OVERVIEW OF PROJECT MANAGEMENT CYCLE

1.1 Introduction

Thank you for your interest in studying monitoring and evaluation of projects which is an indispensable management function. You can call it "M & E" – it is much easier. In this lecture we will try to review a few background issues on the projects that you covered in the unit LDP 604: Project planning, design and implementation. This will give us a good foundation to discuss Project Monitoring and Evaluation.

	1.2. Objectives At the end of this lecture you should be able to; 1. Define a project 2. Define the project management cycle 3. Describe the major stages of the project management cycle 4. Explain the element of a project document

1.3 Definition of a project

In the previous unit on project planning design and implementation you may realize that the term project was defined differently by different experts. Let us single out a few definitions and try to understand them in the context of Monitoring and Evaluation.

Singh and Nyandemo (2004) define a project as an endeavor in which human, material and financial resources are organized in a novel way to undertake a unique scope of work of a given specification within constrains of cost, time and the prevailing environment, so as to achieve beneficial change defined by quantitative and qualitative objectives. On the other hand International Standard Organization (ISO) 10006 looks at the project as a unique process that consists of a set of coordinated and controlled activities with start and finish dates undertaken to achieve an objective conforming to specific requirements, including the constrains of time, cost and resources.

In the two definitions it is clear that project involves resources which include human, material and financial among others. It also involves tasks defined in terms of activities that are organized in a unique way to achieve a set of predetermined objectives. Other issues that come out clearly are the timeliness of the projects and the aspect of coordinating and controlling of activities to achieve the desired objectives. We can therefore conclude that:

- Activities that comprise a project are intentionally designed to achieve certain ends in consideration of available resources and time.
- Objectives therefore become the major target of each and every activity.
- Monitoring of the project activities is therefore very important to ensure that they are implemented as planned.
- It is important to ensure that the activities produce the intended results at the end of the project cycle.

- It is also important to ascertain the changes brought to the project beneficiaries in terms of quantitative and qualitative data.

It is only when this is achieved that we can conclude that the project has fulfilled its objectives. Evaluation of projects therefore becomes not only important to projects but a part and parcel of project design.

Activity 1.4

1. From the two definitions Singh and Nyandemo (2004) and ISO (2006), identify the elements that calls for monitoring and evaluation

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1.5 Project cycle

A project cycle is a sequence of continuous events which a project follows. The events, stages or phases can be divided into several equally valid ways depending on the executing agency or parties involved. For instance in 1970s the World Bank identified five stages in which a project undergoes namely project identification, project formulation, project appraisal, implementation and project evaluation. This model has given rise to many variations of stages in project cycle for instance Ogula (2002) proposes five stages as reflected in fig.1 below:

Fig. 1: Project life cycle
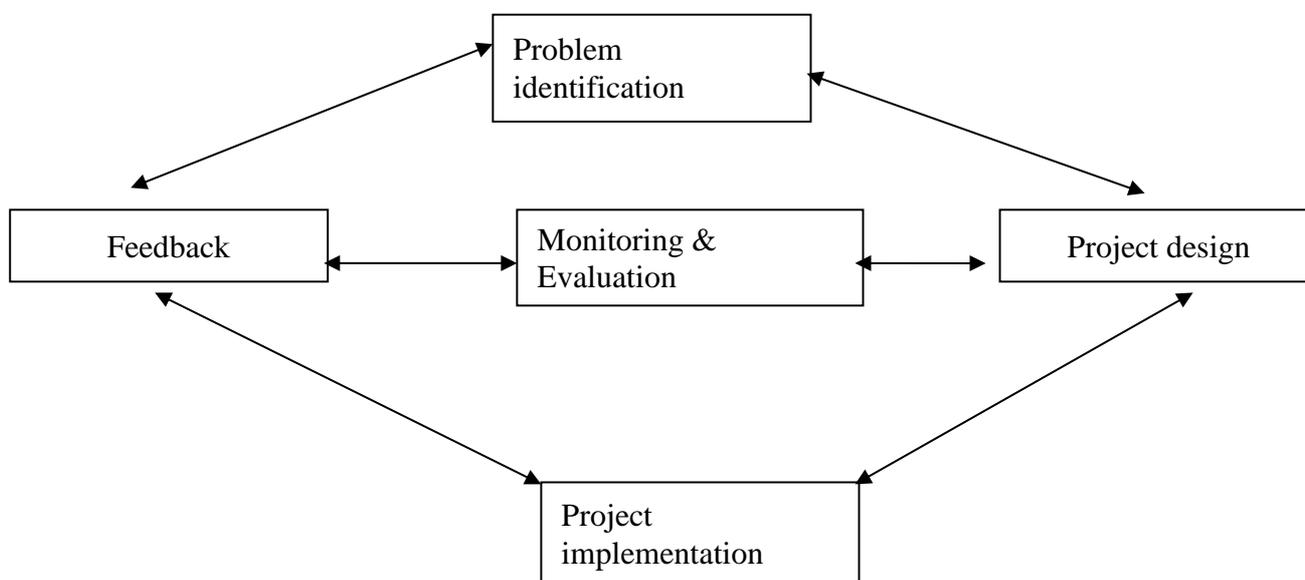
Source: Ogula (2002) Monitoring and Evaluation of Educational Projects and Programmes. Nairobi. New Kemit Publishers

From the above demonstration of stages in project cycle it is clear that monitoring and evaluation forms a very key component. For instance in figure 1 above it is implied that at all the stages of project cycle monitoring and evaluation is required. For instance:

1). At the problem identification or project conceptualization stage one needs to undertake project needs analysis in which data is collected and evaluated to identify the needs of the communities; possible project ideas to satisfy needs identified are also evaluated and closely analyzed (filtered) to finally arrive at the indented projects.

2). Formulation of the project also involves evaluation to some extent. Project objectives formulation is a participatory activity that requires careful evaluation by all project stakeholders. Cost and benefit analysis of each and every activity is done to give the final activity that will be included in the project. The purpose is to arrive at the activities that have the highest impact in terms of fulfilling the project objectives.

3). Implementation stage involves rolling out the project activities. This calls for monitoring to ensure that the activities are implemented as planned.

4). At the end of the project cycle, the terminal evaluation is done to determine the impact of the whole project to the project beneficiaries.

Take Note
We can therefore conclude that Monitoring and Evaluation is a very important component of project design and project life cycle

1.7 Components of Project design

At this point, we need to examine the components of a project design and see how they all hinge on monitoring and evaluation. It is important to note that a well designed project should have a written document which is logical and complete.

Lets us look at some of the components of a project design. The project document has the following;

Statement of project: Describe the areas that emerged during the need assessment and that the project seeks to address.

Project strategy: Explain clearly the beneficiaries of your project. Show the beneficial changes to be brought by the project. Indicate the partners/ stakeholders involved and show how the project will deliver its benefits to the intended group.

Goals/ purpose/vision: This is the ultimate objective of the project. It is the long term objective e.g. to ensure that every youth at Kwa kavoo village is self employed by 2015.
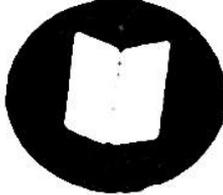
Objectives/mission: State the immediate achievement at the end of the project e.g at the end of the project 400 youth from Kwa kavoo village will have been trained on how to run their own small businesses.

Outputs: Describe the products that would result from the project activities

Activities: Show all the activities which will be undertaken to produce the desired output e.g workshops, developing training manual/ modules.

Inputs: Give a full range of the resources needed (human, financial, technical etc) to carry out the activities in terms of costs.

Indicators: State the end result /changes achieved at the end of a project. Indicators are shown by the objectives and outputs of a project.

	1.8 Summary When you view a project in many perspective the most notable aspect that one may not fail to notice is the ability of the project to produce results that can be measured and thus provide a change from one state of being to a desired state. This Lecture provided definition of a project and highlighted on project management cycle with a view of demonstrating that monitoring and evaluation is part and parcel of a project design. The lecture also elaborates on the components of the project design.
	Activity 1.9: Self assessment questions 1. Explain the components of a good project document 2. Describe the main stages in project life cycle
	1.10 Further reading Chandra Prasanna (2005) projects: planning analysis, financing implementation and review (5th ed). Tata Mc Graw – Hill publicity Company Limited, New delhi. Kohli, U. T Chitkara, KK (2008). Project management Handbook. Tata McGraw-Hill Publishing company Limited, New Delhi UNCRD (1998) "Introduction to project cycle (PMC)" Fourth African Training course on local and regional development planning and management : module 7 training material, Nairobi UNCRD

LECTURE TWO

BASIC CONCEPTS AND DEFINITIONS

2.1 Introduction

After looking at the overview of projects, we will now focus on in-depth understanding of the major concepts of Monitoring and Evaluation, and Social Research.

	2.2 Lecture Objectives
	At the end of this lecture you should be able to:
	1. Define the terms Project Monitoring and Evaluation
	2. Explain why there is need for project monitoring and evaluation
	3. Discuss project monitoring
	4. Discuss project evaluation
	5. Explain the relationship between project monitoring and evaluation
	6. Differentiate between Social Research and Evaluation

CONTENT

2.3 Concepts of project Monitoring and Evaluation

2.3.1 Concept of project monitoring

➢ Project Monitoring is a continuous process of collecting, analyzing, documenting, and reporting information on progress to achieve set project objectives. It helps identify trends and patterns, adapt strategies and inform decisions for project or programme management.

➢ Project monitoring is a continuous and periodic review, and overseeing of the project to ensure that input deliveries, work schedules, target outputs and other required action proceed according to plan (UNFPA, 1990).

➢ Monitoring is a continuous process of collecting information at regular intervals about on-going projects or programmes concerning the nature and level of their performance.

Monitoring is an on-going activity which aims at tracking project progress against planned tasks to ensure that the project is moving towards the right direction at the right time. It aims at providing regular, oversight of the implementation of an activity in term of inputs delivery, work schedules, and targeted outputs among other desired results.

Through routine data gathering, analysis and reporting, project monitoring aims at providing project management staff and other stakeholders with information on whether progress is being made towards achieving project objectives. In this regard, monitoring represents a continuous assessment of project implementation in relation to project plans, resources, infrastructure and use of services or products by project beneficiaries. Let us try to discuss the importance of project monitoring.

1. Project managers and their stakeholders (including funding agencies) need to know the extent to which their projects activities are implemented as per the plan. Meeting the set objectives and leading to their desired effect.

2. Monitoring and to some extent evaluation builds greater transparency and accountability in terms of use of project resources. All project stakeholders develop confidence in the project when they know that resources are well spent on the planned project activities.

3. Information generated through Monitoring exercise, provides project managers and staff with a clearer basis for decision-making. This decision concerns the continuing or discontinuing certain activities that may be expensive to implement and which may be having less impact as far as achieving project objectives.

4. Future project planning and development is improved when guided by lessons learned from project experience. Documented results of previous monitoring activities may serve as good lessons for future project implementation.

5. Monitoring allows the project manager to maintain control of the project by providing him/her with information on the project status at all times.

6. Project monitoring alerts managers to actual and potential project weaknesses, problems and shortcomings before it is too late. This provides managers with the opportunity to make timely adjustments and corrective actions to improve on the program/project design, work plan and implementation strategies. In short, monitoring activities must be undertaken throughout the lifetime of the project.

Effective monitoring needs adequate planning; baseline data; reliable indicators of performance and results; practical implementation mechanisms that include actions such as field visits, stakeholder meetings, documentation of project activities, regular reporting etc. Project monitoring is normally carried out by project management staff and other stakeholders

2.3.2 The concept of project Evaluation

➤ Project Evaluation is a periodic assessment, as systematic and objective as possible, of an on-going or completed project, programme or policy, its design, implementation and results. It involves gathering, analysing, interpreting and reporting information based on credible data. The aim is to determine the relevance and fulfilment of objectives, developmental efficiency, effectiveness, impact and sustainability.

➤ Project evaluation can be viewed as the process of systematic collection, analysis and interpretation of project related data that can be used to understand how the project is functioning in relation to the project objectives. It is a process of ascertaining decision areas of concern selecting appropriate information and collecting and analyzing information in order to report summary data useful to decision makers in selecting among

alternatives (Alkin, 1969). Project evaluation is a necessary component that must be included in the project design.

Evaluation is a systematic approach to attribute changes in specific outcomes to program activities. It has the following characteristics:
- Conducted at important program milestones

- ☐ Provides in-depth analysis
- ☐ Compares planned with actual achievements
- ☐ Looks at processes used to achieve results
- ☐ Considers results at outcome level and in relation to cost
- ☐ Considers overall relevance of program activities for resolving health problems
- ☐ References implemented activities
- ☐ Reports on how and why results were achieved
- ☐ Contributes to building theories and models for change
- ☐ Attributes program inputs and outputs to observed changes in program outcomes and/or impact

As we continue with our discussion and understanding project evaluation, we will realize that in lecture five, various scholars have attempted to define evaluation differently according to the purpose of evaluation results and evaluation models employed. Most of the definitions are geared towards justifying the evaluation models that they subscribe to, but their definition does not go beyond the above definition. We shall examine this later, for now, let us focus on various reasons why it is important for us to carry out project evaluation.

1. First and foremost, project evaluation provides managers with information regarding project performance. You will realize that, sometimes during project implementation, project plans may change significantly. In this case evaluation may come in handy to verify if the program is running as originally planned. In addition, evaluations provide signs of project strengths and weaknesses and therefore, enable managers to improve future, planning, delivery of services and decision making.
2. Project Evaluation assists project managers, staff and other stakeholders to determine in a systematic and objective way the relevance, effectiveness and efficiency of activities (expected and unexpected) in light of specific objectives.
3. Mid-term evaluations may serve as a means of validating the results of initial assessments obtained from project monitoring activities.
4. If conducted after the termination of a project, an evaluation determines the extent to which the interventions were successful in terms of their impact and sustainability of results.
5. Evaluations assist managers to carry out a thorough review and rethinking about projects in terms of their goals and objectives and means to achieve them.
6. Evaluation can be used to generate detailed information about project implementation process and results. Such information can be used for public relations, fundraising, and promotion of services in the community as well as identifying possibilities for project replication.
7. Evaluation improves the learning process- Evaluation results should be documented to help in explaining the causes and reasons why the project succeeded or failed. Such documentation can help in making future project activities more relevant and effective.

There is need for all project stakeholders to have a clear knowledge and understanding of Monitoring and Evaluation. This is because knowledge of M&E helps project staff to improve on their ability to effectively monitor and evaluate the progress of the projects. It also enables them to strengthen the performance of their projects thus increasing the impact of the project results to beneficiaries. With basic orientation and training in monitoring and evaluation, project staff can implement appropriate techniques to carry out a useful evaluation of their projects. Project staff with knowledge in monitoring and evaluation can be in a good position to vet and evaluate external evaluators' capacity to evaluate their projects - Program/project evaluations carried out by inexperienced persons might be time consuming, costly and could generate impractical or irrelevant information.

Project Monitoring and Evaluation

Monitoring and Evaluation is a process of continued gathering of information and its analysis, in order to determine whether progress is being made towards pre-specified goals and objectives, and highlight whether there are any unintended (positive or negative) effects from a project/programme and its activities.

Take Note

- As in monitoring, evaluation activities must be planned at the program/project level. Baseline data and appropriate indicators of performance and results must be established.
- Project strengths and weaknesses might not be interpreted fairly when data and results are analyzed by project staff members that are responsible for ensuring that the project is successful. It is preferred therefore, that the management recruits an external evaluation consultant to lead the evaluation process.
- If the management does not have an expert to carry out the evaluation and cannot afford to hire an external evaluator or prefers to use its own resources in carrying out the evaluation, it is recommended that it engages an experienced evaluation expert to advice on developing the evaluation plan, selecting evaluation methods and analyzing and reporting results.

2.3.3 Relationship between Monitoring and Evaluation

You will realize that form above discussions of project monitoring and evaluation we can comfortably conclude the two serve the project managers differently. However, sometimes you may find it difficult to separate the two concepts since they are closely related. The two support each other. Now let us see how the two concepts are related;

1. Through routine tracking of project progress, monitoring can provide quantitative and qualitative data useful for designing and implementing project evaluation exercises.
2. Through the results of periodic evaluation monitoring tools and strategies can be refined and further developed.
3. Good monitoring may substitute evaluation in cases where:
    -projects are short-term
    -projects are small-scale
4. The main objective of Monitoring is to obtain information that can be used in improving the process of implementation of an ongoing project, however, when a final judgment regarding project results, impact, sustainability and future development is needed, an evaluation must be conducted.
5. Project evaluations are less frequent than monitoring activities, considering their costs and time needed.

It is important to understand that project monitoring can be different from project evaluation in some aspect. The table be low shows a summary of the differences between project monitoring and project evaluation.

Table 2.1 Comparison between Monitoring and Evaluation

Item	Monitoring	Evaluation
Frequency	Periodic, Regular	Episodic
Main Action	Keeping track/Oversight	Assessment
Basic Purpose	Improving efficiency, adjusting work plan	Improve effectiveness, impact, future programming
Focus	Inputs/outputs, process outcomes work plans	Effectiveness, relevance impact, cost-effectiveness
Information Sources	Routine systems, field observations, progress reports, rapid assessments	Same plus surveys and studies
Undertaken by	Project Managers, community workers, community (beneficiaries) supervisors Funders	Program managers Superiors Funders External evaluators Community (beneficiaries)

Kurze and Rist (2004) identifies other complementary roles of Monitoring and Evaluation as

Indicated in table 2.2

Table 2.2: Complementary role of monitoring and evaluation

Monitoring	Evaluation
• Clarifies program objectives	• Analyzes why intended results were or were not achieved
• Links activities and their resources to objectives	• Assesses specific causal contributions of activities to results
• Translates objectives into performance indicators and sets targets	• Examines implementation process
• Routinely collects data on these indicators, compares actual results with targets	• Explores unintended results
• Reports progress to managers and alerts lights them to problems	• Provides lessons, significant accomplishment or program potential, and offers recommendations for improvement

2.4 The difference between Research and Evaluation

We would like to introduce a concept of 'social research' which you well known from the Research Methods unit you covered in your first year. The discussion of the concept of project evaluation may have left you wondering how different the concept is from research. In this section we will attempt to highlight on the differences between evaluation and social research

Activity

1. On a piece of paper, try to note down the meaning of Research

2. Using the definition that you wrote down, try to list down

> at least three similarities and differences between social research and Evaluation
>
> 3. Compare your answers with our discussion below

Social research is an inquiry that is based on logic through observation and involves the interaction between ideas and evidence. Ideas help social researchers make sense of evidence and use such evidence to test, extend or revise existing knowledge or facts. Social research is based on logic through observation and involves the interaction between ideas and evidence. Ideas makes social researchers make sense of evidence and use such evidence to test, extend or revise existing knowledge or facts. Social research thus attempts to create or validate theories through data collection and analysis and its goals are exploration, description, prediction, control and explanation

Take Note
Research is a process that involves systematic collection, analysis and interpretation of data with the purpose of describing, explaining, predicting and controlling a phenomenon.

From the above description of social research we can note that research shares some aspects with evaluation in that they both are concerned with generation of knowledge and are both aimed at finding answers to significant inquiry questions. In addition, both employ scientific approaches of inquiry which is systematic in nature. However, the two concepts differ to some extent as shown below;

1. Evaluation findings are concerned with phenomena which are not generalized beyond their application to a given project or program while research aims at generalizing findings to the population
2. Research and evaluation are undertaken for different reasons. Research satisfies curiosity by advancing knowledge while evaluation contributes to the solution of practical problems through judging the value of whatever is evaluated
3. Research seeks conclusions while evaluation leads to decisions
4. Research is concerned with relationships among two or more variables while evaluation describes the objects of evaluation
5. The researcher sets his own problems. Evaluations are normally commissioned by clients
6. Evaluation follows the set standards of Feasibility, Propriety, Accuracy and Utility while
7. research does not.

Purpose/Importance of Monitoring and Evaluation
  ☐ *Support project/programme implementation* with accurate, evidence-based reporting that informs management and decision-making to guide and improve project/programme performance.

- *Contribute to organizational learning and knowledge* sharing by reflecting upon and sharing experiences and lessons.
- *Uphold accountability and compliance* by demonstrating whether or not our work has been carried out as agreed and in compliance with established standards and with any other stakeholder requirements
- *Provide opportunities for stakeholder feedback,*.
- *Promote and celebrate project/program work* by highlighting accomplishments and achievements, building morale and contributing to resource mobilization.
- *Strategic management* in provision of information to inform setting and adjustment of objectives and strategies.
- *Build the capacity, self-reliance and confidence stakeholders*, especially beneficiaries and implementing staff and partners to effectively initiate and implement development initiatives.
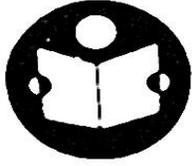
Characteristics of monitoring and evaluation

Monitoring tracks changes in program performance or key outcomes over time. It has the following characteristics:
a) Conducted continuously
b) Keeps track and maintains oversight
c) Documents and analyzes progress against planned program activities
d) Focuses on program inputs, activities and outputs
e) Looks at processes of program implementation
f) Considers program results at output level
g) Considers continued relevance of program activities to resolving the health problem
h) Reports on program activities that have been implemented
i) Reports on immediate results that have been achieved

Key benefits of Monitoring and Evaluation
a. Provide regular feedback on project performance and show any need for 'mid-course' corrections
b. Identify problems early and propose solutions
c. Monitor access to project services and outcomes by the target population;
d. Evaluate achievement of project objectives, enabling the tracking of progress towards achievement of the desired goals
e. Incorporate stakeholder views and promote participation, ownership and accountability
f. Improve project and programme design through feedback provided from baseline, mid-term, terminal and ex-post evaluations
g. Inform and influence organizations through analysis of the outcomes and impact of interventions, and the strengths and weaknesses of their implementation, enabling development of a knowledge base of the types of interventions that are successful (i.e. what works, what does not and why.
h. Provide the evidence basis for building consensus between stakeholders

2.0. Summary

This lecture provided a discussion on the concepts of monitoring and evaluation. In these discussions, the need for undertaking project monitoring and evaluation is discussed. The lecture also examines the relationships, c and complementary roles played by monitoring and evaluation in projects. Finally the lecture concludes by focusing on the concept of social research. The similarities and differences between the concept of social research and M&E is examined.

Activity 1.5: Self assessment questions

1. Define the following terms;
   a) Monitoring and;
   b) evaluation
2. Explain why there is nee monitoring and evaluation
3. Discuss the concept project monitoring
4. Discuss project evaluation
5. Explain the relationship between monitoring and evaluation
6. Identify the core concerns of evaluation

LECTURE THREE

LEVEL OF MONITORING AND EVALUATION

3.0   Introduction

Welcome to this lecture which is going to take you through various levels of monitoring and evaluation. First and foremost the lecture will attempt to discuss the concept of 'project evaluator'. The lecture will then explore the core concern of monitoring and evaluation and then highlight on various levels of monitoring and evaluation.

	3.1 Lecture Objectives At the end of this lecture you should be able to; 1. Differentiate between internal and external evaluator 2. Explain the advantages using internal and external project evaluator. 3. Outline key questions that evaluators are concerned with when evaluating projects 4. Describe levels of Monitoring evaluation

3.2   Project Evaluators

In lecture two we discussed the concepts of monitoring and evaluation. In this section we are going to discuss the concept of project evaluators a concept that is closely related with what we discussed in the previous lectures.

	Activity 1. In your own wards what do you think a project evaluator is?

Let's now focus on what you wrote in the attempt to answer the above question. It is clear that for one to be called project 'evaluator', he or she must be qualified and experienced in carrying out monitoring and evaluation. We can therefore conclude that project evaluators are individuals with skills, knowledge and hands on experience involving theories and practices in monitoring and evaluation. These individuals may either be within the projects or outside the project. In general, there are two types of project evaluators: external evaluators what we commonly refer to as consultants, and internal evaluators – those within the project. All these evaluators are at the disposal of the project manager only that he or she must determine what type of evaluator would be most beneficial to the project. Let us now try to examine possible option that a project manager can explore in terms of choosing and utilizing project evaluators;

1. **External Evaluator**

External evaluators are contracted from outside the project. These may include qualified and experienced individuals, agency or organization with credible track record concerning evaluation. These evaluators often are found in the universities, colleges, hospitals, consulting firms, or within the home institution of the project. Because external evaluators maintain their positions with their organizations, they generally have access to more resources than internal evaluators (i.e., computer equipment, support staff, library materials, etc.). In addition, they may have broader evaluation expertise than internal evaluators, particularly if they specialize in project evaluation or have conducted extensive research on your target population. External evaluators may also bring a different perspective to the evaluation because they are not directly affiliated with your project. However, this lack of affiliation can be a drawback. External evaluators are not staff members; they may be detached from the daily operations of the project, and thus have limited knowledge of the project's needs and goals, as well as limited access to project activities.

2. **Internal Evaluator**

A project manager may have an option of assign the responsibility for evaluation to one of the staff members or to hire an evaluator to join the project as a staff member. This internal evaluator could serve as both an evaluator and a staff member with other responsibilities. Because an internal evaluator works within the project, he or she may be more familiar with the project and its staff and community members, have access to organizational resources, and have more opportunities for informal feedback with project stakeholders. However, an internal evaluator may lack the outside perspective and technical skills of an external evaluator.

3. **Internal Evaluator with an External Consultant**

A final option combines the qualities of both evaluator types. An internal staff person conducts the evaluation, and an external consultant assists with the technical aspects of the evaluation and helps gather specialized information. With this combination, the evaluation can provide an external viewpoint without losing the benefit of the internal evaluator's first-hand knowledge of the project. This may be an appropriate option but it may be too expensive.

3.2.1 The Evaluator's Role

Whether you decide on an external or internal evaluator or some combination of both, it is important to think through the evaluator's role. As the goals and practices of the field of project evaluation have diversified, so are the evaluators' roles and relationships with the project they evaluate

	Take note.
	It is important to note that the idea of multiple evaluator roles is a controversial one. Those operating within the traditional project evaluation tenets still view an evaluator's role as narrowly confined to judging the merit or worth of a program.)

In most cases the project manager will draft the roles of a project evaluator depending on the nature of the evaluation and the kind of the information required. The roles will also be based on the option of the evaluator that the project manager deems fit. For those evaluators that are recruited as part of the staff of a project their roles may be defined by job specification and description, while the external evaluators roles may be specified by term of reference (TORs).

Depending on the primary purpose of the evaluation and with whom the evaluator is working most closely (funders vs. program staff vs. program participants or community members), an evaluator might be considered a consultant for program improvement, a team member with evaluation expertise, a collaborator, an evaluation facilitator, an advocate for a cause, or a synthesizer. If the purpose of evaluation is to determine the worth or merit of a project, the project manger may look for an evaluator with methodological expertise and experience. If the evaluation is focused on facilitating project improvements, an evaluator with a good understanding of the project and is reflective may be suitable. If the primary goal of the evaluation is to design new projects based on what works, an effective evaluator would need to be a strong team player with analytical skills.

3.3   Core concern of project evaluators

After discussing the concept of evaluators, let us now focus on the core concern of evaluations. All experience and experts in evaluation have certain aspects of concern that they would want to establish or understand whenever they are given a project evaluation task. These aspect are as follows;

1. **Project Progress:** The project evaluator will be concerned with continual development of the project towards the achievement of the planned objectives.

2. **Project Adequacy:** Project adequacy means that the project objectives, inputs or activities are enough for the purpose indented

3. **Project Relevancies:** Relevancy is related to how the project's objectives and activities respond to the needs of indented beneficiaries.

4. **Validity of the project design:** validity of project design assesses the extent to which the project design;

i. Sets out clear immediate objectives and indicators of their achievement,

ii. Focuses on the identified problems and needs and clearly spell out the strategies to be followed for solving the problems and meting identified needs,

iii. Describes the main inputs , outputs and activities needed to achieve the objectives

iv. Stated the means of verification of achievements of objectives and valid assumptions about the major external factors affecting the project

5. **Project effectiveness:** Effectiveness refers to the extent to which a project produces the desired result. Effectiveness measures the degree of attainment of the pre-determined objectives of the project. A project is effective if its results are worthwhile.

6. **Project efficiency:** this is an expression of the extent to which the methods used by the project, or activities are the best in terms of their cost, resources used, time required and appropriateness of the task. It examines whether there was an adequate justification for the resource used and identifies alternative strategies to achieve better results with the same inputs.

7. **Project impact:** Measurement of impact is concerned with determining the overall effect of a project activities in terms of socio-economic and other aspects of the community

8. **Project cost –effectiveness analysis:** This refers to the evaluation of alternatives according to both their costs and their effect with regard to producing an outcome or a set of outcomes

9. **Project sustainability:** sustainability examines the extent to which the projects strategies and activities are likely to continue to be implemented after the termination of the project and the withdrawal of external assistance.

10. **Project Unintended outcomes:** Unintended outcomes are unforeseen negative or positive effects of a project. For example an adjacent community benefiting as a result of a project implemented in the neighboring community.

11. **Project alternative Strategies:** Alternative strategies to solving the identified needs or problems are analyzed and recommended for the next phase of the project, normally if the original strategy is found inappropriate.

12. **Project cost benefit**s: Cost benefit analysis compares the financial costs of a project to the financial benefits of that project. It is normally conducted on more than one project

3.4 Levels of evaluations

After looking at various concerns of evaluations, let us now focus on levels of monitoring and evaluations. A project of a National concern with multiple beneficiaries requires that its effects be monitored and evaluated at different levels. These levels include community, district, national and donor among others. Monitoring and evaluating of such project at the mentioned level is very important since each level is unique. Due to this uniqueness, it is possible for an evaluator to apply different monitoring and evaluation methods befitting each level. These may bring about unique project results and effects depending on each level. To some extend these results complement other findings that may be experienced at a higher level.

Take Note
Consider that the government of Kenya has acquired funds from World Bank aimed at investing in construction of health centers in order to improving access to medical care by all Kenyans. This can be regarded as a National project with multiple stakeholders. The lowest level that that can determine the effects of the project is at the community level. If access to medical care has been achieved at the community level, the effects can be felt at the District level and then the Province and even Nationally. The total effects will contribute to achievement of the project objectives.

Let us now discuss each of the levels mentioned above:

1. Monitoring and evaluation at community level

This is done at grassroots and zonal level because this is where the implementation and utilization of the benefits of the projects take place. The major purpose of monitoring and evolution at this level is to improve the implementation and management of projects.

The objectives for monitoring and evaluation at this level include;
- Ensuring that project activities are implemented in time
- Experts have been contracted to provide consultancy on the project

- Ensure that project inputs are available and utilized in the right way as planned

The activities for monitoring and evolution at this level include:

- Identify community's needs
- Organize the needs in order of priority
- Develop projects to address those priority areas
- Identify teams and their roles to spearhead the projects
- Design work plans and their performance standards
- Compare what is happening with what was planned, to determine whether the project is on schedule as planned
- Involve the local community to ascertain the quality of the projects

The monitoring teams should ensure that they make frequent visits to the project sites to observe, and discuss with everyone involved in the projects. This should be captured in field visit reports. This information can be utilized to improve the implementation of the project or stored for future use.

2. **Monitoring and evaluation at District and Local Authority level**

The monitoring and evaluation team should get information from the teams at local levels. It is important for the team to monitor and evaluate the outcome of the project. They should also monitor and evaluate the increase in strength, capacity and power of the target community to stimulate its own development. With the above example, the team should be able to establish whether the community will be able to maintain and manage the even health centers even when the donor funding is withdrawn.

The objectives of Monitoring and evolution at this level include:

- Supporting the improvement in project performance
- Measuring the applicability of the way the project was designed in relation to community strengthening

The methods used include routine monitoring and supervisory support by the district project coordinator, community development assistance, other technical staff, and politicians

The major issues to consider in the routine monitoring include:

- Levels of actual community, local authorities, districts and donor contributions (in terms of funds, materials, time and expertise)
- Timely implementation and quality of projects
- Appropriate use and accountability of community and donor resources; levels of community involvement in the project
- Community involvement in projects
- Timely use of information generated through the community routine monitoring and evaluation

National and Donor Level

At the national or country level, there are two main stakeholders,

a) The ministry or agency that is implementing the intervention or project – the government interest in projects is to ensure national wide community development. Their interests

will be to ensure community participation in projects that caters for their interests. Major involvement of the government agencies (Ministry of Agriculture) will be to ensure that the project evaluation methodology is well known to the community. The evaluation will be concerned with the impact of the project to a wider target group- This will involve the contribution of the agricultural project to the economic development of the country as a whole.

b) Any external Nation or international donors – the major concern is the effectiveness of the projects. Their major focus is the percentage of output attained as a result of the projects

3.5 Summary

The lecture explores various levels of evaluation by first looking at the concept of evaluator and types of evaluator that the project manager can exploit in terms of project evaluation. The lecture also provides an insight on what project managers should look at when selecting types of evaluators for project evaluation. Core concerned for project monitoring and evaluation have also been discussed. The effects of project that of National concern can be assessed adequately as per certain levels. This lecture using relevant illustration discussed the levels of project monitoring. The lecture also demonstrates how project monitoring and evaluation activities differ as per each level of monitoring and evaluation.

3.5   Self Assessment questions

1. Explain the options that a project manager has in deciding the type of evaluator that will handle project evaluation activities?
2. Outline key questions that evaluators are concerned with when evaluating projects?
3. With illustrations discuss ways in which monitoring and evaluation varies as per levels of project evaluation?

LECTURE FOUR
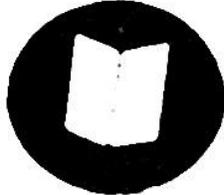**TYPES OF MONITORING AND EVALUATION**

4.1 Introduction

In lecture three we discussed the concept of evaluator, core concerns of evaluation and various levels of evaluation. We also established that monitoring and evaluation varies with different levels of evaluation, however the levels complement each other.   In this lecture we shall examine in details various types of monitoring and evaluation.

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4.2Lecture objectives
At the end of this lecture you should be able to:
1. Explain types of project monitoring
2. Describe types of project evaluations

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4.3 Types of monitoring

You recall that in lecture one, we learned that among the main components of a project design included project purpose which the ultimate objective of the project is; project objectives which state the immediate achievement at the end of the project; project outputs which describe the

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2.10 Further reading
Worthon, B,R., Sanders, J,R and Fitzpatric J.L (1997); **Programme evaluation- Alternative approaches and practical guidance (2Ed):** New York, Longman Inc.

UNICEF (1991), Guide for Monitoring and Evaluation; making a difference? New York

Ogula, P (2002) Monitoring and Evaluation of Educational Projects and Programmes. Nairobi. New Kemit Publishers

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kind of products produced by the project; Project activities which show all actions that will be undertaken to produce the desired output; and project inputs that give a full range of the resources needed (human, financial, technical etc) to carry out the project activities. During the implementation of the project, all these aspects of the project must be monitored closely. Figure 4.1 shows the types of monitoring that a project manager can employ in monitoring the above mentioned components.

Figure 4.1 Key Types of Monitoring

```
                        ┌─────────────────────┐
                        │      Impact         │
   ┌──────────┐ ⎫       └─────────────────────┘       ⎧ ┌──────────────┐
   │ Results  │ ⎬            ↑          ↓                ⎨ │ Result       │
   └──────────┘ ⎭       ┌─────────────────────┐       ⎩ │ Monitoring   │
                        │     Outcomes        │         └──────────────┘
                        └─────────────────────┘
                                 ↑
                        ┌─────────────────────┐
                        │      Output         │
                ⎧       └─────────────────────┘       ⎫
                │            ↑          ↓                │ ┌──────────────────┐
 ┌────────────────┐ ⎨  ┌─────────────────────┐       ⎬ │ Implementation   │
 │ Implementation │    │     Activities      │         │ Monitoring       │
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                        │      Inputs         │
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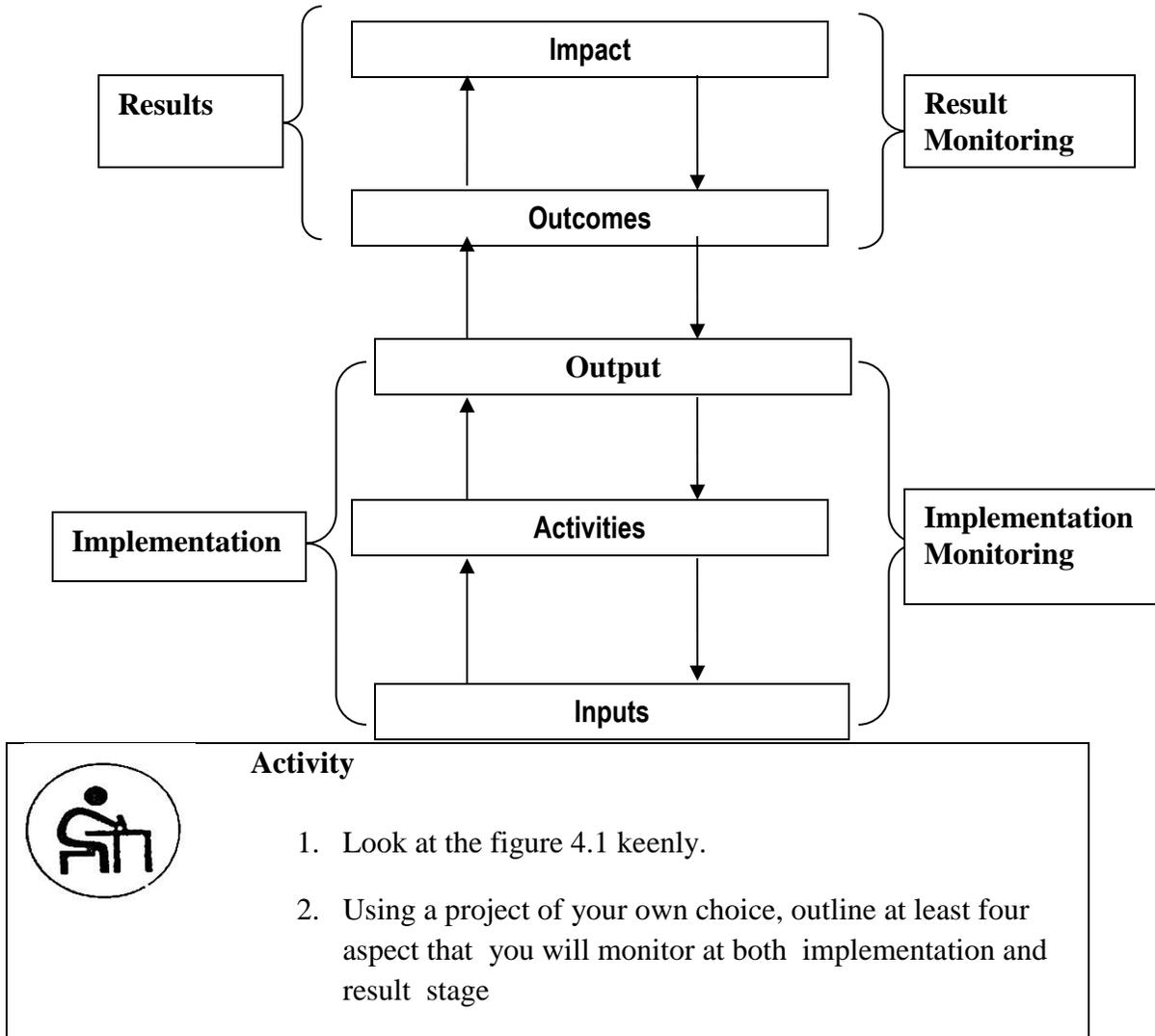|	**Activity**
(icon)	1. Look at the figure 4.1 keenly.
	2. Using a project of your own choice, outline at least four aspect that you will monitor at both implementation and result stage

Figure 5.1 shows two main types of monitoring: implementation monitoring and results monitoring. Let use examine each one of this types of monitoring.

1. **Implementation Monitoring:** This is concerned with tracking the means and strategies used in project implementation. It involves ensuring that the right inputs and activities are used to generate outputs and that the work plans are being complied with in order to achieve a given outcome. Implementation monitoring as the name suggests is the type of monitoring carried out during the roll out of project plans. Figure 4.1 clearly shows that the main concern of implementation monitoring is the inputs, activities and outcome. It involves determining both the amount of activity and the compliance to the plan's standards. The question regarding amounts of activities is addressed for the entire project

rather than for an individual activity. The other concern of project managers is on whether planned inputs are utilized for intended purpose. This sort of monitoring is normally done annually to determine if the planned projects and activities are completed on time and then use that information to better interpret the 'effectiveness of the projects' - monitoring results.

2. **Results Monitoring:** This looks at the overall goal/impact of the project and its impacts on society. It is broad based monitoring and aligns activities, processes, inputs and outputs to outcomes and benefits. Ideally, all monitoring should be results based.Now, let us focus on the second type of monitoring otherwise known as results monitoring. When you look at figure 4.1 carefully, you will notice that the monitoring for results is a stage higher than implementation monitoring. It defines the expected results in terms of project outcome and project impact. A single project activity may be divided into different milestones. The milestones can be referred to as segments of an overall result. Monitoring for result therefore means that the project managers' major concern is whether the project has attained the milestones that lead it to the overall results.

3. **Activity based monitoring:** This focuses on the activity. Activity Based Monitoring seeks to ascertain that the activities are being implemented on schedule and within budget. The main short coming of this type of monitoring is that activities are not aligned to the outcomes. This makes it difficult to understand how the implementation of these activities results in improved performance.

4. **Process (activity) monitoring :** Tracks the use of inputs and resources, the progress of activities, how activities are delivered – the efficiency in time and resources and the delivery of outputs

5. **Compliance monitoring:** Ensures compliance with, say, donor regulations and expected results, grant and contract requirements, local governmental regulations and laws, and ethical standards.

6. **Context (situation) monitoring:** Tracks the setting in which the project/programme operates, especially as it affects identified risks and assumptions, and any unexpected considerations that may arise, including the larger political, institutional, funding, and policy context that affect the project/programme.

7. **Beneficiary monitoring**: Tracks beneficiary perceptions of a project/programme. It includes beneficiary satisfaction or complaints with the project/programme, including their participation, treatment, access to resources and their overall experience of change.

8. **Financial monitoring:** Accounts for costs by input and activity within predefined categories of expenditure, to ensure implementation is according to the budget and time frame.

9. **Organizational monitoring:** Tracks the sustainability, institutional development and capacity building in the project/programme and with its partners.

Take Note

Take an example of a Bore hole project that has a general purpose of providing clean and safe drinking water to the community, the milestone can be considered as:

- Securing funds for the project
- Sensitizing the community
- Putting together a steering management committee
- Procuring the consultancy for the project
- The actual sinking of the bore hole
- Commissioning of the bore hole

All the above milestones lead to the final result which is complete borehole that can provide clean and safe water to the community. These milestones are arranged in order of priority leading towards the overall results. Achieving of the first one leads to the achievement of the second milestone. The achievement of each milestone gives us an assurance of achieving the overall results.

4.4 Types of evaluation

We have discussed the concept of monitoring in chapter one and two, in this section we will focus on various types of evaluation. You should note that types of evaluation are very different from the models of evaluation that we will examine in subsequent lectures. In this section we are going to discuss three types of evaluations.

1. Ex-Ante Evaluation (Need Assessment)

Conducted before the implementation of a project as part of the planning. *Needs assessment* determines who needs the program, how great the need is, and what might work to meet the need. *Implementation(feasibility)evaluation* monitors the fidelity of the program or technology delivery, and whether or not the program is realistically feasible within the programmatic constraints. According to Singh and Nyandemo (2004), ex-ante evaluation is pre-project evaluation undertaken before the implementation of a given project in order to assess the development needs and potentials of the target group/region to test project hypothesis or determine the feasibility of a planned project. This kind of evaluation is carried out during the planning phases of a project. During such evaluation, the following key questions need to be addressed:

- What has the project set out to achieve?

- What are the objectives of the project?
- Who are the intended beneficiaries and how are they to benefit?
- What are the main intended inputs (financial, technical, manpower e.t.c)?
- What are the main intended outputs?
- How do the outputs relate to the objectives?
- What is the implementation plan?
- Have the alternative methods of achieving objectives considered?

> **Take Note**
> The following areas should be addressed at this stage of evaluation:
> - **Needs assessment** to determine who needs the project and how great is the need
> - **Evaluability assessment** to determine whether the evaluation is feasible and how stakeholders can help to shape its usefulness
> - **Project structure conceptualization-**defines project or technology, the target population and possible outcomes
> - **Project implementation evaluation-** determines the fidelity of the project or technology delivery
> - **Process evaluation-** investigates the processes required to deliver the project including alternative delivery procedures

2. Formative evaluation

Conducted during the implementation of the project. Used to determine the efficiency and effectiveness of the implementation process, to improve performance and assess compliance. Provides information to improve processes and learn lessons. *Process evaluation* investigates the process of delivering the program or technology, including alternative delivery procedures. *Outcome evaluations* investigate whether the program or technology caused demonstrable effects on specifically defined target outcomes. **C*ost-effectiveness and cost-benefit analysis*** address questions of efficiency by standardizing outcomes in terms of their dollar costs and values.Formative evaluation is conducted during the development and implementation of a project in order to provide project managers with information necessary for improving the project. This types of evaluation is sometime referred to as Mid-term evaluation.

In general, formative evaluations are process oriented and involve a systematic collection of data to assist decision-making during the planning or implementation stages of a project. They usually focus on operational activities, but might also take a wider perspective and possibly give some consideration to long term effects. While staff members directly responsible for the activity or project are usually involved in planning and implementing formative evaluations, external evaluators might also be engaged to bring new approaches or perspectives (Nadris, 2002). Questions typically asked in those evaluations include:

1. To what extent do the activities and strategies correspond with those presented in the plan? If they are not in harmony, why are there changes? Are the changes justified?

2.   To what extent did the project follow the timeline presented in the work plan?
3.   Are activities carried out by the appropriate personnel

Other issues addressed by formative evaluations include:

1. To what extent are project actual costs in line with initial budget allocation?
2. To what extent is the project moving towards the anticipated goals and objective of the project?
3. Which of the activities or strategies are more effective in moving towards achieving the goals and objectives?
4. What barriers were identified? How and to what extent were they dealt with?
5. What are the main strengths and weaknesses of the project?
6. To what extent are the beneficiaries of the project active in decision making and implementation?
7. To what extent do project beneficiaries have access to services provided by the project? What are the obstacles?
8. To what extent are the project beneficiaries satisfied with project services

3. Ex-post evaluation: Conducted after the project is completed. Used to assess sustainability of project effects, impacts. Identifies factors of success to inform other projects. Conducted sometime after implementation to assess long-term impact and sustainability.

4. **External evaluation:** Initiated and controlled by the donor as part of contractual agreement. Conducted by independent people – who are not involved in implementation. Often guided by project staff

5. **Internal or self-assessment:** Internally guided reflective processes. Initiated and controlled by the group for its own learning and improvement. Sometimes done by consultants who are outsiders to the project. Need to clarify ownership of information before the review starts
6. *Real-time evaluations (RTEs):* are undertaken during project/programme implementation to provide immediate feedback for modifications to improve on-going implementation.
7. *Meta-evaluations*: are used to assess the evaluation process itself. Some key uses of meta-evaluations include: take inventory of evaluations to inform the selection of future evaluations; combine evaluation results; check compliance with evaluation policy and good practices; assess how well evaluations are disseminated and utilized for organizational learning and change, etc.
8. **Thematic evaluations**: focus on one theme, such as gender or environment, typically across a number of projects, programmes or the whole organization.
9. **Cluster/sector evaluations**: focus on a set of related activities, projects or programmes, typically across sites and implemented by multiple organizations
10. **Impact evaluations**: is broader and assesses the overall or net effects -- intended or unintended -- of the program or technology as a whole focus on the effect of a project/programme, rather than on its management and delivery. Therefore, they typically occur after project/programme completion during a final evaluation or an

11. Summative evaluation

Conducted at the end of the project to assess state of project implementation and achievements at the end of the project. Collate lessons on content and implementation process. Occur at the

end of project/programme implementation to assess effectiveness and impact. Summative evaluation (also called outcome or impact evaluation) addresses the first set of issues from those discussed above. They look at what the project has actually accomplished in terms of its stated goals. There are two approaches under this type of evaluation.

1. **End Evaluation** that aims at establishing the project status at the end of the project cycle. For example when external aid is terminated and there is need to identify the possible need for follow- up activities either by donor or project staff.

2. **Ex-post** – these evaluations are carried out two to three years after external support is withdrawn. The main purpose is to assess what lasting impact the project has had or is likely to have and to extract lessons of experience. This type of evaluation is sometimes referred to as impact evaluation.

Summative evaluation questions include:

- To what extent did the project meet its overall goals and objective?
- What impact did the project have on the lives of the beneficiaries?
- Was the project equally effective for all the beneficiaries?
- What components were the most effective?
- What significant unintended impacts did the project have?
- Is the project replicable?
- Is the project sustainable?

For each of those questions qualitative data and quantitative data can be useful.

|	
	Take Note The following areas should be addressed at this stage of evaluation: - **Outcome evaluation-**to investigate whether the programme or technology caused demonstratable effects on specifically defined target outcome - **Impact evaluations-** to assess the overall or net effects intended or untended of the project or the technology as a whole - **Cost effectiveness and cost benefits analysis** – to address questions of efficiency by standardizing outcomes in terms of their dollar costs and values - **Secondary analysis** – to reexamine existing data to address new questions or use methods not previously employed - **Meta-analysis** –to integrate the outcome estimates from multiple studies to arrive at an overall or summary judgment on an evaluation questions

 4.5 Summary

Using illustrations as shown by figure 4.1 the lecture introduces you to two types of monitoring implementation(inputs, activities, outputs) and Results

monitoring(outcomes ,impacts). Three types of evaluation namely, Ex-Ante, Formative and Summative evaluation are also discussed in details.

4.6 Self Assessment questions
1. Identify and explain two major types of project monitoring
2. Outline and examine types of project evaluations
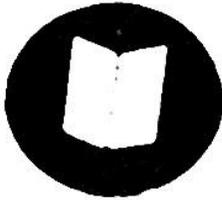
2.10 Further reading
Singh, K.D & Nyandemo, S.N (2004). Aspect of Project Planning, Monitoring, Evaluation and Implementation. Duhra Dune. Bishen Singh Mahendra Pal Singh

Ogula, P (2002) Monitoring and Evaluation of Educational Projects and Programmes. Nairobi. New Kemit Publishers

Worthon, B,R., Sanders, J,R and Fitzpatric J.L (1997); **Programme evaluation- Alternative approaches and practical guidance (2Ed):** New York, Longman Inc.

UNICEF (1991), Guide for Monitoring and Evaluation; making a difference? New York

MONITORING AND EVALUATION THEORIES AND MODELS

5.1 Introduction

In our previous lecture we learned that different evaluations can have different demands depending on core concerns of the evaluators. This has made different scholars devise different ways of approaching various evaluations activities. In this lecture we are going to look at some of the evaluation models and approaches that have been employed over years in project evaluation.

	5.2 Lecture objectives At the end of this lecture you should be able to; 1. Differentiate between evaluation model and evaluation theories 2. Outline at least five models employed in evaluations of projects 3. Form a structure for placing different evaluation needs in terms of methodologies 4. Distinguish between different models used in project evaluation 5. Outline at least five advantages and disadvantages of various evaluation Models

5.3 Meaning of models and theories
5.3.1 Definitions of Theories and Models?

According to Dorin, Demmin and Gabel, (1990) a theory provides a general explanation for observations that are made over time. A theory attempts to explain and predict behaviour based on observations, and conclusions are based on the data that is systematically collected, analysed and interpreted. The theories are based on conclusions and observations that have stood the test of time and conditions and thus are established beyond all doubt. This not withstanding, a theory may be modified depending on new observations Theories seldom have to be thrown out completely if thoroughly tested but sometimes a theory may be widely accepted for a long time and later disapproved.

5.2.2 What is a Model?

Dorin, Demmin and Gabel, (1990) defined a model as " A mental picture that helps us understand something we cannot see or experience directly. Scriven (1974) argues that the term

"model" is loosely used to refer to a conception or approach or sometimes even a method (e.g., naturalistic, goal-free) of doing evaluation 'Models' are to 'paradigms' as 'hypotheses' are to 'theories', which means less general but with some overlaps.

5.2.3 Evaluation Theories

Some scholars (Hamlin, Kirkpatrick) link theories of evaluation to different learning theories. They argue that the main goal of evaluation is learning. There are three basic theories of learning. They are behaviourism, cognitivism and constructivism. Each of these is briefly described below:

5.2.3.1 Behaviourism

Behaviourists believe in the stimulus response pattern of condition behaviour. According to the behaviourist theory of learning, "a child must perform and receive reinforcements before being able to learn". Behaviourism is based on observable changes in behaviour. As a learning theory as a 'black box' in the sense that responses to stimulus can be observed quantitatively, totally ignoring the possibility of thought processes occurring in the mind?

5.2.3.2 Cognition

The cognitive theory of learning is based on the thought process behind the behaviour "Cognitive theorists recognise that much learning involves associations established through contiguity and repetition. They also acknowledge the importance of reinforcement, although they stress its role in providing feedback about the correctness of responses over its role as a motivator. However, even while accepting such behaviouristic concepts, cognitive theorists view learning as involving the acquisition or reorganization of the information." (Good and Brophy, 1990, p. 187). After understanding the differences between evaluation models and evaluation theories let us try to discuss the various evaluation models that are commonly used in evaluations of projects.

1.4 Common evaluation models used in project evaluation
1.4.1 Objective oriented Models

You may recall that in your previous unit of project panning, design, and implementation you defined project objectives as statement of intent that outline what the project intends to achieve in both quantitative and qualitative terms in a specified period of time. Objective oriented Model's concern is whether project objectives have been realized. The distinguishing feature of an objective –oriented evaluation approach is that the purposes of project activities are specified. After which the evaluation efforts is focused on the extent to which those purposes are achieved. Consider an NGO that has an objective of improving the community's life through sensitization.

The objective oriented approach was developed in 1930s and was credited with the works of Ralph Tyler. Tyler regarded evaluation as the process of determining the extent to which the objectives of a project are actually attained. He proposed that for one to evaluate a project he or she must:

1. Establish broad goals or objectives of that project
2. Classify the goals or the objectives
3. Define those objectives in measurable terms
4. Find situations in which achievement of objectives can be shown
5. Develop or select measurement techniques
6. Collect performance data
7. Compare performance data with measurable terms stated

These can be conceptualized in the model below:

Figure5. 1 Tyler's Model
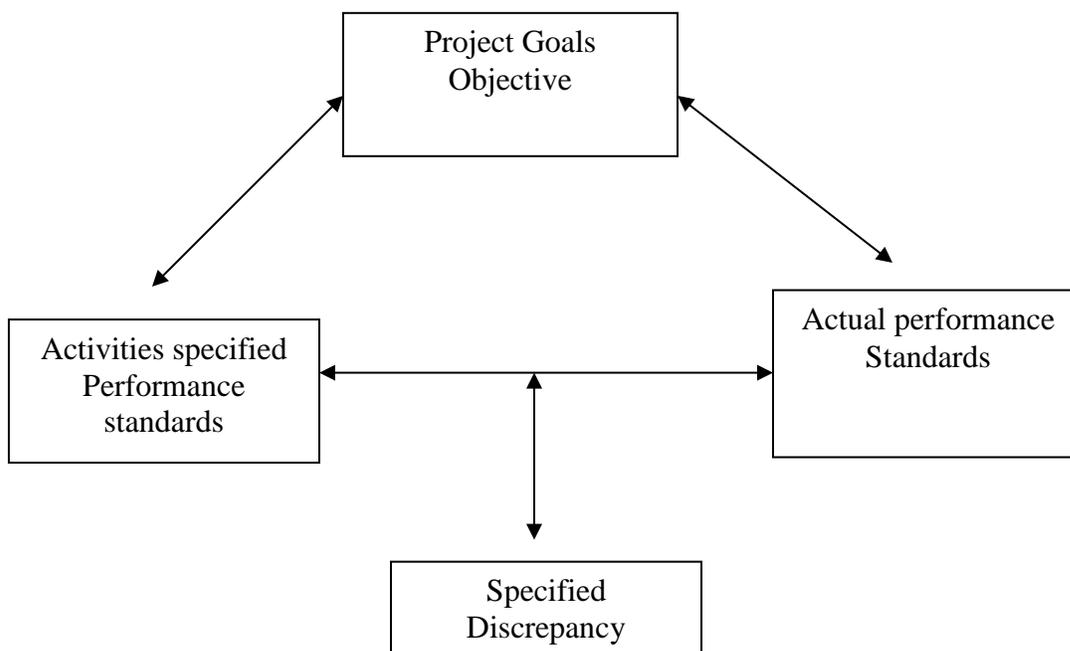
From this figure it is clear that the purpose of objective oriented model of evaluation is to determine the extent to which the objectives of a project have been achieved and emphasis is on the specification of objectives and measuring outcomes. To determine the outcome between project specified performance standards and actual project performance there is need to perform pre-tests and post test to determine the extent to which the objectives have been achieved.

Advantages of objective – oriented model
1. It is easy to assess whether the project objectives are being achieved
2. The model checks the degree of congruency between performance and objective
3. The model focuses on clear definition of the objectives
4. It is easy to understand in terms of implementation
5. It produces relevant information to the project

Disadvantages of the model
1. It tends to focus on terminal rather than on-going programme performance
2. It has a tendency to focus directly and narrowly on objectives with the little attention on the worth of the objectives
3. It neglect the value of the objectives themselves
4. It neglect the transaction the occurs within the project being evaluated
5. It neglect the context in which the evaluation is taking place
6. It ignores important outcomes other than those covered by the objectives
7. It promotes linear, inflexible approach to evaluation
8. There is a tendency to oversimplify project and tendency to focus on terminal rather than on –going and pre-project information
9. It does not take unplanned outcomes into account. This is because it focuses on the stated objectives.
10. It does not pay enough attention to process evaluation. In other words it does not consider how the activities that lead to achievement of project objectives are carried.

5.4.2 Management Oriented Approaches
The management oriented evaluation model is more concerned with providing information that can help project managers make crucial decision about the project. The rationale of the management –oriented evaluation approach is that evaluation data is an essential component of good decision making. Management oriented model of evaluation manifest in various ways. Let us discuss some of these approaches.

5.4.2.1 The Context –Input- Process –Product evaluation model (CIPP)
The purpose of this model is to provide relevant information to decision makers for judging decision alternatives. The proponent of this model is Daniel Stafflebeam who argues that evaluation should assume a cyclical approach whereby feedback is continuously provided to the decision makers. The models highlights different levels of decision makers and how, where and in what aspects of the project the results will be used for decision making. The model assumes that the decision maker is an audience to whom management oriented evaluation is directed

(Worthen, et al, 1997). The model has various types of evaluation that must be accomplished. Let us analyze each one of them.
.
1. Context Evaluation

Context evaluation is the most basic type of evaluation under CIPP model. Its purpose is to provide a rationale for determining of objectives. Specifically, it defines the relevant environment, identifies unmet needs and unused opportunities and diagnoses the problems that prevent needs from being met and opportunities from being used. Diagnosis of the problems provides an essential basis for developing objectives whose achievement results in project improvement.

2. Input evaluation

The purpose of input evaluation is to provide information for determining how to utilize resources to meet project goals. This is accomplished by identifying and assessing relevant capabilities of the responsible agency, strategies for achieving project goals, and designs for implementing a selected strategy. The end product of input evaluation is an analysis of one or more procedural designs in terms of cost benefit. Specifically, alternative designs are assessed concerning staffing, time, budget requirements, potential procedural barriers, the consequences for not overcoming these barriers and the possibilities and the cost of overcoming theme, relevant of design to the project objectives, and overall potential of the design to meeting the objectives. Essentially, the input evaluation provides information to decide if outside assistance is required to meet the objectives.

3. Process Evaluation

Process evaluation is necessary to provide periodic feedback to persons responsible for implementing plans and procedures. Process evaluation has three main objectives
  i. To detect or predict defects in the procedural designs or its implementation during the implementation stages
  ii. To provide information for project design
  iii. To maintain record of the procedures as it occurs

There are three strategies that should be followed during process evaluation. The first is to identify and monitor continuously the potential source of failure in a project. This include, but not limited to, interpersonal relationships among staff and students, communication channels, logistics, understanding s and agreement within the intent of the project by person involved in and affected by it , and adequacy of the resources, physical failures, staff and time schedules. The second involves projecting and serving pre-project decisions to be made by project managers during the implementation of a project. The third process evaluation strategy is to note main features of the project design.

4. Product evaluation

The purpose of product evaluation is to measure and interpret attainments not only at the end of a project cycle, but as often as necessary during the project. The general method of product evaluation includes devising operational definitions of activities, measuring criteria associated

with the objectives of the activity comparing this measurements with predetermined absolute of relative standards and making rational interpretations of the outcomes using the recorded context, input and process information.

Strengths of CIPP
1.   It provides data to administrators and other decision makers on a regular basis.
2.   It is sensitive to feedback.
3.   It allows for evaluation to take place at any stage of the programme/project.

Limitations of CIPP
1. It lays little emphasis on value concerns.
2. Decision-making process is unclear.
3. Evaluation may be costly in terms of funds and time if this approach is widely used.

5.4.2.2 Alkins Model (UCLA)-The UCLA Evaluation Model
The UCLA (University of California at Los Angeles) model was developed by Alkini (1969). The conceptual framework for the UCLA model closely parallels that of the CIPP. According to Alkin, evaluation is the process of ascertaining the decision areas and concern, selecting appropriate information and collecting and analyzing information in order to report summary data useful to decision makers in selecting among alternatives (Alkin, 1969).

The model has the following five steps (Worthen and Sanders 1997:5).
i)   System assessment – which provides information about the state of the system. This is similar to context evaluation in the CIPP model
ii)   Project planning which assist in the selection of particular project likely to be effective in meeting specified project needs. (Very similar to input evaluation)
iii)   Project implementation which provides information about whether the project was introduced to the appropriate group in the manner intended.
iv)   Project improvement which provides information about how a project is functioning, about whether the interim objective are being achieved and whether unanticipated outcomes are appearing This is similar to process evaluation in the CIPP model
v)   Project certification which provides information about the value of the project and its potential for use elsewhere (Very similar to product evaluation).

Both the CIPP and UCLA frameworks for evaluation appear to be linear and sequential, but the developers have stressed that such is not the case. For example, the evaluator would not have to complete an input evaluation or a systems assessment in order to undertake one of the other types of evaluation listed in the framework. Often evaluators may undertake 'retrospective' evaluations (such as a context evaluation or a system assessment) in preparation for a process or project improvement evaluation study, believing this evaluation approach is cumulative, linear and sequential: such steps are not always necessary. A process evaluation can be done without having completed context or input evaluation studies. At other times, the evaluator may cycle into other type of evaluation if some decisions suggest that earlier decisions should be reviewed (Sanders et al, 1997: 102).

Strengths

1. It provides administrators and other decision makers with useful information.
2. It allows for evaluation to take place at any stage of the programme. It is holistic.
3. It stresses timely use of feedback by decision makers.

Limitations

1. It gives preference to top management.
2. The role of value in evaluation is unclear.
3. Description of decision-making process is incomplete.
4. It may be costly and complex.
5. It assumes that important decisions can be identified in advance.

5.4.2.3   Provu's Discrepancy Model:

Some aspect of the model is directed towards serving the information needs of project managers. It is system oriented and it focuses   on input, process, and output at each of five stages of evaluation: project definition, project installation, project process, project products, and cost-benefit analysis.

5.4.2.4   Utilization- focused evaluation:

This approach was developed by Patton (1986). He emphasized that the process identifying and organizing relevant decision makers and information users is the first step in evaluation. In his view the use of evaluation findings require that decision makers determine what information is needed by various people and arrange for that information to be collected and provided to those people. He recommends that evaluators work closely with primary intended users so that their needs will be met. This requires focusing on stakeholders' key questions, issues, and intended uses. It also requires involving intended users in the interpretation of the findings, and then disseminating those findings so that they can be used. One should also follow up on actual use. It is helpful to develop a utilization plan and to outline what the evaluator and primary users must do to result in the use of the evaluation findings. Ultimately, evaluations should, according to Patton, be judged by their utility and actual use

5.4.2.5   System analysis approach:

The approach has been suggested to be linked to management – oriented evaluation model. However, most system analysis may not be evaluative oriented due to their narrow research focus.

5.5 Expertise - Oriented Evaluation Approaches

The expertise oriented approaches to evaluation depend primarily on professional expertise to judge an educational activity, programme or product. Some scholars regard evaluation as a process of finding out the worth or merit of a programme. Stake (1975), for example, views evaluation as being synonymous with professional judgments. These judgments are based on the opinion of experts. According to these approaches, the evaluator examines the goals and objectives of the programme and identifies the area of failures or successes.

5.6 Consumer oriented evaluation approache

Some theorists consider evaluation a consumer service. They stress that although the needs of project funder and mangers are important, they are often not the same as those of consumers. The main proponents of this theory are Michael Scrivens. A consumer-oriented evaluation approach typically occurs when independent agencies, governmental agencies, and individuals compile educational or other human services products information for the consumer. Such products can include a range of materials including: curriculum packages, workshops, instructional media, in-service training opportunities, staff evaluation forms or procedures, new technology, and software. The consumer-oriented evaluation approach is increasingly being used by agencies and individuals for consumer protection as marketing strategies are not always in the best interest of the consumer. Consumer education typically involves using stringent evaluation criteria and checklists to evaluate products.

The consumer-oriented evaluation approach is typically applied to education products and programs. It is typically used by government agencies and other independent educational consumer advocates (i.e. the Educational Products Information Exchange), with the common goal to make more product information available. Although this approach can be used for any consumer product, in the public sector it is typically used for educational products and programs.

Advantages of using a consumer-oriented evaluation approach
1. Has made evaluations available on products and programs to consumers who may have not had the time or resources to do the evaluation process themselves
2. Increases the consumers' knowledge about using criteria and standards to objectively and effectively evaluate educational and human services products
3. Consumers have become more aware of market strategies

Disadvantages of using a consumer-oriented evaluation approach
1. Increases product costs onto the consumer
2. Product tests involves time and money, typically passed onto the consumer
3. Stringent criteria and standards may curb creativity in product creation
4. Concern for rise of dependency of outside products and consumer services rather than local initiative development

5.7 Adversary oriented evaluation approaches (Judicial).
Judicial or adversary-oriented evaluation is based on the judicial metaphor. It is assumed here that the potential for evaluation bias by a single evaluator cannot be ruled out, and, therefore, each "side" should have a separate evaluator to make their case. For example, one evaluator can examine and present the evidence for terminating a project and another evaluator can examine and present the evidence for continuing the project. A "hearing" of some sort is conducted where each evaluator makes his or her case regarding the evaluand. In a sense, this approach sets up a system of checks and balances, by ensuring that all sides be heard, including alternative explanations for the data. Obviously the quality of the different evaluators must be equated for fairness. The ultimate decision is made by some judge or arbiter who considers the arguments and the evidence and then renders a decision.

Example of this model includes multiple "experts" otherwise known as blue-ribbon panel, where multiple experts of different backgrounds argue the merits of some policy or project. Some committees also operate, to some degree, along the lines of the judicial model. As one set of authors put it, adversary evaluation has "a built-in **metaevaluation**" (Worthen and Sanders, 1999). A metaevaluation is simply an evaluation of an evaluation.

By showing the positive and negative aspects of a program, considering alternative interpretations of the data, and examining the strengths and weaknesses of the evaluation report (metaevaluation), the adversary or judicial approach seems to have some potential. On the other hand, it may lead to unnecessary arguing, competition, and an indictment mentality. It can also be quite expensive because of the requirement of multiple evaluators. In general, formal judicial or adversary models are not often used in project evaluation.

5.8 Goal free Evaluation Approach

According to this approach, project goals and objectives should not be taken as given. Like other aspects of the project or activity, they should be evaluated. In addition, the evaluator focuses on the activity rather than its intended effects. In goal free evaluation, the evaluator is not limited to the goals of the project; he or she focuses on actual outcomes.

5.9 Naturalistic and participation oriented approaches

This approach stresses firsthand experience of project settings and activities. It involves intensive study of the project as a whole. Stake calls it *responsive evaluation* i.e. what people do naturally. Evaluators are expected to be responsive to project realities and to the reactions. They are also expected to be responsive to concerns and issues of participants rather than being preordinate i.e. strictly following a prescribed plan. In this approach, the evaluator studies project activities as they occur naturally, without manipulating or controlling it. Naturalist evaluation tends to be based on project activity rather than project outcomes. Naturalistic evaluators use collaboration of data through cross-checking and triangulation to establish credibility.

5.10 Participatory evaluation approach

This model is also called collaborative or stakeholder-based evaluation model. Proponents of this model contents that since different parties have an interest in the outcomes of the evaluation they should always be involved in the design and conduct of evaluations. Stakeholder-based evaluation is expected to yield two positive outcomes, realistic and more effective results and improved utilization of the findings. However, this approach should be used sparingly because of the requirements of confidentiality and credibility that dictate the distancing of the evaluator from the evaluated (Scriven, 2001, p. 28). Using a collaborative approach is also costly in time and money. Moreover, different stakeholders tend to have conflicting expectations.

5.11 Summary

This lecture has attempted to distinguish between evaluation model and evaluation theories. The lecture has also outline and analysed various evaluation models giving where necessary the advantages and disadvantages of each. From the analysis of the various models and

approaches used in evaluation you can clearly trace and locate each model of evaluation in terms of its applicability in the evaluation of projects.

4.12 Self Evaluation questions

3. Distinguish between evaluation theory and evaluation models
4. Discuss the advantages of using a model in monitoring and evaluation.
5. What are the main differences between objective-oriented and management-oriented evaluation approaches

4.13 Further Reading

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INDICATORS FOR MONITORING AND EVALUATION

6.1 Introduction

In the previous lecture we discussed monitoring and evaluation theories and models. In this lecture we are going to discuss indicators for monitoring and evaluation. More specifically, we will attempt to define the term 'indicator' and then examine various types of indicators. The importance of indicator in monitoring and evaluation will also be discussed. We will later examine the characteristics of good indicators, and steps that a project manager can follow in selecting SMART indicators for monitoring and evaluation.

6.2 Lecture objectives

By the end of this lecture you should be able to:

1. Definition the term indicator
2. Explain the importance of indicators in monitoring and evaluation
3. Outline categories of indicators used in monitoring and evaluation
4. Explain types of indicators
5. Discus the characteristics of good indicators
6. Describe steps in selecting SMART indicators
7. Describe the vertical and horizontal logic used in logical framework

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6.3 The concept of Project Indicators

In this section we are going to attempt to define the term 'Indicator', and then discuss the importance of indicators in project monitoring and evaluation.

6.3.1 Definition of an indicator.

An indicator is a specific, observable and measurable characteristic that can be used to show changes or progress a programme is making toward achieving a specific outcome. There should be at least one indicator for each outcome. The indicator should be focused, clear and specific. The change measured by the indicator should represent progress that the programme hopes to make.

An indicator should be defined in precise, unambiguous terms that describe clearly and exactly what is being measured. Where practical, the indicator should give a relatively good idea of the data required and the population among whom the indicator is measured. Indicators do not

specify a particular level of achievement -- the words "improved", "increased", or "decreased" do not belong in an indicator.

An indicator is a sign showing the progress of a situation. It is a basis for measuring progress towards the objectives. A specific measure, that when tracked systematically over time indicates progress (or no progress) toward a specific target. An indicator asks the question: - How will we know success when we see it? You can also consider an indicator as road signs that show whether you are on the right road, how far you have traveled, and how far you are yet to travel to reach your destination.

	Take Note In other words project indicators can be viewed as benchmarks or milestones that show progress towards project objective

	6.1 Activity
	Imagine moving between two major towns in your country - say town A to town B (Use example of towns that are familiar with you)
	    1 List down some of the landmarks and signs (Indicators) that make you know that you are heading towards Town B.
	    2 What do you think is the importance of those indicators to other travellers moving in the same direction as you
	    3 Try to link your answers in question two with the discussion in section 6.3.2

6.3.2   Importance of project indicators in project monitoring and evaluation

Indicators play very important roles in project monitoring and evaluation. Let's now focus on some of these importances.

1. Indicators measure progress in project inputs, activities outputs, outcomes and goals
2. Indicators enable you to reduce a large amount of data down to its simplest form. (for instance a project to sink borehole with an aim of improving access of a certain community to safe drinking water may have outcome indicator reduced to ' the percent of households in that community with safe drinking water)
3. When compared with targets or goals, indicators can signal the need for corrective management action. For instance, if in the project of sinking the borehole for the community was supposed to be completed in the duration of one year and it happens to overrun the duration, (One year in this case serves as a time indicator in which the project should be completed) Project managers need to make quick corrective decision to ensure that the project is within its completion time.
4. Indicators can evaluate the effectiveness of various project management action
5. Indicators can provide evidence as to whether the objectives are being achieved
6. Indicators provide the qualitative and quantitative details to a set of objectives

6.4 Classification and types of indicators

Indicators can be classified in three categories as follows;

1. **Quantitative indicators**; these types of indicators provides hard data to demonstrate results achieved. They also facilitate comparisons and analysis of trends over time. Quantitative indicators are statistical measure that are expressed in numbers, percentages, rates, ratio e.t.c

2. **Qualitative indicators**: these are indicators that provide insight in changes in organizational process, attitudes, beliefs, motives and behaviuors of individuals. They imply qualitative assessments, compliance with, quality of, extent of, level of e. t c. Qualitative indicators must be expressed quantitatively (in figures) in order to illustrate change.

3. **Efficiency indicators:** These tell us whether we are getting the best value for our investment. In order to establish such indicator, we need to know the market, i.e. the current price of desired output considering quantity and quality aspects. Efficiency indicators are unit cost measures expressed in cost per unit of client , students, schools e.t.c

6.4.1 Types of indicators

The above classifications of indicators give rise to various types of indicators. The main criterion for differentiating them is the level at which the project is assessed e.g output, outcome, or impact. Some of the types of indicators are discussed below;

1. **Input indicators:**

These are quantified statements about the resources provided to the project. They rely on management, accounting and other resource's used in the development of the project. They use management records illustrating the use of resources by the project. Because indicators use the functioning of the organization at the input level, a good accounting system is needed to keep track of expenditures and schedules developed to track timelines. Input indicators are used mainly by managers closest to the tasks at the implementation level and are consulted frequently, probably as often as daily or weekly. They focus on the use of funds personnel, materials and other inputs necessary to produce the intended outputs of project activities. These indicators can utilize the relevance and performance criteria applicable at implementation level

2. **Process indicators**

The term 'process; is used to imply all that goes on during the implementation phase of the project. Process indicators therefore are those indicators that measure the progress of the project during implementation. That is, the extent to which stated objectives are being achieved. The indicators capture information from project management records from the field or project sites. They are based on cost, timelines and the scope of the project. They apply at the relevance and performance criteria of the project. Examples include: date by which building site clearance must be completed, latest date for delivery of fertilizers to the firm store, number of health outlets, number of women receiving contraceptive, status of procurement of school textbooks.

3. Output indicators

Outputs are tangible products of project activities. They show the immediate output of the project availed after each of the tasks conducted at the project implementation. They are the results of activities performed by different components of the project and use quantitative ways of measuring physical entities or some sort of qualitative judgment on timed production of outputs. Decision on the performance of the project is determined by reading the output indicators. They show the worth of the project strategy, more so where the outputs are weak and poor, then the project effectiveness is cynical and hence needs adjustment. Therefore, output indicators will use the effectiveness criteria to show the performance of the project. Outputs include; physical quantities, improved capacities, services delivered, systems introduced, milestones achieved, legislation passed, awareness campaigns affected etc. Examples may percentage of community members attending community workshop, number of buildings constructed by the project.

4. Impact indicators

Impact is the positive or negative long-term changes that can be attributed to the project intervention. When developed, they forecast long –term effects of the project on the target population after some duration from the project completion. Precisely impact refers to medium or long-term development changes expected on the beneficiaries or target region upon project completion. They are at a higher level of project process. Impact depends on data gathered from beneficiaries. To obtain early indication of impact, a survey of beneficiary perception about project services is conducted. Measures of change often involve complex statistics about economic or social welfare and depend on data that is gathered from the beneficiaries.

5. Exogenous indicators

These are indicators that cover factors outside the control of the project but which might affect its outcome. They include risks and the performance of the sector in which the project operates. Data collection for monitoring and evaluation cover a wider external environment if expected to impinge on the projects performance not withstanding additional burden on the projects monitoring and evaluation effort. Exogenous indicators will help in checking the project assumptions and risks that are likely to affect the project. Example is during project implementation, policy decision about currency exchange rates can adversely affect profitability. Management should carefully monitor and alert project participants about deteriorating situations if the indicators of environment dictate so.

6. Proxy indicators

These refer to indirect measures or signs that approximate or represent a phenomenon in the absence of a direct measure. Cost, complexity or the timeliness of data collection may

prevent results from being measured directly. Proxy indicators are expected to provide reliable estimation of the direction of movement of the ideal but un attainable indicators for example, number of children fully immunized is a reliable proxy for infant mortality from immunizable diseases because immunization is known to be highly infective. The proxy indicators that qualify as a measure must have strong causality link to the direct measure and should be measurable on regular basis. It can supplement available information by obtaining data from related topics or different sources. These is often the case for outcomes in behavioral change, social cohesion and other results that are difficult to measure. For example, if ethnicity in target villages is unavailable, you can complement the data by use of data on the mother tongue or spoken language. Therefore, caution should be taken when interpreting proxy indicators because over reliance on indicators that can be manipulated by individuals like mother tongue may lead to wrong interpretation.

Take Note
1. Indicators only indicate:-
    - An indicator will never completely capture the richness and complexity of a system
    - Indicators are designed to give 'slices' of reality
    - They might provide the truth but they rarely give the whole truth
2. Indicators encourage explicitness in that they forces us to be clear and explicit about what we are trying to do
3. Indicators usually rely on numbers and numerical techniques
    - Indicators should not just be associated with faulty finding: they can help us understand our performance be it good or bad
    - Well designed measurement systems identify high performers (from whom we can learn), as well as systems (or parts of the systems), that may warrant further investigation and intervention

6.4.2 Characteristics of good indicators

After looking at the types of indicators, let us ask ourselves: What does a good indicator look like? What qualities does it display? Here are some of the characteristics of a good indicator:

Validity

This is accurate measure of behaviuor practice or task. Data may not be valid if
- Inaccurate measurement tools are used in collecting data
- Sample is unrepresentative (not from correct target population or small sample size)
- Data is incomplete
- Evaluators are biased

Reliability

The indicator is reliable when it consistently measures what it purports to measure in the same way even when used by different evaluators.

Precise:

Indicator should be operationally defined in clear terms and should be context specific, subjective, or specified with clear yard sticks. This reduces confusion between indicators

Independent

Indicators should be non-directional and un-dimensional, depicting a specific definite value at one point in time. Example of directional could be healthier families or policy improvement. In this indicator you will realize that the result is one. Example of mult-dimension indicators could be sustainability or quality. The characteristic of independent captures the idea that the value of the indicator should stand alone. It is best to avoid ratio rate of increase or decrease, or other directional definition.

Objectively verifiable indicator

An indicator is said to be objectively verifiable if;

- it shows the right direction (progress or failure of the project)
- it produces the same value in repeated measures/calculation on the same observation
- it leads to the same conclusions if underlying situations are similar or same
- its interpretation is independent of evaluator or researcher

Integrity

Indicators should be truthful.

- For example number of HIV positive tested by ELISA against the number of HIV positive tested by RAPID HIV CHECK
- To improve service delivery you train service providers; what indicator would be more truthful – number of providers trained or number of trained providers?
- How truthful can an indicator be on self reported sexual behaviour?

Measurable

One should be able to quantify an indicator by using available tools and methods. An evaluator should consider whether tools and methods for collecting or calculating the indicator information are available.

Timely

An indicator should provide a measurement of a period of time of interest with data available for all appropriate intervals. Timelines considerations include:

- Reporting schedules
- Recall periods
- Survey schedules
- Length of time in which project change can be detected

Programmatically important

This implies that indicator should be linked to an impact or to achieving the project objectives that are needed for impact

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Take Note
When designing indicators, effort should be made to link them to project activities. Failure to do so renders the indicator ineffective in terms of providing information useful in measuring the performance of the project.

Disaggregated if possible
It is important to disaggregated project output by either gender, age, location or any other dimensions suitable for the project. This is very important for better management and reporting. Projects often require different approaches for different target groups and therefore disaggregated indicator could help decide whether or not specific groups participate in and or benefit from projects.

Feasible
Data can be gathered over a specific time period and at an acceptable level of effort and cost

Comparability:
This assists in understanding results across different population groups and project approaches

6.4.3 Steps in selecting SMART indicators

After examining the characteristics of indicator, we now need to discuss the steps a project manager can follow in selecting SMART indicators. The term 'SMART' mean Specific, Measurable, Attainable, Realistic and Time bound. In other words, when selecting indicators, you need to ensure that they satisfy the SMART criterion.

Step One:
Clarify the result statement. Identify what needs to be measured. Good indicators start with result statements. Start with overall objective or goal or work backward

Step Two
Develop a list of possible indicators. With the help of project stakeholders try brainstorm all the indicators listed at each level of results. This brainstorming can be internal, consultation with experts, seeking experiences of other similar organizations or pre-existing resources.

Step Three
Assess each possible indicator in terms of:
Measurability- can it be quantified and measured by some scale
Practicability – can data be collected on timely basis and at reasonable cost
Reliability- can it be measured repeatedly with precision by different people
Relevance– is the indicator attributed to your organization

Management usefulness- Does the project staff and audience feel that the information provided by the measure is critical to decision-making

Directness/Precision – does the indicator closely track the result it is intended to measure?

Sensitivity – does it serve as early warning of changing conditions

Capability of being disaggregated- can data be broken down to by gender age location or other dimension e.g. class tribe where appropriate

Step Four

Select the best indicators:

Based on your analysis and the context, narrow the list to the final indicator that will be used in the monitoring system. Ensure that every element of the indicator and how it is measured is defined. There should be an optimum set that meets management needs at a reasonable cost

You should limit the number of indicators used to track each objective or result to a few (two or three) while remembering your target audiences both external and internal.

6.5 Indicators and Logical Framework

From the previous discussion, we learned that indicators help us assess progress of the project and also quantify the achievement of the project results. This makes indicators important aspect of project planning and implementation. In this section we are going to discuss the central role indicators play in logical framework (Log-frame) which is considered as a key project planning, monitoring and evolution tool. We will start by examining the concept of log-frame.

6.5.1 Logical framework

Log-frames have now been in use for more than 30 years, and their overall structure has changed very little since they were first developed. When USAID first began to use log-frames, they served mainly as guides to project design and to make evaluation possible, by clearly identifying objectives and indicators. Now they serve as a guide to understanding logical project structure and the expected impacts and results. They make evaluation of projects possible.

Uses of Log framework

1. Log-frame helps improve the quality of projects design. The framework requires that project objectives are specified in clear terms. It requires the use of performance indicators and assessment of risks.
2. Summarizing design of complex activities
3. Assisting the preparation of detailed operation plans
4. Providing an objective basis for activity review, monitoring and evaluation

Advantages of Log frame

- Ensures that decision makers ask fundamentals questions and analyze assumptions and risks
- Engages stakeholders in the planning and monitoring process

- When used dynamically it is an effective management tool to guide the implementation of monitoring and evaluation

Disadvantages
- If managed rigidly, it stifles creativity and innovation
- If not updated during implementation, it can be a static tool that does not reflect changing conditions

6.5.2 Components of logical framework

For us to understand the components that characterizes the logical framework, it is imperative that we focus on elements that are presented in logical framework that shows vertical order flow (Vertical Logic) and those represented in a horizontal flow (Horizontal logic)

6.5.2.1 Horizontal Logic

Horizontal logic is the logic that goes across the matrix and describes how the achievement of objectives will be measured or verified (indicators), how this information will be obtained (Means of Verification), what external factors could prevent the project from achieving the next level objectives (assumptions).

a) **Narrative summary column**

These contain the following three strategic elements: resources, purpose and goals. The first two levels i.e purpose and resources are specific to the project itself. The logic that links them can be illustrated with the following questions: What resources (inputs/activities usually in dollar amount) will have to be invested in the project in order for the women and men from targeted population groups to benefit from the achievement of the project purpose?

It is important that we, not only design projects to achieve meaningful results but also for the benefits of the society at reasonable costs. The purpose statement of the project must identify the intended beneficiaries. The first two levels of the narrative summary are essential to the strategic planning process and must be taken into consideration in a results oriented logical framework. Although the purpose is the reason or basic motive why the project is to be undertaken, it should be defined in the context of broader strategic planning. A result –oriented logical framework thus serves project level management purposes by ensuring that projects are identified, selected, designs and approved within the context of a strategic planning framework at all levels of the project.

b) **Means of Verification:**

Information for the means of verification (MOVs) column should be developed at the same time as the indicators. It provides information to help justify the achievement of the project at the indicator level. The means of verification is like the exhibit to help verify what has been said to have been done by the project manager at various project levels. During the process of the project, care should be taken to keep these exhibits which are in the forms of registers, receipts,

records, notices, memos, e.t.c. It can also be data previously captured by various means which can be available when needed in the cause of evaluation. Means of verification should clearly specify the anticipated source of information, the methods to collect that data, such as sample surveys, administrative records, workshops or focus group, observation, Participatory Rural Appraisal (PRA) techniques or Rapid Rural Appraisal (RRA) techniques. MOVs should also specify those who are responsible for data collection e.g. project staff, independent survey teams e.t.c. Also they should indicate the frequency with which the information should be provided (eg Monthly quarterly, annually etc) and the format required to collect the data. The means of verification is either more or less structured depending on the intervention logic level. At the lower level, monitoring and evaluation relies more on secondary information than primary. Secondary information is captured from such items as receipts; register records etc. which is more applicable at the lower level of the matrix. At the upper level, which measures the project impact relies on the interviews questionnaires etc which are more primary. This is well illustrated by figure 6.1

Figure 6.1 means of verification stage

Primary Data
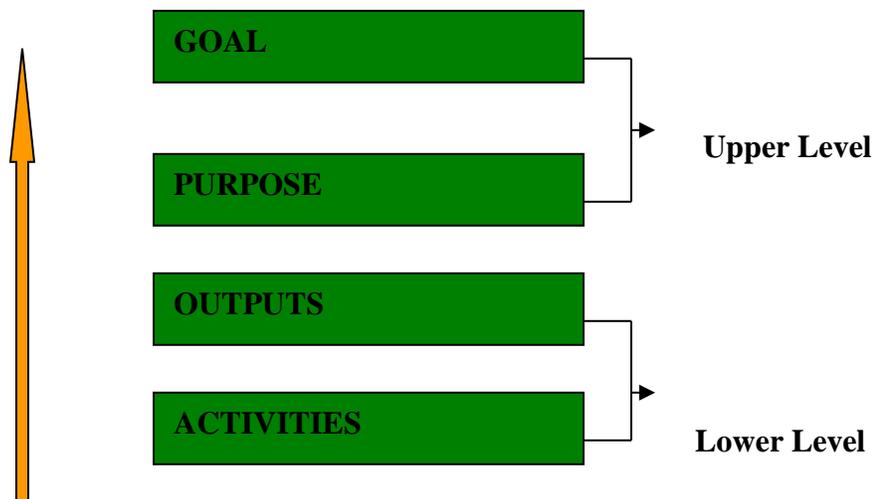
Secondary data

c) Assumptions

Assumptions are conditions external to the project that may affect the progress or success of the project and over which the project management has little control. They are stated as positive conditions that need to exist to permit progress of the project to the next level e.g. price changes, rainfall, political situations etc.

An assumption needs to be relevant to the project or otherwise relevant to the level of the objectives to allow the project to progress to the next level. Contrary to a risk, which is negative statement of what might prevent objectives project from being achieved; assumptions are a positive statement of a condition that must be met in order for project objectives to be achieved. It is important to note that assumptions are not delicate community problems. If the assumptions

prove that they will impede on the project moving to the next level, it is extremely significant to capture them and strategically manage the project to bypass these problem or otherwise, redesign or terminate the project.

Assumptions are normally forecast and should be relevant and probable. Therefore, the decision to select an assumption depends on some sort of value judgment on the part of the evaluator. This can be based on the normal occurrences of risks or events. If something rarely happens as risks, then the assumption is based on the rare occurrence aspects. The chance of that thing happening is treated as rare. As a suggestion, the best way to go about the assumption is by probably giving a percentage chance of something happening or not happening. Several aspects can be evaluated in this way and those with higher risks are definitely denoted. These can help the evaluator make valid judgment on assumption than can affect the project.

For instance, if a project is located in an arid region you will not assume that the climate will be conducive for growing maize where maize has never grown. You may also not assume that it is going to rain in March when there is rare rain in that month. Provisionally, estimate that the assumption has a chance of happening before deciding on it as a problem. From your estimate if it has no chance of not happening do not bother about it. Logical framework demands that all hypotheses, assumptions and risks relevant to a project are made explicit. This then further demands that the appropriate action is considered (necessary taken) before problems materialize and affects the project. Some factors to consider include:

1. How important are the assumptions?
2. How big are the risks?
3. Should the project be redesigned?
4. Should some elements of the proposed project be abandoned?

In logical framework, relationships between the assumptions and the intervention logic are presented as causal, one step leading to the next. If one step is not completed successfully then the next will not be achieved.

The casual relationship between the intervention logic elements and assumptions is as follows:

- if the preconditions are complied with, then the activities can be started;
- if the activities are realized, and if the assumptions at the activities level have come true, then the outputs will be realized;
- if the outputs are realized, and if the assumptions at the results level have come true then the project purpose would be realized
- if the project purpose is realized and if the assumption and the project purpose level have come true, then the goal will have been significantly be contributed to

Consider the following figure;

Figure 6.2 Flow of the logic in Horizontal logic
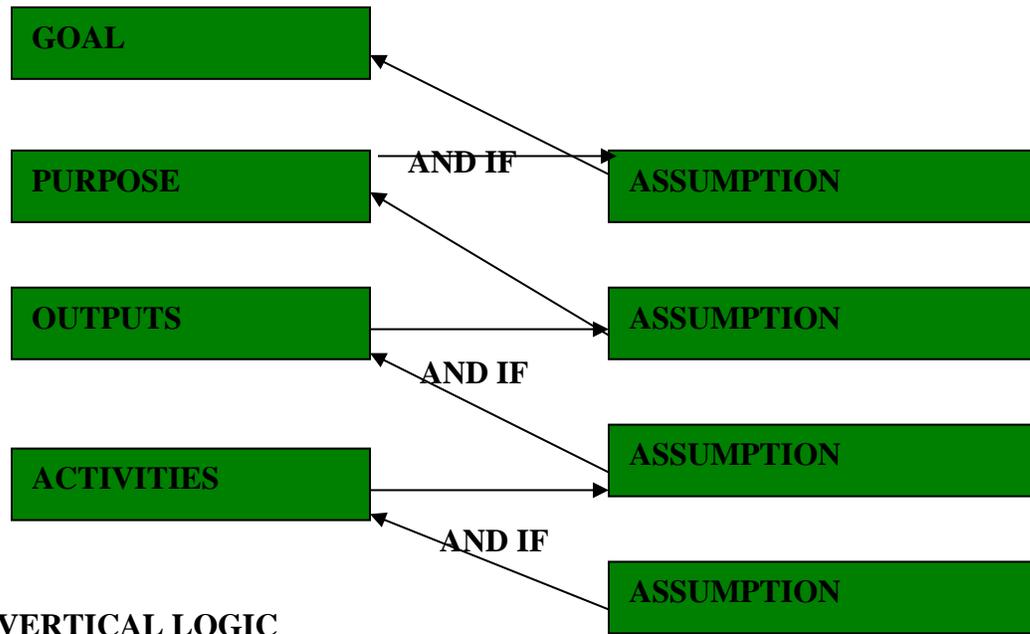
VERTICAL LOGIC

The vertical logic has four levels where each lower level of activity must contribute to the next higher level. It elucidates between the casual relationships between the different levels of objects and specifies the important assumptions and uncertainties beyond project management control. The capacity of the project to move to the next higher level will be determined by the assumptions, which are concrete determinant factors of the project proceeding from one lower level to the next higher level all the way to the goal as the highest level. Each level has a set of the logical framework items referred to as objectives. The items are the intervention logic, with its corresponding means of verification, objectively verifiable indicators and the assumptions. As a set the items are addressed by the logic framework sequentially upwards from the lower level to the higher level. For example, project activities contribute to the achievement of project outputs. The achievement of the project outputs lead to the achievement of project purpose and finally the purpose contribute to the goal of the project. The goal of the project is the ultimate aim of the project; the reason for the project existence. The description in the matrix involves a detailed breakdown of the sequence of causality. This can be expressed in terms of

   1   if inputs are provided, then the activities can be undertaken;
   2   if the activities are undertaken, then outputs will be produced;
   3   if outputs are produced, then the purpose will be supported, and;
   4   if the purpose is supported, this should then contribute to the overall goal

Figure 6.3 Logic in the objectives

THEN → **GOAL**

IF → **PURPOSE** ← THEN

THEN → **OUTPUTS** ← IF
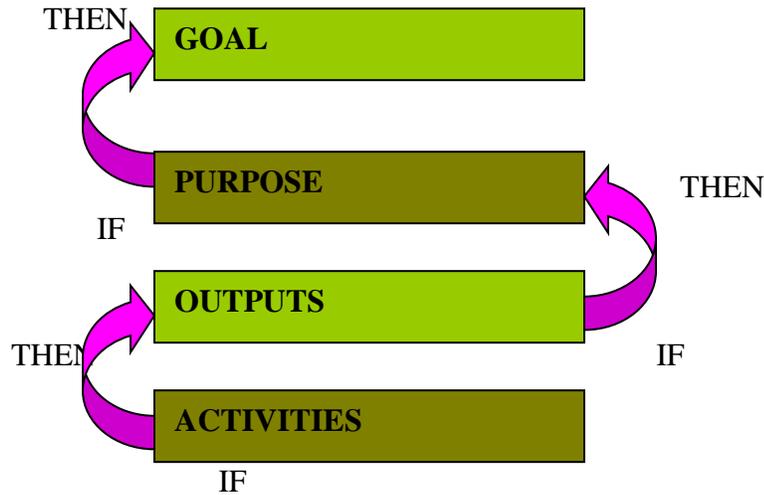
IF → **ACTIVITIES**

Each level thus provides the justification for the next level for instance the goal helps justify the purpose, the purpose the output, the output the activities and the activities the inputs

Logical Framework Matrix

After determining all the necessary items to be entered into the log frame matrix, it is developed by drawing a table with four columns and four rows. The first rows enter the item names, goal, purpose output and activities. Append appropriate information besides each of the items in the first column. Remember as mentioned earlier, they are written down wards but read upwards. The next are the indicators corresponding to each of the first column items. The indicators vary depending on the level they are corresponding to. The various types of indicators mentioned earlier in this chapter are indicated at each of the levels. For instance the input indicators appear at the input level while the output at the output level, the purpose indicators at the purpose level and lastly the impact indicators at the goal level.

Next is the means of verification (MOV). The MOV also fall into each level. Incidentally, the MOVs vary according to the levels appropriate for data collected. At the lower levels there is more secondary information in the form of receipts, documents. At the upper level there is more of primary information collected through such tools as questionnaires, interview etc

Table 6.1 Logical framework

Project description	Indicators	Means of Verification	Assumptions
Goal: the broader development impact to which the project contribute	What are the quantitative ways of measuring or qualitative ways of	Source of information and methods used	Factors are necessary for sustaining objectives in the

	judging whether these broad objectives are being achieved (Estimated time)		long run
Purpose: the development outcome expected at the end of the project	What are the quantitative measure or qualitative evidence by which achievement and distribution of impact and benefits can be judged (estimated time)	Source of information and methods used	Conditions necessary for the achievements of the project's purpose to reaching the project goal
Outputs: the direct measurable outputs (goods and services) of the project	What kind and quantity of outputs and by when will they be produced (quantity, quality and time)	Source of information and methods used	Factors if not present are liable to restrict progress from outputs to achievements of project purpose
Activities: activities that must be undertaken to accomplish the output	Implementation/work project targets. Used during monitoring	Source of information and methods used	Factors that must be realized to obtain planned outputs on schedules

See Appendix A ' Awendo OVC Scholarship Project' for practical example of a logical framework

6.10 Summary

The lecturer provides definition of indicators used in project monitoring and evaluation and their importance. It also provides a detail analysis of the characteristics and their categories. It is clearly explained in this lecture that it is important for project managers to understand steps to be followed in selecting SMART indicators if relevant and useful information is to be collected. The lecture also shows the indicators as a central factor in the logical framework which is regarded as one of the key tools for project planning and even project monitoring and evaluation. In-depth understanding of the logical framework is also provided in terms of both vertical and horizontal logic.

6.11 Self Evaluation questions

1. Explain the difference between project indicators and project objectives
2. Describe the four roles played by project indicators.
3. Explain Five characteristics of project indicators
4. What are the main differences between horizontal logic and vertical logic as used in Logical Framework

6.12 Further Reading

Jody Zall Kusek Ray C. Rist (2004), A Handbook for Development Practitioners, Ten Steps to a Results-Based Monitoring and Evaluation System. Washington. The International Bank for Reconstruction and Development / The World Bank

(http://www.ifad.org/evaluation/guide/annexc/c.htm: Managing   for impact for Rural Development; A Guide for Project M&E)

SETTING UP A MONITORING AND EVALUATION SYSTEM

7.1 Introduction

After understanding what the indicators are and how they link to the whole monitoring and evaluation process, we now need to look at how we can establish a monitoring and evaluation system. It is important to understand that Monitoring and Evaluation is a vital rational integrated system within the project that must be planned, managed and resourced.

7.2 Lecture objectives

By the end of this lecture you should be able to:

1. Define the terms Monitoring and Evaluation system
2. Explain how M&E links to project strategy and operations
3. Outline factors to consider when setting up an M&E system
4. Discus at least two models used in setting up an M&E system

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7.3   Overview of setting up the M&E System

You will recall from the module LDP 604 on project design and implementation that among the key components of project cycle is project Monitoring and Evaluation. Monitoring and Evaluation therefore, must be developed at the project planning stage.

7.3.1 M&E as a System

A system is an organized or complex whole, an assemblage or combination of things or parts performing as a complex or unitary whole. This definition conveys three very important ideas:

Take Note

The first concept is that of **interdependence**. That is to say the parts that make up a system are interdependent i.e. if change occurs in one part or set of parts, it affects all other parts. This effect on each part or set of parts in a system may be direct or indirect

The second concept is that of **holism.** That is to say, the system should be conside as a functioning whole. Changes in parts of the system and in the functioning of elements of the system should be considered from the standpoint of the syste overall performance.

Finally is the concept of **synergism**. This refers to the fact that the interactive effects of the parts of the system working together create an effect greater than the effect of the parts acting separately. This means that, as each part performs its role within the system it enhances the performance of other parts and hence the total performance of the system

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A well-functioning M&E system integrates the formal data commonly associated with the task of M&E, together with informal monitoring and communication such as field staff sharing their experiences of project implementation over a cup of tea. M&E system therefore is an integral

system of reflection and communication supporting project implementation that should be planned for and managed throughout the projects' life. It is therefore disastrous for project managers to view M&E as a statistical task or a tedious external obligation of little relevance to those implementing projects. From the previous lecture we have seen that it is hard to separate Monitoring from evaluation. Therefore it is not wise to separate project monitoring functions from project evaluation functions such that high – level impact – related assessments are subcontracted, while project staff focuses only on tracking short term activities. This limits the opportunities to learn since short term activities forms part of the long and high level impact of the project.

To ensure that the M&E provides integrated support to those involved in project implementation, the project manager requires:

1. Create an M&E process that will lead to clear and regular learning for all those involved in project strategy and operations.
2. Understand the link between M&E and management functions
3. Use existing processes of learning, communication and decision making among stakeholders as the basis for project oriented M&E.
4. Put in place the necessary conditions and capacities for M&E to be carried out.

7.4 Linkage of M&E system to project strategy and operations

In the above section we have seen how M&E forms an integral system which assists in project implementation. In this section we are going to focus on how M&E links up to all the operations within the project to satisfy the project objectives.

Figure 7.1: How M&E Links to Project strategies
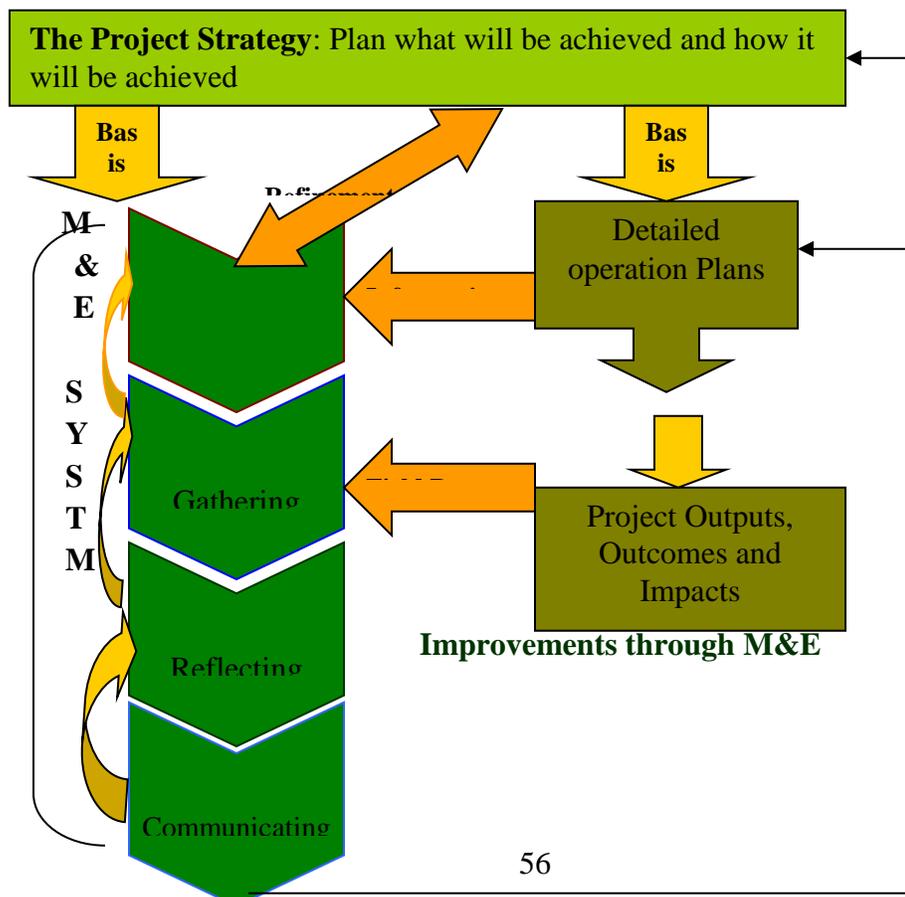
Figure 7.1 shows how the M&E fits in within the project. The figure focuses on the elements of M&E and how it links with two components of the project: project strategies and operations. Let us now discuss some elements as shown in figure 7.1.

1. Project Strategy: project strategy is considered as the plan for what will be achieved and how it will be achieved. This forms a starting point for project implementation and setting up an M&E system. The strategy is the basis for working out the project operations required to implement activities efficiently and effectively.

2. The completion of project activities leads to a series of actual outputs, outcomes and impacts. Comparing the actual outputs, outcomes and impacts with what was planned in the project strategy and understanding the differences in order to identify changes in the strategy and operations is the core function of M&E system

3. It is clear from figure 7.1 that M&E system consist of four interlinked parts
The first parts consist of: **Developing an M&E system**. This is done by identifying the information need to guide the project strategy, ensure effective operations and meet external reporting requirements. There is need for one to decide on how to gather and analyze this information and document a plan for M&E system. The process of working out on how to monitor and evaluate a project, inevitably raises questions about project strategy itself, which can help improve the initial design. Setting up an M&E system with a participatory approach builds stakeholders' understanding about the project and starts creating a learning environment.

The second part is **Gathering management information**. This is regarded as the implementation of the M&E system. Information can be gathered through informal as well as structured approaches. Information comes from tracking which outputs, outcomes and impacts are being achieved and checking project operations (e.g. activity completions, financial management and resource use). After you start on gathering information and management, you will have the capacity to solve some problems or you will have a lot of ideas that may lead to revising the initial M&E plan.

o The third part of the M&E is that of involving project stakeholders on a **critical reflection process for improvement of the activity**. Once the information has been collected it needs to be analyzed and discussed by the project stakeholders. This may happen formally – for example during an annual project review workshop. Or it may happen informally – for example talk to project beneficiaries about the project during field visits. In these reflections and discussions, you will probably notice information gaps. This can trigger adjustment on the M&E plan to ensure the necessary information is being collected.

o The fourth part of the M&E system is the communication of M&E results to the people who need to use it. This is the part that determines the success of the M&E

system. The part includes **reporting to the funding agencies** but it is broader. For example, problems experienced by field staff need to be understood by project managers. Project progress and problems must be shared with project participants to enable you to find solutions together. Reports to funding agencies need to balance the success and mistakes, and above all, be analytical and action-oriented. Some of those who are to use the information may have been involved in collecting data or analyzing part of it. However you need to plan on how to inform those who were not involved.

4. The results from M&E must improve the project strategy and operations. The senior management with the support of project staff is responsible for this. Sometime the improvement may be immediate depending on the availability of resources and sometimes improvement may require negotiation between key project stakeholders. Or there may be need to change the sequence of certain activities and thus require time to be effected.

7.5 Factors to be considered before constructing M&E system

The readiness assessment is a diagnostic tool that can be used to determine whether the prerequisites are in place for building an M&E system. The following factors must be considered before setting up an M&E system.

i) Potential Pressures Are Encouraging the Need for the M&E

It is important to know where the demand for creating an M&E system is emanating from and why. Are the demands and pressures coming from internal, multilateral, or international stakeholders, or some combination of all these? These requests will need to be acknowledged and addressed if the response is to be appropriate to the demand. To some extent internal demands may arise from calls for reforms in public sector governance and for better accountability and transparency. Anti-corruption campaigns may be a motivating force. Externally, pressures may arise from the donor community for tangible development results for their investments. International organizations investing in development projects, such as the European Union, expect a feedback system on public sector performance via M&E for each of the accession countries. The competitive pressures of globalization may come into play, and the rule of law, a strong governance system, and clearly articulated rules of the game are now necessary to attract foreign investment. Financial capital and the private sector are looking for a stable, transparent investment climate, and protection of their property and patents, before committing to invest in a country. There are multitudes of pressures that project management may need to respond to, and these will drive the incentives for building a results-based M&E system.

ii) Project staff attitude towards M&E System?

Champions in an organization implementing projects are critical to the sustainability and success of an M&E system. Within a given organization implementing projects, there are individuals or groups who will likely welcome and champion such an initiative, while others may oppose or even actively counter the initiative. It is important to know who the champions are and where

they are located in the organization. Their support and advocacy will be crucial to the potential success and sustainability of the M&E system. However, if the emerging champion is located away from the center of policymaking and has little influence with key decision makers in that particular organization, it will be difficult, although not impossible, to envision an M&E system being used and trusted. It will be hard to ensure the viability of the system under these circumstances.

Viability is dependent upon the information being viewed as relevant, trustworthy, useable, and timely. M&E systems with marginally placed champions who are peripheral to the decision making process will have a more difficult time meeting these viability requirements. Information from assessment on the champions of M&E system will help the Project manager together with the stakeholders come up with the roles and responsibilities that must be stated prior to the development of the system. Clearly identify those who Will be involved in the design, implementation and reporting and allocate them such responsibilities. This will ensure that there is staff for the supervision of the system by assigning the responsibilities and roles. It will be clear as to who will do what.

iii)   Ownership, utilization and sustaining of M&E system

Frequently, a careful institutional assessment should be made to assess the real capacity of the users to actually create, utilize, and sustain the system. A carefully done readiness assessment helps provide a good understanding of how to design the system to be responsive to the information needs of its users, determine the resources available to build and sustain the system, and assess the capacities of those who will both produce and use the information. Understanding these issues helps to tailor the system to the right level of complexity and completeness. For a results-based M&E system to be effectively used, it should provide accessible, understandable, relevant, and timely information and data. These criteria drive the need for a careful readiness assessment prior to designing the system, particularly with reference to such factors as ownership of the system, and benefits and utility to key stakeholders. From a technical perspective, issues to be addressed include the capacity of the organization to collect, analyze and interpret the data, produce reports, manage and maintain the M&E system, and use the information produced. Thus, the readiness assessment will provide important information and baseline data against which capacity-building activities—if necessary— can be designed and implemented. Furthermore, there is an absolute requirement to collect no more information than is required. Time and again, M&E systems are designed and are immediately overtaxed by too much data collected too often—without sufficient thought and foresight into how and whether such data will actually be used.

iv)   Better Resource Allocation for maximum project impact

Monitoring and evaluation is not an end unto itself. It is a tool to be used to promote good governance, modern management practices, innovation and reforms, and better accountability. When used properly, these systems can produce information that is trustworthy, transparent, and

relevant. M&E systems can help policymakers track and improve the outcomes and impacts of resource allocations. Most of all, they help organizations make better informed decisions and policies by providing continuous feedback on results. Experience shows that the creation of a results-based M&E system often works best when linked with other public sector reform programs and initiatives, such as creating a medium-term public expenditure framework, restructuring public administration, or constructing a National Poverty Reduction Strategy. Linking the creation of M&E systems to such initiatives creates interdependencies and reinforcements that are crucial to the overall sustainability of the systems. The readiness assessment can provide a road map for determining whether such links are structurally and politically possible.

v)   Handling Negative Information Generated by the M&E System

It is difficult to have a functioning M&E system in an organizational or political climate characterized by fear. M&E systems will inevitably (even if infrequently) produce data that may be embarrassing, politically sensitive, or detrimental to those in power. In a similar way, the information can also be detrimental to units and individuals in an organization. If it is clear from the readiness assessment that only politically popular or "correct" information will be allowed to emanate from the M&E system, the system is vulnerable and compromised from the beginning. It will not be seen as credible by those outside the organization. It will come to be seen as a hollow exercise. In such a political setting, it is important to build the system carefully and slowly. Finding units that will risk potentially detrimental information—including unfavorable information about their own performance—is perhaps the best that can be achieved. If such units are not present, there is little rationale or justification for proceeding further to design such a system. Organizations willing to use performance information to make policy generally have achieved some level of democracy and openness. But even in these organizations, there is often a reluctance to measure and monitor because of fears that the process will bring bad news to leadership and stakeholders alike. There are real political limitations to be recognized in building such systems. Not all barriers can be addressed simultaneously in the design of the system. However, not recognizing the presence of these barriers and addressing them as soon as possible creates the risk of a level of resistance greater and longer than may have been necessary. It is a strategic decision as to how much time and energy should be spent on removing barriers as opposed to using that same finite time and energy to strengthen champions and support emerging opportunities. We strongly lean toward the latter.

vi)   Assess Existing Capacity to Support an M&E System

The basic concern of the project manager is to assess whether there are any organizational units or departments, or individuals within the organization that already have monitoring and evaluation capacity and that can undertake evaluations. An effective and monitoring system should have competent staff to manage and oversee the system. To ensure that the system works effectively consider developing the capacity of the people selected to

manage it. It is important to assess organization's capacity to monitor and evaluate. As part of the preparation an appropriate organization structure should be identified. This would provide the management team the authority to determine the course of the system and t o avoid the confusion on whose authority the system is working. The project manager needs also to scout capacities from outside the organization, such as NGOs, universities, research institutes, and training centers that may provide part of the necessary technical capacity to support the organizations' M&E system if there be any need. It is important for the project manager to assess the following as they manifest in the project: Technical skills; Managerial skills; Existing data systems and their quality; Technology available; Fiscal resources available; Institutional experience

7.6 Models for Setting up an Effective M&E System

Although experts differ on the specific sequence of steps in building a results-based M&E system, they all agree on the overall intention of the system. For example, different experts propose four or seven-step models. Regardless of the number of steps, the essential actions involved in building an M&E system are to:

1. Formulate outcomes and goals
2. Select outcome indicators to monitor
3. Gather baseline information on the current condition
4. Set specific targets to reach and dates for reaching them
5. Regularly collect data to assess whether the targets are being met
6. Analyze and report the results.

You will notice that all the above will feature to a large extent in the two models that we are going to discuss below.

7.6.1 A Six step model for setting up an M&E system

Other experts urge that six key steps should be considered while setting up an effective M&E system. These include:

1. Establishing the purpose and the scope on M&E system. Under this one should ask, why do we need M&E and how comprehensive should be our M&E system?
2. Identifying performance questions, information needs and indicators. The question to be raised is what do we need to know to monitor and evaluate the project in order to manage it well?
3. Planning information gathering and organization – how will the required information be gathered and organized?
4. Planning critical reflection processes and events – how will we make sense of the information gathered and use it to make improvements?
5. Planning for quality communication and reporting – how and to whom do we want to communicate what in terms of our project activities and processes?

6. Planning for the necessary conditions and capacities – what is needed to ensure that our M&E system actually works?

Although these factors have been extensively examined by the Kuzek and Rist (2004) model, there is need to look at them keenly. It is imperative to note that a good project appraisal report will include an indicative M&E framework that provides enough details about the above questions to enable budgeting and allocation of technical expertise, giving funding agencies an overview of how M&E will be undertaken, and guide project and partner staff during project start-up phase. Let briefly focus on what each step entails.

1).Purpose and scope of M&E system: Clear definition of the purpose and scope of the intended M&E system helps when deciding on issues such as budget levels, number of indicators to track, type of communication needed. Specifying the purpose also helps to make clear what can be expected of the M&E system as it forces you to think about the nature of the project and the implications for information needed to manage it well.

2). Performance questions, information needs and indicators: it may be difficult for a project manager to list quantitative indicators directly from the project objectives in the log frame matrix. This is because some objectives are so complex to the extent that they cannot be summarized in terms of one or a few indicators. Also, while it might be possible for quantitative information to be found that show if objectives are being met, it does not necessarily explain why and if this can be attributed to the project, therefore multiple source of quantitative and qualitative information are critical to explain what is happening and look closely at the relationship between different pieces of information, rather than single indicator.

Working with performance questions to guide indicator analysis will give you a more integrated and meaningful picture of objective achievements. Answering these questions requires descriptive analysis and qualitative information. Starting by identifying performance questions makes it easier to recognize which specific indicators are really necessary. Sometimes a performance question may be answered directly with a simple quantitative indicator. However, very often the question can only be answered by a range of quantitative and qualitative information.

Table 7.1 Tasks needed when detailing the M&E plan based on a project appraisal report

M&E Design Steps	Outputs in project appraisal (M&E Framework)	Tasks during project Start up to develop detailed M&E system
1. Establish the purpose and scope	Broadly define purpose and scope of M&E in project context	Review purpose and scope with key stakeholders
2. Identify performance questions, indicators and information needs	List of indicative key questions and indicators for the goal, purpose and output levels	• Assess the information needs and interest of all key stakeholders • Precisely define all questions, indicators and information needs for all levels of objective hierarchy

		• Check each bit of information for relevance and end-use
3.Plan information gathering & organizing	Generally describe information gathering and organizing methods to enable resource allocation	• Plan information gathering and organizing in details i.e (who will do what, use which methods to gather/synthesize what information, how often and when, where, with whom, with what expected information product) • Check the technical and resource feasibility of information needs, indicators and methods • Develop formats for data collection and synthesis
4. Plan for communicating and Reporting	Broad description of key audiences and type of information that should be communicated to them to enable resource allocation	• Make a precise list of all key audiences, what information they need, when they need it and in what format. • Define what is to be done with the information – simply send it, provide a discussion for analysis, seek relevance feedback for verification e.t.c • Make a comprehensive schedule for information production, showing who is to do what by when in order to have information needy on time
5. Plan critical reflection processes and events	General outline of processes and events	• Precisely detail which methods/approaches are to be used with which stakeholder group and for what purpose • Identify who is responsible for which reflective events • Make a schedule that integrate all the key events and reporting/decision making moments.
6. Plan for the necessary conditions and capacities	Indicative staff levels and types, clear description of	• Come to precise description of: the number of M&E staff, their

	organization structure of M&E, indicative budget	responsibilities and linkages, incentive needed to make M&E work, organizational relationships between key M&E stakeholders, the type of information management system to be established and detailed budget

7.6.2 A Ten Step Model for Setting up an M&E system

Kuzek and Rist (2004) argues that the above model for setting up an M& E systems is defective in that it ignores some key factors that makes the system not impressive to the key project implementers. He adds that the models do not cater for organizational, political and cultural factors. He proposes a 10 Step model which differs from others because it provides extensive details on how to build, maintain—and perhaps most importantly—sustain a results based M&E system. There 10-steps proposed by Kuzek and Rist (2004) are briefly discussed below:

Step 1: Conducting a readiness assessment

This model differs from other approaches in that it contains a unique readiness assessment. Such an assessment must be conducted *before* the actual establishment of a system. The readiness assessment is, in essence, the foundation of the M&E system. Just as a building must begin with a foundation, constructing an M&E system must begin with the foundation of a readiness assessment. Without an understanding of the foundation, moving forward may be fraught with difficulties and, ultimately, failure**.** Readiness Assessment can be considered as an analytical framework to assess the project's capacity and willingness to monitor and evaluate its project's goals.

Step 2: Agreeing on Outcomes to Monitor and Evaluate

This stage will be described in detail in lecture eight. However what we need to know is that the outcomes help the project stakeholders 'Know where you are going before you get moving". It is important that all project stakeholders agree on what outcomes to monitor and evaluate. Clearly defined outcomes provide a foundation for designing and building sustainable M&E system. They also help in Budgeting for outputs, and general management of the outcomes. The outcomes are usually not directly measured they are only reported on. At some level outcomes must be translated to a set of key indicators.

Step 3: Selecting Key Indicators to Monitor Outcomes

You will recall that in lecture six we discussed indicators as a specific measure, that when tracked systematically over time indicate progress (or not) toward a specific target. We also discussed the importance of an indicator, types of indicator, characteristics of good indicators, and steps a project manager can explore in selecting SMART indicators. It is important to note that selecting of indicators is a key step in developing an M&E system. All indicators emanate from outcomes agreed upon by all the project stakeholders. The most compelling question to ask yourself when selecting key indicators is, how will we know success when we see it?

Step 4: Baseline Data on Indicators

Step 4 of the model relates to establishing performance baselines—qualitative or quantitative—that can be used at the beginning of the monitoring period. The performance baselines establish a starting point from which to later monitor and evaluate results. The baseline provides a measurement 'to find out where we are today'. This stage will be discussed in details in lecture eight. Other steps as suggested by Kuzek and Rist (2004) include;

Step 5 which builds on the previous steps and involves the selection of results targets, that is, interim steps on the way to a longer-term outcome. Targets can be selected by examining baseline indicator levels and desired levels of improvement.

Step 6 of the model, includes both implementation and results monitoring. Monitoring for results entails collecting quality performance data, for which guidelines are given;

Step 7 deals with the uses, types, and timing of evaluation. Reporting findings;

Step 8, looks at ways of analyzing and reporting data to help decision makers make the necessary improvements in projects, policies, and programs;

Step 9 which talks more on using M&E findings and emphasizes the importance of generating and sharing knowledge and learning within the organizations; and ,Finally,

Step 10, covers the challenges in sustaining results-based M&E systems including demand, clear roles and responsibilities, trustworthy and credible information, accountability, capacity, and appropriate incentives.

6.8 Self Evaluation questions
1. Explain why M&E is considered as a 'system?
2. Discuss factors that you will consider before setting up an M&E system
3. Critically examine a Six Step Model for designing an M&E system with a view to point out any possible limitations to this model.

7.9 Summary

In this lecture M&E system is regarded as one of the most important aspect of project design. The Lecture starts by defining the M&E system and linking the system to project strategy and operations. It also explores factors that a project manager will need to consider before setting up and M&E system. Two models of setting up an M&E system are also discussed.

LECTURE EIGHT
MEASURING OF PROJECT PERFORMANCE INDICATORS

8.1 Introduction

In lecture seven we discussed the basic models for setting up M&E system. During this discussion we realized that the decision on outcomes and setting of targets was key in the build up of M&E system. Despite the fact that indicators were discussed earlier in this lecture, it is important for you to understand that one cannot set indicators before determining outcomes. This is because it is the *outcomes*—not the indicators—that will ultimately produce the project benefits. In this lecture we are going to discuss outcomes and baseline targets as foundations of measuring of project performance indicators.

	8.2 Lecture objectives At the end of this lecture you should be able to; 1. Define outcome, baseline and targets for monitoring and evaluation 2. Discuss factors to be considered when setting up the outcome and target to monitor and evaluate 3. Explain the overall process of setting and agreeing on outcome to monitor and evaluate

8.3 Setting the project outcome to monitor

Outcomes will demonstrate whether success has been achieved. In short, outcomes will show which road to take. Setting outcomes is essential in building a results-based M&E system. Building the system is basically a deductive process in which inputs, activities, and outputs are all derived and flow from the setting of outcomes. Before discussing the process of setting up project M&E outcomes it is important to look at the factors that a project manger should consider while choosing which outcome to monitor.

8.3.1 Factors to consider when choosing outcomes to monitor and evaluate

There are several factors that a project manager should consider while choosing the outcome to monitor and evaluate. Some of the factors include:

1. **Goals of the projects and Existing priorities**

What are the strategic priorities? What are the desired outcomes? These are the questions that every organization, every level of government, and the interested parties in civil society should be asking themselves and others. We focus primarily on how this relates to the national government.

Every country has finite budgetary resources and must set priorities. Consequently, it is important to keep the following distinction in mind: One budgets to outputs and manages to outcomes. There are many issues to consider in choosing outcomes to monitor and evaluate. For example, outcomes could be linked to international economic development and lending issues, including a National Poverty Reduction Strategy, a National Development Plan, and even

Millennium Development Goals. At the country level, there could already be some stated national, regional, or sectoral goals. Also, political and electoral promises may have already been made that specify improved governmental performance in a given area. In addition, there may be citizen polling data indicating particular societal concerns. Parliamentary actions and authorizing legislation are other areas that should be examined in determining desired national goals. There may also be a set of simple goals for a given project or program, or for a particular region of a country. From these goals, specific desired outcomes can be determined. It should be noted that developing countries may face special challenges in formulating national outcomes.

2. **Stakeholder interest**

When setting outcome it is important to capture the stakeholders' interest. it is important to note that the projects outcomes target to fulfill felt needs of the society/organizations. In order to capture the stakeholders' interests there is need to launch a participatory process involving key stakeholders in the formulation of the outcomes.

3. **Available capacity**

Available capacity in terms of finances and other resources such as human resource and technological capacity are important factors that should be considered while formulation of the project outcomes. A project performance is only realized in an environment where adequate resources interact in an effective and efficient way to achieve the desired outcome. It will be needless to formulate outcomes that will never be realized due to lack of capacity.

8.3.2   The Overall Process of Setting and Agreeing upon Outcomes

After looking at factors that you need to consider when choosing outcome to monitor, let's now discuss the process of setting and agreeing upon outcome to monitor. In order to jump start the process of setting the outcome to monitor, you need to know where you are going, why you are going there, and how you will know when you get there. There is a political process involved in setting and agreeing upon desired outcomes. Each part is critical to the success of achieving stakeholder consensus with respect to outcomes. The following are the steps involved in setting and agreeing upon outcome to monitor;

1. **Identify Specific Stakeholder Representatives**

Who are the key parties involved around an issue area (health, education, and so forth)? How are they categorized, for example, NGO, Government, donor? Whose interests and views are to be given priority?

2. **Identify Major Concerns of Stakeholder Groups**

Use information gathering techniques such as brainstorming, focus groups, surveys, and interviews to discover the interests of the involved groups. Numerous voices must be heard—not just the loudest, richest, or most well-connected. People must be brought into the process to enhance and support a democratic public sector.

3. **Translate Problems into Statements of Possible Outcome Improvements**

It should be noted that formulating problems as positive outcomes is quite different from a simple reiteration of the problem. An outcome oriented statement enables one to identify the road and destination ahead. We encourage outcomes to be framed positively rather than
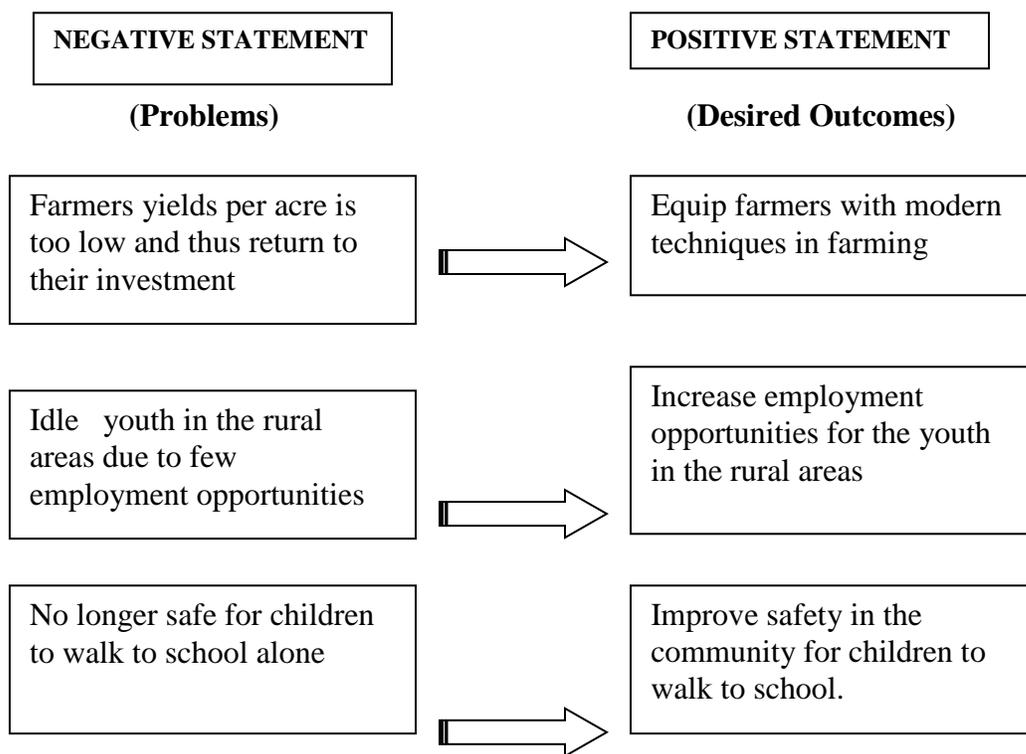
negatively. Stakeholders will respond and rally better to positive statements, for example, "We want improved health for infants and children," rather than "We want fewer infants and children to become ill." Positive statements to which stakeholders can aspire seem to carry more legitimacy. It is easier to gather a political consensus by speaking positively to the desired outcomes of stakeholders.

4. Disaggregate to Capture Key Desired Outcome

Outcomes should be disaggregated sufficiently to capture only one improvement area in each outcome statement. A sample outcome might be to "increase the percentage of employed people." To know whether this outcome has been achieved, the goal needs to be disaggregated to answer the following: Agreeing on Outcomes to Monitor and Evaluate

Table 8.1 shows an example of formulating various concern identified by stakeholders into positive and desired outcomes.

Figure 8.1 Developing Outcome statements

NEGATIVE STATEMENT	POSITIVE STATEMENT
(Problems)	**(Desired Outcomes)**
Farmers yields per acre is too low and thus return to their investment	Equip farmers with modern techniques in farming
Idle youth in the rural areas due to few employment opportunities	Increase employment opportunities for the youth in the rural areas
No longer safe for children to walk to school alone	Improve safety in the community for children to walk to school.

From the figure above the problem is translated in desired outcomes. However, there is need to disaggregate the positive statement by considering the following questions: **For whom?; Where? How much? By when?** If we take an example from figure 8.1; 'increase employment opportunities for youth in rural areas' we can disaggregate this outcome to "increase employment among youth in the rural sector by 20 percent over the next four years." It is only through disaggregating the outcome and articulating the details that we will know if we have successfully achieved it. Simplifying and distilling outcomes at this point

also eliminates complications that may arise later when we start to build a system of indicators, baselines, and targets by which to monitor and evaluate. By disaggregating outcomes into subcomponents, we can set indicators to measure results.

8.4 Setting Baseline and Gathering data on indicators

After focusing on the process of selecting key performance indicators to monitor outcomes, we now need to examine the next level of the foundations of measuring the project indicators, and that is; Setting baseline and gathering data on indicators. Establishment of baseline data - establishing where we are at present relative to the outcome we are trying to achieve. One cannot determine project Performance in the future (set targets) without first establishing a baseline. The baseline is the first measurement of an indicator. It sets the current condition against which future change can be tracked. For instance, it helps to inform decision-makers about current circumstances before embarking on projecting targets for a given program, policy, or project. In this way, the baseline is used to learn about current or recent levels and patterns of performance. Importantly, baselines provide the evidence by which decision-makers are able to measure subsequent policy, program, or project performance.

8.4.1 Establishing Baseline Data on Indicators

Establishing baselines is the third part of the performance framework. Baselines are derived from outcomes and indicators. A performance baseline is information—qualitative or quantitative— that provides data at the beginning of, or just prior to, the monitoring period. The baseline is used as a starting point, or guide, by which to monitor future performance. Baselines are the first critical measurement of the indicators. Figure 8.2 contains an example of baseline data for an Education project:

Figure 8.2 Developing Baseline Data for Educational project

OUTCOME	INDICATORS	BASELINE	TARGETS
Nation's children have better access to pre-school programme	1. Percent of eligible urban children enrolled in pre-school education. 2. Percent of eligible rural children enrolled in pre-school education	1. In 1999, 75% of children ages 3 – 5 2. In 2000, 40% of children aged 3 -5	
Primary school learning outcome for children improved	Percent of standard 6 children scoring 70% or better on a standardized Maths and Science tests	In 2002, 75% scored 70% or better in Maths, and 61% scored 70% or better in science.	

There are eight key questions that should be asked in building baseline information for every indicator. (These questions continue to apply in subsequent efforts to measure the indicator.)

1. What are the sources of data?
2. What are the data collection methods?
3. Who will collect the data?
4. How often will the data be collected?
5. What is the cost and difficulty to collect the data?
6. Who will analyze the data?
7. Who will report the data?
8. Who will use the data?

8.5 Selecting Targets to Monitor and evaluate

A target is can be defined as a specified objective that indicates the number, timing and location of that which is to be realized (IFAD, 2002). In essence, targets are the quantifiable levels of the indicators that a country, society, or organization wants to achieve by a given time. For example, one target might be "all families should be able to eat two meals a day, every day, by the year 2005." One method of establish targets is to start with the baseline indicator level, and include the desired level of improvement (taking into consideration available resources over a specific time period, for example, 24–36 months), to arrive at the performance target. In so doing, the starting point will be known, as will the available resources to make progress toward that target over a particular period of time. This will give the target performance.

8.5.1 Factors to Consider When Selecting Performance Indicator Targets

There are a number of important factors to consider when selecting performance indicator targets. First and foremost one needs to take baselines seriously. There must be a clear understanding of the baseline starting point; for example, an average of the last three years' performance, last year's performance, average trend, data over the past six months, and so forth. In other words, previous performance should be considered in projecting new performance targets. One might observe how an organization or policy has performed over the previous few years before projecting future performance targets.

Another consideration in setting targets is the expected funding and resource levels—existing capacity, budgets, personnel, funding resources, facilities, and the like—throughout the target period. This can include internal funding sources as well as external funding from bilateral and multilateral donors. Targets should be feasible given all of the resource considerations as well as organizational capacity to deliver activities and outputs. Most targets are set annually, but some could be set quarterly. Others could be set for longer periods. However, setting targets more than three to four years forward is not advisable. There are too many unknowns and risks with respect

to resources and inputs to try to project target performance beyond three to four years. In short, be realistic when setting targets.

The political nature of the process also comes into play. Political concerns are important. What has the government or administration promised to deliver? Citizens have voted for a particular government based on articulated priorities and policies that need to be recognized and legitimized in the political process. Setting targets is part of this political process, and there will be political ramifications for either meeting or not meeting targets. Setting realistic targets involves the recognition that most desired outcomes are longer term, complex, and not quickly achieved. Thus, there is a need to establish targets as short-term objectives on the path to achieving an outcome. So how does an organization or country set longer-term, strategic goals to be met perhaps 10 to 15 years in the future, when the amount of resources and inputs cannot be known? Most governments and organizations cannot reliably predict what their resource base and inputs will be 10 to 15 years ahead. The answer is to set interim targets over shorter periods of time when inputs can be better known or estimated. "Between the baseline and the . . . [outcome] there may be several milestones [interim targets] that correspond to expected performance at periodic intervals" (UNDP 2002, p. 66). For example, the Millennium Development Goals (MDGs) have a 15-year time span. While these long-term goals are certainly relevant, the way to reach them is to set targets for what can reasonably be accomplished over a set of to four-year periods.

The aim is to align strategies, means, and inputs to track progress toward the MDGs over shorter periods of time with a set of sequential targets. Targets could be sequenced: target one could be for years one to three; target two could be for years four to seven, and so on.

Flexibility is important in setting targets because internal or external resources may be cut or otherwise diminished during budgetary cycles. Reorientation of the program, retraining of staff, and reprioritization of the work may be required. This is an essential aspect of public management.

If the indicator is new, be careful about setting firm targets. It might be preferable to use a range instead. A target does not have to be a single numerical value. In some cases it can be a range. For example, in 2003, one might set an education target that states "by 2007, 80 to 85 percent of all students who graduate from secondary school will be computer literate." It takes time to observe the effects of improvements, so be realistic when setting targets. Many development and sector policies and programs will take time to come to fruition. For example, environmental reforestation is not something that can be accomplished in one to two years.

Finally, it is also important to be aware of the political games that are sometimes played when setting targets. For example, an organization may set targets so modest or easily achieved that they will surely be met. Another game that is often played in bureaucracies is to move the target as needed to fit the performance goal. Moving targets causes problems because indicator trends can no longer be discerned and measured. In other cases, targets may be chosen because they are not politically sensitive.
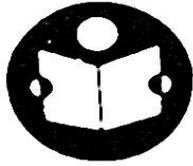
8.6 Summary

The lecturer discusses Outcomes, baseline data, targets and the foundation of measuring project indicators. It examines various factors to be considered when choosing outcomes to monitor and evaluate and also factor to consider when selecting targets. The lecture also outlines the overall process of setting and agreeing of on outcomes to monitor. In details and with illustrations, the lecture also looks at how outcomes, baseline and targets are set for effective monitoring and evaluation

8.7 Self Evaluation questions

1. Explain factors you will consider when setting up outcomes and targets to monitor and evaluate?
2. Discuss factors that you will consider before setting up an M&E system
3. With relevant examples show how the outcomes, baseline and target are set for effective M&E?

8.9 Further Reading

Jody Zall Kusek Ray C. Rist (2004), A Handbook for Development Practitioners, Ten Steps to a Results-Based Monitoring and Evaluation System. Washington. The International Bank for Reconstruction and Development / The World Bank

(http://www.ifad.org/evaluation/guide/annexc/c.htm: Managing for impact for Rural Development; A Guide for Project M&E)

MONITORING AND EVALUATION STANDARDS

9.1   Introduction

Credibility of any evaluation is measured against standards of quality established by the International Community of Evaluators. This lecture will introduce you to commonly agreed standards that you can apply while planning for evaluation up to the implementation stage. The lecture covers; utility standards, feasibility standards, propriety standards and accuracy standards.

	9.2 Lecture objectives
	At the end of this lecture you should be able to;
	   3. Identify the utility standards
	   4. Explain the feasibility standards
	   5. Describe the propriety standards
	   6. Discuss accuracy standards

9.3 Utility Standards

Before you plan to does an evaluation make sure you have the information needs of the project users. It is important to ask yourself the following questions:

- Who has interest in this evaluation?
- Who are the beneficiaries of the evaluation?
- What are the characteristics of the evaluator?
- How is the data going to gathered and reported?
- What impact is the evaluation going to have on the interested parties?

Once you can answer the above questions successfully, continue reading the brief note on the various standards that you should consider when planning an evaluation process.

9.3.1 Stakeholder identification

A sound and fair evaluation should address the interests and needs of those involved or affected by the evaluation. For example the planners, designers, implementers of the project, target group, development partners, decision makers, evaluators and the general public.

9.3.2 Credibility of the evaluator

Evaluation can only achieve maximum credibility and acceptance if it was carried out by an evaluator who is trust worthy, who displace high degree of integrity, professionally competent, able to give independent judgment, good communicator and sociable.

9.3.3 Section of the information

The information surrounding the evaluation should be carefully selected. Information collected should be responsive to the interest and needs of the stakeholders. Therefore it is important to gather enough information that would answer all pertinent questions about the project

9.3.4 Transparency of assessment
Describe all the procedures used in data collection and interpretation carefully so that the bases for value judgment are clear

9.3.5 Clarity of the report
Describe clearly the project that is being evaluated. Give simple definitions that can be understood by the intended user.

> **Take Note**
> All stages of evaluation should be describe; context, purpose, questions, procedures, funding etc.

9.3.6 Timeliness of the project
All reports should be presented in good time for use by the intended groups.

> **Take Note**
> Interim and final reports are equally important for they may have an impact on the future action of the target group. Reporting is important.

9.3.7 Evaluation impact
In order to increase evaluation impact on the users, involve the stakeholders at different stages of evaluation

9.4 Feasibility Standards
You have to ensure that feasibility standards are observed to check on the manner in which evaluation was carried out. The major question to ask yourself is, was the evaluation realistic, cost effective, prudent, thoughtful e.t.c
Let us review various standards under feasibility standards;

9.4.1 Practical procedures

Under this standard it is important to ensure that the evaluation process embraces practical methods and instruments. If this is adhered to the evaluation process will guarantee production of the needed information and disruption will be minimized. To validate the evaluation methods and instruments there is need to involve all the stakeholders.

9.4.2 Political viability

When planning and conducting an evaluation, it is important to take into account the interest of all interested groups. This ensures maximum cooperation that guarantees smooth running of the activity and generation of unbiased evaluation results.

9.5 Propriety standards

A sound and fair evaluation is bound by legal and ethical standards. The evaluation process should be hinged on sound ethical consideration to ensure the welfare of the stakeholders and participants. The rights of the participants and beneficiaries should be respected by the methodology and procedures of the evaluation process. The following standards should be considered.

9.5.1 Formal Agreement

Avoid gentleman agreements' and insist on putting all agreement in writing. This will bind the formal parties so that they are obligated to adhere to all conditions of the agreement or to renegotiate it. When preparing formal agreements ensure that you spell out clearly what is to be done, how it will be done, by who and when. Budgets, time, personnel, design, methodology, and report content are also regulated in formal writing

9.5.2 Protection of individuals' rights

An evaluation design and methodology should respect and protect the rights and the welfare of the stakeholders and participants. For instance the instrument should at all cost avoid items that will cause physical, physiological and even psychological damage to the participants. On the other hand the evaluation findings that are perceived to have a negative effect to the beneficiaries must be justified beyond any reasonable doubt before dissemination is done.

9.5.3 Human Interactions

Evaluation should respect human dignity and worth in the interaction with other persons associated with an evaluation so that participants are not threatened or harmed. It is therefore necessary to be familiar with the cultural practices of the intended group i.e. beliefs customs manners e.t.c

9.5.4 Complete and fair assessment

The evaluation should be complete and fair in its examination and recording of strengths and weakness of the programme being evaluated so that strengths can be build upon and weakness can be addressed. The evaluation exercise depends on the methodology which is

constrained with available resources in terms of time and budget. These are factors that ensure the exercise is complete and fair. Therefore any issues that may cause difficult in the process of evaluation should be discussed and agreed upon before the exercise.

9.5.5 Disclosure of findings

The formal parties to an evaluation should ensure that the entire findings of the evaluation along with pertinent limitations are made accessible to the persons affected by the evaluation and any others with express legal rights to receive the findings.

9.5.6 Conflict of interest

As a project manager, you need to deal with conflict of interest openly and honestly so that it does not compromise the evaluation process and results.

	Take Note
	The evaluation interests can be categorized into: 1. Donors interests; 2. Top management interests; 3. Stakeholders interests and; 4. The evaluators interests All of the above interests will always want to influence the evaluation findings. This is a source of dilemma on the side of the evaluator

The integrity of the evaluation cannot be compromised just to accommodate conflicts of interest

9.5.7 Fiscal responsibility

The evaluators allocating and expenditure of resources should reflect sound accountability procedures. The evaluators should be prudent and ethically responsible in management of the resource assigned to the evaluation exercise to the satisfaction of the stakeholders

9.6 Accuracy standards

The accuracy standards are intended to ensure that an evaluation will reveal and convey technically adequate information about the features that determine the value of the programme being evaluated. The standards involved include the following:

9.6.1 Programme documentation

Describe and document clearly and accurately the project being evaluated. The description should be sufficiently detailed to ensure an understanding of programme aims and strategies.

9.6.2 Context Analysis

The context in which the evaluation exists should be examined in enough detail so that its likely influence on the programme can be identified. This will help in the accurate interpretation of the evaluation findings and assessing the extent to which they can be generalized.

9.6.3   Described purposes and procedures

The purposes and procedure of the evaluation should be monitored and described in enough details so that they can be identified and assessed. The purpose of describing and clarifying the purpose and procedures of the evaluation is to help the evaluator focus on issues that are of greatest concern to stakeholders. This ensures that time and resources are used as efficiently and effectively as possible.

9.6.4   Defensible information sources

The sources of information used in programme evaluation should be described in enough details so that their adequacy can be assessed. The criteria used for selecting sources should be stated clearly so that users and other stakeholders can interpret the information accurately and assess if it might be biased.

9.6.5   Valid and reliable information

The information gathering procedures implemented should provide assurance that the interpretation arrived at is valid and reliable. Validity and reliability can be see as the extent to which methodologies and instrument measure what they are intended to measure and can produce the same results if repeatedly applied.

9.6.6   Systematic review of information

The information collected analyzed and reported in an evaluation should be systematically reviewed and any error found should be corrected.

9.6.7   Analysis of Quantitative and qualitative data

The information collected should be processed and analyzed in a systematic way so that the evaluation questions can be effectively answered.

Take Note

All data analysis should follow rules of methodological soundness.

9.7   Summary

1. This lecture extensively examines various standards used in monitoring and evaluations. Identify the utility standards
2. Explain the feasibility standards
3. Describe the propriety standards
4. Discuss accuracy standards

9.7   Self assessment test

1. Identify at least four utility standards used in evaluation
2. Explain the feasibility standards as used in evaluation
3. Examine the propriety standards
4. Discuss accuracy standards that are used in evaluation exercise

9.7 Further Reading

Ogula, P. (2002). **Monitoring and Evaluation of Educational Projects and programme,** Nairobi. New Kemit Publishers

<center>**LECTURE TEN**</center>

<center>**MONITORING AND EVALUATION METHODS AND TOOLS**</center>

10.1   Introduction

After exposing yourself to different aspects of evaluation, the next task as an evaluator is to design an evaluation exercise. At this juncture you will be required to have knowledge of various methodology and tools that you will use to conduct the evaluation. In this lecture we are going to discuss, key monitoring and evaluation methods, factors to consider when selecting the monitoring and evaluation tools and preparation of monitoring and evaluation document (proposal).

10.2 Lecture Objectives

1. Identify the key monitoring and evaluation methods and tools
2. Explain the factors to consider when selecting monitoring and evaluation methods
3. Develop a monitoring and evaluation document (proposal)

10.3   Key monitoring and evaluation approaches and tools

Evaluation often produces controversial results. These might be criticized, especially in terms of whether the data collection method, analysis and results lead to reliable information and conclusions that reflect the situation.

Methods of data collection have strengths and draw backs. Formal methods (surveys, participatory observation, direct measurements etc) used in academic research would lead to qualitative and quantitative data that have a high degree of reliability and validity. The problem is that they are expensive. Less formal methods (field visits, unstructured interviews etc) might generate rich information but less precise conclusions, especially because some of those methods depend on subjective views and intuitions.

There are two main evaluation approaches that an evaluator can consider when designing an evaluation method. Some authors call them evaluation paradigms. These are quantitative and qualitative. Let us discuss each of the approaches mentioned above:

10.3.1 Quantitative Approach

Quantitative approach of evaluation is a school of thought that certain groups of evaluators view as the best for evaluating projects. They believe that evaluations that peruse this kind of approach produce valid and reliable evaluation results. Quantitative approach is a systematic collection, analysis and interpretation of numerical data for the purpose of explaining, predicting or controlling evaluation phenomena. Some of the widely used designs in this

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approach include: survey designs, cross-sectional design, longitudinal design, ex-post facto design, experimental design, and quasi-experimental design. We know that you have covered this design in the Research Method module. For the purpose of reminding ourselves, we will briefly discus each of the above mentioned designs as below:

10.3.1. 1 Survey Design

This designs attempts to systematically collect, analyze and interpret numerical data from members of a project stakeholders in order to determine the current status of project target population, with respect to one or more variables. There are two types of survey designs; sample surveys and census surveys. Data is normally analyzed using frequencies, percentages, means, standard deviations, ANOVA, and Chi-square

10.3.1.2 Cross –Section Design

In this design, subjects at various stages of development are simultaneously studied. Suppose for example an evaluation is interested in the level of effects of a project that is implemented at different phases: the result from each phase would be different from the other. Therefore the overall project results can be attained by evaluating each phase and making conclusions.

10.3.1.3 Longitudinal design

In this design the evaluator studies the same project (target population) over a period of time. Using the above example the evaluator will evaluate the effects of a programme at each phase and studies the effects of the project as it progresses from one phase to the other.

10.3.1.4 Correlation studies

This involves collecting data in order to determine whether and to what degree the relationship exists between two or more quantifiable variables

10.3.1.5 Ex-Post Facto Design (Casual Comparative)

It attempts to determine the cause of reasons for existing differences in the status or behaviour of different groups of individuals. The design is ex-post facto design because the evaluator attempts to identify the major factor which has led to a difference in two groups of individuals after both the effect and the alleged cause have already occurred and are studied by the evaluator in retrospect.

10.3.1.6 Experimental design

In an experimental study, the evaluator manipulates at least one independent variable, controls other variables and observes the effects on one or more dependent variables (manipulation of independent variables involves determining which group of subjects get which treatment). Independent variables typically manipulated may include types of inputs exposed to

project target groups or even the kind of services rendered to the groups by the project. The experimental evaluation involves two groups, an experimental group and a control group. The experimental group receives a new novel treatment, while the control either receives a different treatment or the usual treatment. The control group is needed for comparison purpose.

The experimental design can be in form of true-experimental design, factorial design, or even quasi-experimental design.

10.3.2 Qualitative approach

This is another school of thought that a section of evaluators view as the best for evaluating projects. They believe that evaluations that peruse this kind of approach produce valid and reliable evaluation results. Qualitative approach is a systematic collection, analysis and interpretation of narrative data for the purpose of explaining, and gaining insight and understanding of evaluation phenomena.It provides descriptions and accounts of social events and object of an evaluation in its natural setting. This implies that an evaluator using this approach to evaluate projects, should look at it in view of:

- **Field work**: referring to the mode of data collection that is in the field rather than in the laboratory
- **Naturalistic** – meaning that data should be collected where the events take place
- **Ethnographic** – implying that the evaluation should be descriptive in nature. Culture of the project beneficiaries should also be described and necessary linkages made
- **Symbolic interactions** – this holds that, the 'human experience is mediated by interpretations' implying that meaning given to objects, events or situations are interpretations from the responsible individuals given the occasions and environment. Thus definitions and settings of the occurrences are important to figure out the meanings and the process behind them.
- **Phenomenological** – this points to the subject matter to be investigated. The evaluator should try to understand how people go about describing the behaviour in their respective world. The evaluator should exercise a high degree of common sense during data collection process. This is because micro- issues of data collection are of importance and can influence the direction of an evaluation results.
- **Orientational** – the evaluation should begin with a presumed general pattern (theoretical or ideological perspective) which is then described and explained by the data gathered (Patton, 1990). Thus the evaluator goes into the field knowing the most important variables and concepts that will direct the focus and interpretation of the evaluation findings.

Some of widely used designs under this approach include case study, ethnography, phenomenology, biography, grounded theory etc

10.3.2.1 Case study design

This design attempt to examine an individual or unit in depth as an endeavour to describe the behaviours or events and the relationships of these behaviours or events to the subject's history and environment. The emphasis of the design is to understand why an individual does what he/she does and how behaviour changes as the individual responds to the environment

Case study design aims at a comprehensive, systematic and in-depth gathering of information about a case of interest. In such a study raw case data is assembled, a case record is constructed and ultimately a case study narrative is produced. Types of Case studies include:

- **Historical Organizational case study** – this is a study that traces the historical development of an organization/project over time. It relies on document review and interviews
- **Observational case study** – this is mostly used to study the interaction of group of people over a period of time. Their major data collection technique is participant observation.
- **Situation analysis** – in this form of case study a particular event is studied from the view point of all major participants. The collective views of the participants are synthesized by the evaluator to provide an understanding of the subject under study.

10.3.2.2 Ethnography Design

This design can be defined as a study of human societies, institutions and social relationships by getting 'inside them'. In this case the evaluator accesses the social world of people or group being studied for the purpose of tying to understand their 'shared meaning' and 'taken-for-granted assumptions'. The purpose of ethnography evaluation is to describe a social unit as it exists in its natural setting. The major data gathering technique in this design include participants' observation. Visual recording of events e.g diagrams, photographs and video tape may be used.

10.3.2.3 Phenomenological Design

This design describes the meaning of a lived experience. The evaluator sets aside all the prejudgments and collects data on how individuals make sense out of a particular experience or situation. The techniques used in data collection in this design is long interviews directed towards understanding the subjects perspectives on their every day lived experience with the phenomenon (McMillan and Schumacher, 2001). Phenomenological study studies enable readers to feel that they understand more fully the concept related to the particular experience.

	Take Note
	The evaluator can use a mixture of the above approaches in order to source for the best findings. A report that has both qualitative and quantitative data is very rich.

10.4   Selecting Monitoring and evaluation tools

Monitoring and evaluation may use various tools for data collection such as format interviews, literature review, questionnaire and surveys, in-depth interview, focus group discussions, document reviews, field work reports case studies, participants' observations, community meetings.

These tools have advantages and disadvantages as illustrated below

Table 10.1 Evaluation methods and tools

Methods	Descriptions /purpose	Advantages	Disadvantages/challenges
Literature search	Gather background information on evaluation methods used others	Economic and efficient way of obtaining information	Difficult to assess validity and reliability of secondary data
Questionnaires and surveys	Oral interviews or written questionnaires of a representative sample of despondence	▪ Produce reliable information ▪ Can be completed anonymously ▪ Easy to compare and analyze ▪ Can be administered easily to a large number of people ▪ Collect a lot of data in an organized manner ▪ Many sample questionnaire already exist	▪Demanding and could be costly ▪Might not get careful feedback ▪Wording can bias clients responses ▪Data is analyzed for groups and are impersonal ▪Surveys may need sampling experts ▪Provide numbers but do not get the full story ▪Open ended data may be difficult to analyze
Interviews	To fully understands someone's impressions or experiences or learn more about their answers to questionnaire Individuals or group interviews could be	▪ Give fool range and depth of information and yield rich data and details and new insights ▪ Can be flexible with the client ▪ Permit face-to-	▪Can be hard to analyze and compare ▪Interviewers can bias responses ▪Can be expensive and time consuming ▪Need well qualified and highly trained interviewers

	organize to assess perceptions views and satisfaction of beneficiaries	face contact with respondent and provide opportunity to explore topics in depth ▪ Allows interviewer to probe explain or help clarify questions increasing the likelihood of useful responses ▪ Allow interviewer to be flexible in administering interviews to particular individuals or circumstances	▪Interviewee may distort information through recall errors ▪Selective perception and desire to please ▪Flexibility can results in inconsistencies across interviews ▪Volume of information too large and may be difficult to reduce data
Document Review	Impression of how programme operates without interrupting the programme by review of applications finances, memos, minutes etc.	▪ Give impression and historical information ▪ Does not interrupt programme or clients routine in programme ▪ Information already exist ▪ Few biases about information	▪Often takes a lot of time ▪Information may be incomplete. Quality of documentation might be poor ▪Need to be clear about purpose ▪Not a flexible means to get data. Data restricted to what already exists
Observations	Involves inspections, field visits and observation to understand process, infrastructure/services and their utilization Gathers accurate	▪ Well-suited for understanding process views, operation of the programme while they are actually occurring ▪ Can adapt to	▪Dependent on observer's understanding and interpretation ▪Has limited potential for generalization ▪Can be difficult to interpret exhibited behaviuors

	information about how a programme actually operates particularly about processes	events as they occurs and exist in natural, unstructured and flexible setting	▪Can be complex to categories observations
			▪Can influence behaviour of programme participants
		▪ Provide direct information about behaviour of individuals and groups	▪Can be expensive and time consuming
			▪Needs well qualified, highly trained observers and all content experts
		▪ Permits evaluator to enter into and understand situations/context	▪Investigators have little control of the situation
		▪ Provide good opportunity for identifying un anticipated result.	
Focus Groups	A focus group brings together a representative of 8 – 10 People who are asked a series of questions related to the task at hand Used for analysis of specific complex problems in order to identify attitudes and priorities in sample groups Explore a topic in depth through group discussion e.g. about reactions to an experience or suggestions,	▪ Efficient and reasonable in terms of cost	▪Can be hard to analyze responses.
		▪ Stimulates the generation of new ideas	▪Need good facilitators
		▪ Quickly and reliably gets common impressions	▪Difficult to schedule 8 - 10 people
		▪ Can be an efficient way to get a wide range and depth of information in a shot time	
		▪ Can convey key information about programme	
		▪ Useful in project design and in	

	understanding common complaints e.t.c	assessing the impact of a project on a given set of stakeholders	
Case study	In-depth view of one or a small number of selected cases To fully understand or depict beneficiaries' experience in a project, and conduct comprehensive examination through cross comparison of cases	▪ Well-suited for understanding processes and for formulating hypothesis to be tested later ▪ Fully depicts client's experience in programme input, process and results ▪ Powerful means to portray programme to outsiders	▪Usually time consuming to collect, organize and describe. ▪Represents depth of information, rather than breadth
Key informants interviews	Interviews with persons who are knowledgeable about the community targeted by the project A Key informants is a person (or group) who has unique skills or professional back – ground related to the issue/intervention being evaluated, is knowledgeable about the project participants and / or has access to other information of	▪ Flexible, in-depth approach. ▪ Easy to implement ▪ Provides information concerning causes, reasons and/or best approaches from an 'insider' point of view ▪ Advice/feedback increases credibility of study ▪ May have side benefit to solidify relationships	▪Risk of biased presentation/interpretation from informants /interviewer ▪Time required to select and get commitment may be substantial. ▪Relationship between evaluator and informants may influence type of data obtained. ▪Informants may interject own biases and impressions

	interest to the evaluator	between evaluator, beneficiaries and other stakeholders	
Direct measurement	Registration of quantifiable or classifiable data by means of analytical instrument	▪ Precise ▪ Reliable and often requiring few resources	▪Registers only facts and not explanations

Source: Information on common qualitative methods is provide in earlier user friendly Handbook for project evaluation (NSF 93-152

10.5 Preparation of monitoring and evaluation plan (proposal)

An evaluation plan is a framework that clarifies key elements of a proposed evaluation. Ideally, this is a stage that involves evaluation proposal preparation. Before one embarks on serious evaluation proposal development, one needs to ask the following questions:

- What are the goals and objectives of the project?
- What approach should be emphasized in this evaluation?
- Are separate evaluation studies necessary and feasible?
- How should the terms of reference be prepared?
- When should evaluation take place?
- How much will the evaluation cost?
- Who are to be involved in evaluation, and in what ways?
- What advance information is required?
- How will the findings be produced and disseminated?

10.6 Stages in preparation of M&E plan(proposal)

There are many ways of writing an M&E proposal. The most common way are explained below;

1. Preliminary pages

Title page may contain: the name of project, programme or theme being evaluated; the Country/ies of project/programme or theme; name of the organization to which the report is submitted; names and affiliations of the evaluators and the date. Finally in the preliminary pages we have table of contents and acronyms and abbreviations

Step Two

This constitutes chapter one of the proposal that contains the introduction to the evaluation which may include the following areas:

i) **Context of the evaluation:** Briefly describe the project to establish whether it is new, developing or firmly established

ii) **Purpose of the evaluation:** After describing the context of evaluation make a statement of need and then state the purpose of the evaluation. Before writing the purpose consider the following:
   - why is this evaluation important?
   - what are the implication of the evaluation and how does it relate to the future work of the area?

iii) **Evaluation question and objectives:** These are derived from the statement of the purpose of the evaluation. Examples of evaluation questions are
   - Are the planned activities actually being carried out?
   - Is the programme achieving its intended objectives
   - How does the project compare with alternative strategies for achieving the same ends?

   Examples of evaluation objectives may include to:
   - Determine the effect of the project to the beneficiaries
   - Extent to which project objectives have been achieved
   - The impact of the project

iv) **Significance of the evaluation:** The evaluator should first identify the decision areas of the project and explain how the results of the evaluation will guide the effectiveness of the projects. The evaluator will also require identifying key project stakeholders and explaining how the evaluation findings will be important to them.

v) **Limitation and Delimitation of the evaluation:** A single evaluation may not cover all the aspect of interest. It can be limited to certain type of projects, geographical areas etc. These should be stated and justified. This section describes the limits or the scope of the study. The evaluator should give reasons why they are not extending beyond the determined scope

vi) **Assumption of the evaluation:** An evaluator should indicate those factors that operate in his/her study out of which he/she will assume that will not affect the evaluation results. Such factors should be those the evaluator can do nothing about through sampling or studying and therefore has to accept to live with them. For Example, an evaluator will assume that the evaluation participants will give honest and frank answers.

vii) **Definition of the significant terms:** This should be restricted only to those terms which may convey different meanings to different people. Such definitions are sometimes called operational definitions. There are other terms which are not observable but which can only be inferred by subject behaviour when faced with a specific situation. Such terms are called constructs

viii) Evaluation Model: Evaluator needs to look at the entire evaluation and make decision on the type of evaluation model that fits it (see lecture Four).

ix) Conceptual framework: The evaluator needs to explain a framework that shows the interrelationship of independent and dependent variables under the evaluation. These helps in focusing the evaluation.

x) Outline of the final evaluation report: All the chapters for writing the evaluation report must be highlighted on

2. **Step three**

    This is referred to as chapter two. It contains the description of the project being evaluated. These may include:

    - Historical summary of the highlights of the projects or group of activities to be evaluated
    - Day the project was started
    - Philosophy behind the programme
    - Types of beneficiaries for who the project is designed
    - Project out come
    - Project scheduling
    - Content
    - Administrative and management procedures

3. **Step Four**

    This is known as chapter two of the proposal. It entails review of previous Evaluation studies related to the evaluation. The section is very important because it helps one to understand various methods of evaluation that were used elsewhere and the kind of results that were realized

4. **Step Five**

    This step entails the methodology that will be used in the evaluation. It constitutes chapter three which is concerned with Evaluation design and methodology. It touches on:

    - Evaluation Design
    - Target population and sample
    - Description of the sample
    - Description of the instruments
    - Data collection
    - Data analysis plan
    - Work Plan
    - Budget

10.6 Self assessment test

1. Identify various method of collecting data
2. Explain the characteristics of good data collection instruments
3. State the advantages and limitations of different types of methods and tools of data collection
4. With relevant examples explain the steps involved in preparation of M&E proposal

10.7 Summary

It is important to note that when conducting an Evaluation, the methods and tools that one chooses define the quality of the results to be achieved. This lecture therefore disuses two approaches that a project manager can employ in designing a monitoring and evaluation plan. The two methods include qualitative and quantitative techniques. The lecture also provides an in-depth outlook of subcomponent of each of the above methodology and tools that are used in the evaluation of projects. The lecture finally examines various components of a project evaluation proposal Identify the key monitoring and evaluation methods and tools.

10.7 Further Reading

Patton, M, Q. (1990). **Qualitative Evaluation and Research Methods.** Newbury Park, California: SAGE Publications. Inc

McMillan J, and Schumacher, S. (2001). **Research in Education: A conceptual Introduction** (5 Ed). New York: Longman.