation value is 3.444 and 0.8472.The mean value (3.14) is greater than 3 in Likert's scale implying there is a performance of end of project evaluation to ascertain how the project performed.

The research also assessed the practice of documenting lessons learned. From the total participants 25.9 % of the total participants on this research agreed GIZ has a practice of documenting lessons learnt (DLL) on project monitoring and evaluation. But the remaining 14.8% of the respondents disagreed and 59.3% selected neutral. The mean value is 3.111 and the standard deviation is 0.9337.As a result it is concluded that the organization has a practice of documenting lessons learnt on its projects.

The data from the respondent shows 74.1% agreed the organization captures and document lessons from subsequent projects. The remaining 25.9% disagreed and 14.8% selected neutral. The mean and standard deviation is 2.8128 and 0.8786 respectively. Therefore the organization lacks a practice of capturing and documenting lessons learned from its projects. For the statement lessons learned from evaluation are shared with project implementing staff as well as stakeholders, 60.3% of the participants selected agree. In contrary 28.5% disagree and 11.1% selected neutral. The mean value gives 3.48 and standard

value of 0.64.According to Likert's scale, the mean value indicates agreement with the given statement.

The aggregated mean for the practice of midterm and end term evaluation gives 3.311 .This value compared with the Likert scale mean value is greater than 3.This practice determines the impact of the project and the way it contributed to the attainment of the project goal (Gyorkos, 2003). The midterm and end evaluation help in ascertaining how project fared in terms of the input and in terms of the level of output (Gilliam, et al., 2003). According to literatures it is important that after the implementation of the project, lessons learnt are documented to be incorporated into subsequent projects and shared with other stakeholders. Therefore the result of the data analysis implies the practices at the organization's capacity building for biomedical technicians and health professional project is in line with the best practice suggested by literatures.

Table 4.8: Role of external evaluators practice result data of the project

Statement	Frequency of respondents		Percent	Mean	S.D
External project evaluators are allowed in the M&E process.	SD	1	3.7	3.407	.7097
	D	2	7.4		
	N	9	33.3		
	A	15	55.6		
	Total	27	100		
The project team makes plan to disseminate to the stakeholders.	SD	0	0	3.7778	1.05003
	D	6	22.2		
	N	0	0		
	A	15	55.6		
	SA	6	22.2		
	Total	27	100		
Total N=27, Aggregate Mean (u)= 3.5924					

Source: Own survey (2020)

The result from the respondents shows eleven point one percent (11.1%) of the respondents disagreed with the statement external project evaluators are allowed in the M&E process. While 55.6% of the participants agreed with the statement. The remaining 7.4% selected neutral for the statement. Therefore, calculating mean and standard deviation gives 3.407 and 0.7097.This implies that the organization's project practice of project M&E allow external project evaluators in that specific project. For the other sub-practice, 77.8% of the professionals

agreed that the project team makes plans to disseminate to stakeholders, while 22.2% disagreed with the statement. Therefore the mean value is 3.778 and the standard deviation is 1.05.Hence from this result, it is concluded that there is a plan to disseminate stakeholders by GIZ project M&E team.

The aggregated mean for the role of external evaluators in the process gives 3.592.This value compared with the Likert scale mean value is greater than 3.Therefore, the role of external evaluators in the organizations CaNBMET is strong. But the practice of involving external evaluators in the process is loose for this specific project of GIZ. Involving external evaluators provide provides the opportunity for formalized assessment and information gathering by those who are not directly engaged in the Project, in order to elicit an "objective" position, or to solicit expert opinion on the project (European Comission Civil Society Fun in Ethiopia, 2017).Data analysis of challenges on the project M&E practice of the CaNBMET at GIZ .

The section aims to assess the major challenges that hider the M&E practice of the organization. From the possible challenges presented, the following challenges are rated by the professionals.

The result shows that there exists lack of commitment by the management in supporting the M&E process. According to Dabelstein (2003) a lack of commitment is an important factor impeding the effective implementation of M&E (Dabelstein, 2003) .Therefore, the management should give proper and adequate support for the project M&E process. The other problem was less involvement by the project employees in M&E activities. Besides, failures in selecting the correct performance indicator, failure in evaluation design, and managerially ineffective or insufficient implementation are the hindering factors on project M&E of the project.

For the listed possible challenges 78.5% of the total respondent selected uncommitted management is a challenge in the M&E practice of GIZ projects. 64.3% of the participant believes that less involvement of employees. And also 85.8% of the respondents said that failure in selecting the correct performance indicator is hindering the performance of project M&E at GIZ projects. In addition,

failure in evaluation design and managerially ineffectiveness or insufficient implementation is affecting the M&E process.

4.4. Analysis of challenges of M&E in the project

The section aim to assess the major challenges that hider the monitoring and evaluation practice of the organization. From the possible challenges presented to the participants, the following challenges are rated by the professionals based on their experience on the project.

The result shows that there exists lack of commitment by the management in supporting the monitoring and evaluation process. According to Dabelstein (2003) lack of commitment is an important factor impeding effective implementation of M&E. (Dabelstein, 2003) Therefore, the management should give proper and adequate support for the project monitoring and evaluation process. The other problem was less involvement by the project employees in M&E activities. Besides, failure in selecting the correct performance indicator, failure in evaluation design and managerially ineffective or insufficient implementation are the hindering factors on project monitoring and evaluation of the project.

For the listed possible challenges 78.5% of the total respondent selected uncommitted management is a challenge in M&E practice of GIZ projects. 64.3% of the participant believes that less involvement of employees. And also 85.8% of the respondents said that failure in selecting the correct performance indicator is hindering the performance of project monitoring and evaluation at GIZ projects. In addition, failure in evaluation design and managerially ineffectiveness or insufficient implementation is affecting the monitoring and evaluation process

On top of the pre-listed challenges, the participants also put in some other challenges hindering the M&E practice of the organization. To tackle these challenges, According to the technical advisor for monitoring and evaluation the organization's project should exercise monitoring from the beginning of the project. In addition, the organization should track every pros and cons of every implementation with respect to the M&E result. General recommendations are also listed in the next section.

Table 4.9: Descriptive statics result of challenges of M&E in the project

	N	Minimum	Maximum	Mean	Std. Deviation
Descriptive Statistics					
Inadequate financial resource	27	1.00	4.00	1.9259	1.07152
Lack of expertise	27	1.00	4.00	2.0000	1.17670
Uncommitted management	27	1.00	5.00	3.6296	1.00568
Unavailability of funder	27	1.00	5.00	2.2222	1.31071
Less involvement of stakeholders	27	1.00	4.00	1.9630	1.22416
Less involvement of employees	27	1.00	5.00	3.4815	1.36918
Inaccuracy in data collection	27	1.00	4.00	2.7407	.90267
Failure to process and analyze	27	1.00	5.00	2.0000	1.27098
Failure in planning	27	1.00	5.00	2.0741	1.38469
Failure in selecting the correct performance indicator	27	1.00	5.00	4.1481	1.09908
Failure in evaluation design	27	2.00	4.00	3.6296	.74152
Managerially ineffectiveness or insufficient implementation	27	2.00	5.00	3.9630	.80773
Valid N (listwise)	27				

Source: Own survey (2020)

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1.   Introduction

This chapter discusses the summary of the findings of the research. The conclusion derived from the data analysis, summary of findings, and the recommendations for the existing gaps and challenges in the area are presented. Finally, the gaps for further study in the area are suggested.

5.2.   Summary of Findings

The purpose of this research was to assess the practice of project monitoring and evaluation at GIZ's, specifically on a capacity development project for health professionals and biomedical technicians. Further, the challenges that impede the practice of M&E were analyzed and the possible solutions for the existing problems were also proposed in the paper. The questions the research targeted to answer were:-

- How are project monitoring and evaluation practiced in Capacity Development for Health Professionals and Biomedical Technicians project at GIZ?
- What are the main challenges GIZ facing in monitoring and evaluating project?

From the data analysis and interpretation in the previous chapter, the following summaries of findings are derived.

- The data analysis in Table 4.1 shows that the organization conducts a comprehensive baseline study before the implementation of projects. But most of the respondents disagreed that the project team designs the plan for performing the baseline study. The result also shows that the study is not done as the designed plan. Finally, the result indicates the baseline reports are formulated and the results are shared among stakeholders.
- The other finding of the research is there is a good comprehensive monitoring and evaluation planning practice. This result was obtained from

the aggregated mean value of 3.6 (Table 4.2).Besides the project members actively take part in planning to have all details of the project. And also timeliness of the project is put into project plan and there is also risk assessment and mitigation planning.

- As shown in table 4.3, from the data analysis there is always a project budget that makes adequate provisions for all project activities. Further M&E scheduling (MES) M&E activities are included in the overall project schedule and individuals are specifically assigned to the project M&E such as data collection, analysis, and report writing.

- As a result from the analysis (Table 4.6), the M&E team employs the use of computers and computer-aided programs in data collection and data analysis, which reduces too much paperwork.

- In the finding (shown in table 4.7) there is a performance of a midterm project evaluation and end-term project evaluation to ascertain how the project performed. The result also indicates there is Documentation of lessons learned (DLL).Besides after project implementation, lessons are captured and documented for subsequent projects and shred among stakeholders.

- The majority of participants agreed that external project evaluators are allowed in the M&E process. And shown in table 4.8 the finding shows that the drawn lessons and findings after M&E implementation will be put to action in the next phases and other projects of GIZ.

- The finding of the study indicates that the GIZ capacity development for health professionals and biomedical technician project M & E activities are relevant in terms of measuring the attainment of its pre -planned outputs and objectives of the project.

- From the response to the open ended questions the organization does not give much emphasis to activity monitoring.

5.3.   Conclusion

In line with the objective of the study the data collected was analyzed and interpreted. Hence the study aimed to assess the monitoring and evaluation practice of the GIZ project and also to find out the major challenges the

organization facing in the process of project monitoring and evaluation. Consequently, to conclude, a mixed method of qualitative and quantitative research was used. Plus both primary and secondary data were collected in the research. Accordingly, the data interpretation and summary of the study the researcher has concluded are presented below.

Researches show that although monitoring and evaluation are implemented widely on developmental projects, the result is not satisfactory. This study showed that the project implemented by GIZ, especially CaNBMET, is effectively monitored and evaluated. But there are some challenges the project M&E process facing. These include the baseline study is not done as per the plan. Besides the result shows the organization's project monitoring and evaluation practice has a weakness in such areas; uncommitted management, and failure in selecting the correct performance indicators.

According to Erness Kissi et, al best practices of project M&E includes major ten practices. Compared to these practices GIZ project BS is not done under the designed plan. But the organization does not design research materials for undertaking baseline studies. Therefore, to gain the total benefit from the best practice, the organization should improve the sub-practices that are loosely exercised. (Kissi, Agyekum, Kofi Baiden, & Agyei nTannor, 2019)

The M&E practice implemented at the organization comprises a good structured M&E framework, with a practice of M&E budgeting, specifying the frequency of M&E of data collection and involving project stakeholders, the use ICT, midterm and end term evaluation and recognizing the role of external evaluators.

 Although the project has the above limitations the overall result implies that GIZ is exercising best practices on its projects. The organization conducts baseline studies and the baseline results are shared among stakeholders. In addition, there is a good practice of monitoring and evaluation planning (MEP).The best sub-practice of MEP such as comprehensive planning for all projects, active participation of project members in the planning, planning of the capacity of the project team to execute project are strongly applied.

Then the study presented a list of possible challenges for the participants to rate in Likert scale. From the result, it can be concluded that among the possible challenges summarized from literatures the challenges the organization facing are; uncommitted management for the project monitoring and evaluation process and failure in selecting the correct performance indicator .In addition, failure in the evaluation design and managerially ineffective or insufficient implementation of M&E activities are also challenging the project.

5.4. Further areas of study

The scope of the research was limited to one of the GIZ's projects," Capacity development for health professionals and biomedical technicians". But GIZ has various projects in Ethiopia. Therefore, other investigators may study other projects which are undertaken by GIZ in Ethiopia. In addition, the following topics can be used for further study can be performed on other project management process of the intervention. Further research also can review other factors and the effect these factors on project monitoring and evaluation and to the success of a project. Moreover, the impact of the project on the medical equipment management system of the health institutions can be analyzed.

5.5. Limitations of the study

This study focused only on the capacity development project for health professionals and biomedical technicians which targets Tegbare-eid polytechnic and Nekemete regional. Due to time limitations, the study assessed the practice from the ten major best practices perspective, but monitoring and evaluation can also be assessed using additional factors. The number of participants was small for quantitative analysis. In addition, due to the COVID-19 outbreak in the world and in our country also the mode of data collection was changed.

5.6. Recommendation

This subsection was brought following the conclusion above. The overall practice of the organization follows literature suggested best practices of project M&E process. But some of the sub practices show poor implementation and

there are challenges hindering the performance. Thus improvement efforts need be undertaken to improve the current conditions. In this regard this study recommends the following actions to be undertaken.

- To fix the loose practice in baseline study, the M&E team should execute the baseline study in accordance with the designed plan.

- The finding of the study indicates the practice of involving the project members in the designing plan of M&E is loose. Therefore, the project team should be involved in designing the plan for performing the baseline study.

- The result of the study indicates the management's dedication for the M&E activities is poor. Therefore, to increases the performance of the M&E process, the management should improve commitment to monitoring and evaluation activities.

- The M&E team should also improve the practice of selecting the correct performance indicator.

- Since monitoring is a routine process, it should be in place, by the M&E team, from the beginning of the project through the end and track the pros and cons of every implementation with respect to results.

- As stated by the experts in the project, the organization lacks activity monitoring. Therefore, to improve the M&E performance the organization should give emphasis for activity monitoring.

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APPENDIX

APPEDIX I: QUESTIONARY

ST. MARY UNIVERSITY

SCHOOL OF GRADUATES

Dear respondents, I am Frezer Mengistu, pursuing a Master of art in Project management from St. Mary University. The title of this research is the *Assessment of Monitoring and Evaluation practice of GIZ project: A case of Capacity Development for Health Professionals and Biomedical Technicians project*. In this questioner primary data will be collected from the participants regarding the research topic.

Assurance of confidentiality –All information that permits identification of any individual, a practice, or an establishment will be held confidential and will be used only by Mr. Frezer Mengistu for the purpose of this study. It will not be disclosed or released to other persons without the consent of the individual or the establishment.

If you need any clarification at the time of completing this form, please contact Mr. Frezer Mengistu at +251951056389 or through e-mail:frezermengistu@gmail.com

SECTION ONE: General Information

1. What is your gender?

☐ Male

☐ Female

2. What is your age?

☐ 17 – 25

☐ 26 – 35

☐ 36 – 50

☐ Over 51

3. What is your current position?

☐
☐
☐
☐

4. Years of service

☐ 3 years and below

☐ 3 to 6 years

☐ Above 6 years

Section two: Assessment of the Monitoring and evaluation practice of program

The questionnaire is designed to help you critique the monitoring and evaluation practice, and challenge. Please check (√) the appropriate box to each of the following statements. Indicate the degree to which you agree or disagree with the statement by marking one response for each item, with each statement.1 indicates SD= Strongly Disagree, 2 indicates, 3 indicates D=Disagree, 4 indicates N=Neutral, A=Agree, 5 indicates SA= Strongly Agree.

M&E: Monitoring and Evaluation

S/No	Statements	SD	D	N	A	SA

	Baseline studies					
1	The Organization performs comprehensive BS before the implementation of project					
2	The project team designs the plan for performing the BS					
3	The BS is done in accordance with the designed plan					
4	Organization designs research materials for undertaking BS					
5	There are adequate collections and capturing of data on project demands					
6	Data are captured on project beneficiaries					
7	Data are captured on the environment and impact of project on environment					
8	Data collected and captured are analyzed and results are reviewed					
9	The baseline reports are formulated, and the results are shared among stakeholders					
	Monitoring and evaluation planning (MEP)					
10	The Project team also undertakes comprehensive planning for all projects					
12	The project members actively take part in planning so as to have all details of project					
13	There is a comprehensive planning of project cost					
14	There is planning of the capacity of project team to execute project					
15	The plan covers the feasibility of the proposed project activities					
16	Timeliness of project is put into project plan					
17	There is a risk assessment and mitigation planning					
	M&E framework (MEF)					
18	The project is aided by a structured conceptual framework					
19	The framework helps to identify reasons behind project performance					
20	Project framework is put in place for planners to measure performance from beginning to end of the project					
	M&E budget (MEB)					
21	There is always a project budget that makes adequate provisions for all project activities					
22	The M&E budget is defined within the total project budget					
23	The M&E budget covers at least 5–10 percent of total project budget					
24	M&E scheduling (MES) M&E activities are included in the overall project schedule					
25	Individuals are specifically assigned to project M&E					
26	Different personnel are assigned to M&E activities such as data collection, analysis and report writing					

	M&E specification and frequency (MESF)					
27	Specification is made for how often M&E data are collected					
28	Project stakeholders can be a part of M&E process					
	ICT usage (ICTS)					
29	M&E team employs the use of computers and computer-aided programs in data collection					
30	M&E team employs computer and computer-aided programs in data analysis, which reduces too much paper work					
	Midterm and end term evaluation (MEE)					
31	There is a performance of a midterm project evaluation					
32	There is a performance of end of project evaluation to ascertain how project performed					
33	There is Documentation of lessons learnt (DLL)					
34	After project implementation, lessons are captured and documented for subsequent projects					
35	Lessons learned from evaluation are shared with project implementing staff as well as stakeholders					
	Role of external evaluators (REE)					
36	External project evaluators are allowed in the M&E process					
37	The project team makes plan to disseminate to the stakeholders					

Section three: Major Challenges in M&E practice of GIZ

S/No	Possible Challenges	SD	D	N	A	SA
1	Inadequate financial resources					
2	Lack of expertise					
3	Uncommitted management					
4	Unavailability of funder					
5	Less involvement of Stakeholder					
6	Less involvement of employees					
7	Inaccuracy in data collection					
8	Failure to process and analyze					
9	Failure in planning					
10	Failure in selecting the correct performance indicator					
11	Failure in evaluation design					
12	Managerially ineffectiveness or insufficient implementation					

13. Please specify any other challenges that hider the monitoring and evaluation practice of the project?

_____

_____

_____

_____

14. What solutions do you recommend for the above challenges?

_____

_____

_____

_____

15. Please mention any M&E related issues that are not covered in the above statements? (If any)

_____

_____

_____

Thank you for your time

Adopted from Erness Kissi et. Al.(201

Log frame of the project

Results matrix (logframe)

Capacity development for health professionals and biomedical technicians	Project number (GIZ internal) 2016.2086.3

Summary	Indicators of success	Sources of verification	Key assumptions/risks
Module objective (outcome) Framework conditions for the practice-oriented training of selected specialists in the health sector have been improved.	1.The number of teaching staff with defined teaching competencies at the vocational schools for nursing (Nekemte Health Science College) and for biomedical technicians (Nekemte Polytechnic College, Technical & Vocational Education and Training TVET College Tegbare-id) has risen from 0 to 35. Baseline value: 0 (no training carried out as yet in line with defined skills) Target value: 35 (80% of all teaching staff), including at least 25% women Actual value: 0 (no training carried out as yet in line with defined skills)	Analysis of teaching staff self-assessments based on five project criteria using a questionnaire. Qualitative interview with teaching staff and management; Sample lesson observations (alternatively, external assessments of teaching staff). Analysis of self-assessments using a questionnaire .	Assumption Economic development in Ethiopia remains stable enough to maintain an ordered system of training. Risks Renewed escalation of the political situation makes it impossible to maintain an ordered system of training. Assumptions: The current political interest in establishing a comprehensive biomedical equipment management system is maintained. Risk: Procurement issues are influenced by conflicts of interest. This may affect the
	2. The share of nurses at Nekemte Specialized Hospital who have completed the training required in order to provide clinical instruction to trainees has risen from 2% to 24%. Baseline value: 2% (2 instructors out of	Analysis of management reports produced by Nekemte Specialized Hospital and of attendance certificates for 'preceptor training' courses (in individual personnel files).	

	122 nurses), including 1 woman Target value: 24% (30 instructors out of a planned 126 nurses, including 21 women) Actual value: 2% (2 instructors out of 122 nurses)		project's concept to offer objective professional advice in terms of biomedical equipment. Risk: The students/teacher ratio is too high as a result of excessively strong growth in the number of students, thus making it extremely challenging to offer individual instruction.
	3. The roles and duties of biomedical technicians and biomedical engineers within the public health system have been approved by the Federal Ministry of Health (FMoH). Baseline value: 0 (Job descriptions are drafted and need official approval by FMoH) Target value: 1 (job descriptions approved) Actual value: 0 (provision of advice has only just begun)	Documentation of approval of job descriptions	The newly created and formerly understaffed department for medical technology at FMoH now has more staff and is embedded in the organisational hierarchy at FMoH.
Outputs **Output A** Teachers responsible for the training of nurses and biomedical technicians make use of practically-based training.	A1: The number of teaching staff at Addis Ababa Tegbare-id Polytechnic College and Nekemte Polytechnic College who have received didactic and technical training from the project has increased from 0 to 22. Baseline value: 0 (no training provided by the project) Target value: 22, at least 18% women Actual value: 0 (no training yet provided by the project)	Count of the number of teachers who have graduated from further training courses to update their teaching skills and technical knowledge (based on further training course reports).	Risk: The regional biomedical workshop in Nekemte has until now only two biomedical engineers, making it understaffed to adequately fulfil all tasks

	A2. The number of nursing teachers at Nekemte Health Science College (NHSC) who have taken part in the further training courses arranged by the project to update their teaching skills and familiarise them with relevant medical equipment has risen from 0 to 22. Baseline value: 0 (no training provided by the project) Target value: 22, at least 25% women Actual value: 0 (no training yet provided by the project)	Assessment of further training course reports.
Output B The supraregional workshop at Nekemte Specialized Hospital performs its designated functions (e.g. maintaining specified biomedical equipment, training staff in the handling of biomedical equipment and providing practical instruction for trainee biomedical technicians).	B1. The number of different types of biomedical devices maintained by the workshop at Nekemte Specialized Hospital has risen from 17 to 38. Baseline value: 17 (types of equipment) Target value: 38 Actual value: 17 (types of equipment) B2: The number of trainee biomedical technicians taking part in a practical training course led by a development advisor at the workshop in Nekemte has risen from 0 to 25/year of training. Baseline value: 0 (trainees, development	Workshop order book Analysis of the formal agreements between Nekemte Specialized Hospital and those TVET colleges involved in the training of biomedical technicians.

Output	Core activities for outputs	Inputs/Planned instruments	Assumptions
	worker not yet in situ) Target value: 25, including at least 40% women Actual value: 0 (trainees, development worker not yet in situ)		
Output C FMoH has implemented more effective requirements on medical equipment management.	C1: FMoH has used the MEMS monitoring data for their annual planning Baseline value: 0 (not yet used) Target value: 1 (data are used) Actual value: 0 (MEMS now being rolled out) C2: 2 hospitals (Nekemte Specialized Hospital and Wollega University Hospital) in Nekemte have incorporated the equipment management into their monitoring Baseline value: 0 (MEMS not rolled out yet) Target value: 2 (hospitals have MEMS in the monitoring system) Actual value: 0	EHSTG MEMS data on biomedical equipment management at the two hospitals and respective data submitted to OHRB (by NSH) and PMED (by WUH) Qualitative interviews with hospital M&E Officer, management team and ORHB/PMED M&E Officer	

Output A:	Implementation of training modules for teaching staff on how to handle selected medical equipment (in order of priority)	Short-term experts, development workers, integrated expert	Assumptions
	Development of a structure for the systematic training of teaching staff (didactics, handling and application; development of practical applications to accompany training)	Development advisors, integrated expert, financing agreements	• The transfer of administrative responsibility for Nekemte Health Science College from the TVET Bureau to Oromia Regional Health Bureau does not delay the implementation of planned activities.
	Selection and procurement of teaching and learning materials, and procurement for the 'skills labs' at vocational colleges (furniture, tools, etc.)	Development workers, long-term experts, materials and equipment	• Nekemte Health Science College remains interested in working with the project.
	Development of new teaching and learning materials Creation and support of coordination structure between the vocational colleges, hospital and workshop	Development workers, financing agreements Development workers, integrated expert, long-term experts	• Tegbare-id College remains interested in working with the project and can incorporate a new position for the integrated expert into its budget. Risk
Output B:	Provide tools and other operating resources / Familiarise new biomedical technicians with their new roles. Arrange further training for staff and for instruction for trainees.	Development workers, long-term experts, materials and equipment Development workers, short-term experts	• It is not possible to mobilise long-term advisors (development advisors and an integrated expert) with the required profile.
	Arrange basic biomedical equipment training for relevant staff and introduce an inventory system to facilitate the dynamic management of medical equipment.	Development workers, long-term experts	
Output C:	Advise FMoH on the gradual elaboration of a comprehensive biomedical equipment management strategy.	Long-term experts, contract award	
	Advise the Regional Health Bureau on biomedical technician deployments and on the effective planning (and especially the management) of biomedical technology.	Long-term experts, short-term experts	