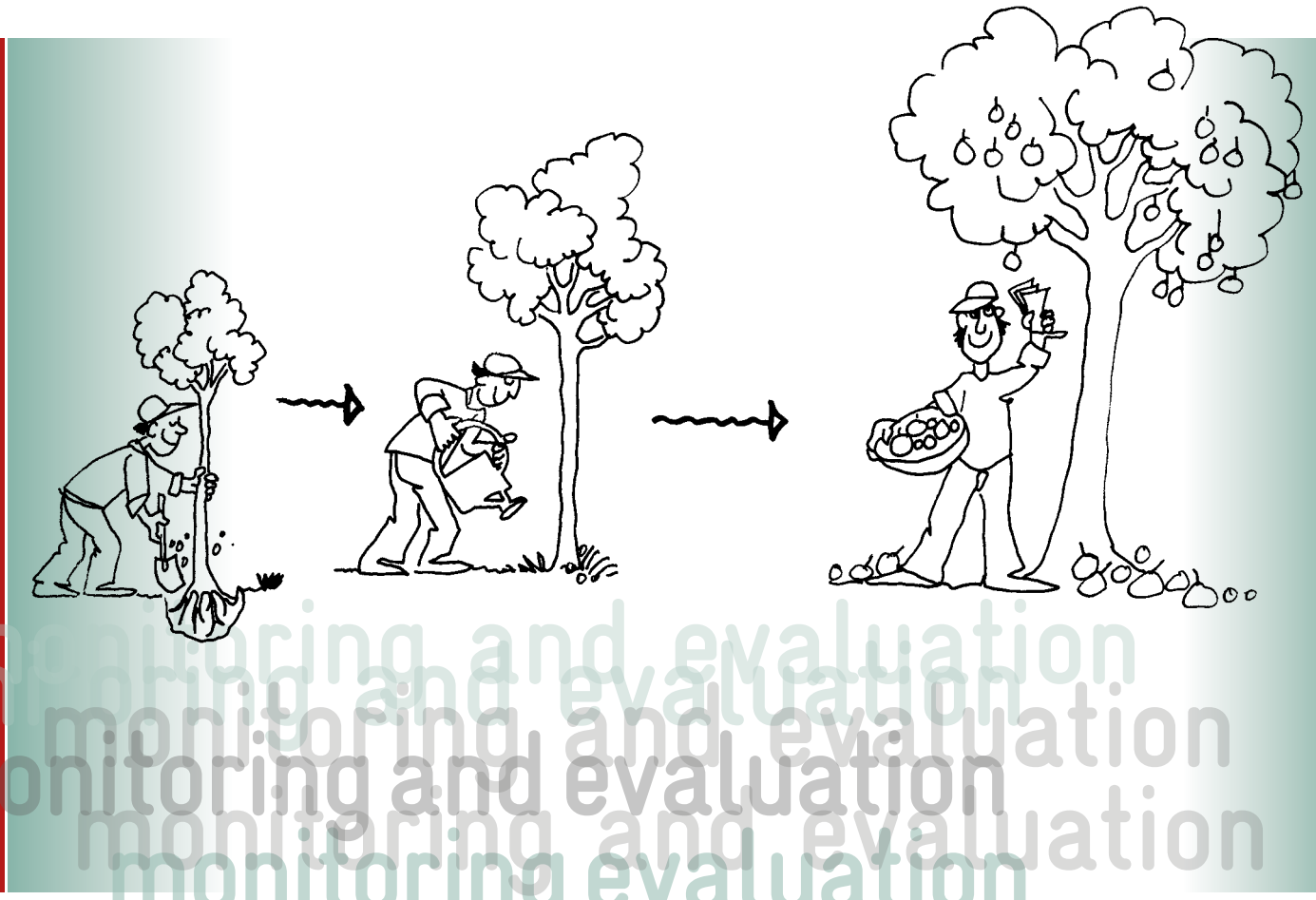

Monitoring and evaluation for TVET-related development interventions

A guide for practitioners

giz

Training Programme for Iraqi Personnel in Egypt Trip

مشروع تدريب الموظفين العراقيين في مصر

Published by

Deutsche Gesellschaft für Internationale
Zusammenarbeit (GIZ) GmbH

GIZ Office Cairo
4d, El Gezira Street
3rd Floor
11211 Zamalek
Egypt

financed by:

Federal Ministry
for Economic Cooperation
and Development

In cooperation with:

FAKT Consult for Management, Training and Technologies
Hackländerstrasse 33
70184 Stuttgart
Germany

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Cairo, January 2011

Table of Content

Abbreviations

BMZ	Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (German Federal Ministry for Economic Cooperation and Development)
DAC	Development Assistance Committee of the OECD
DCED	Donor Committee for Enterprise Development
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
M&E	Monitoring and Evaluation
MDGs	Millennium Development Goals
OECD	Organisation for Economic Cooperation and Development
SMEs	Small and medium enterprises
TRIP	Training Programme for Iraqi Personnel in Egypt
TVET	Technical and Vocational Education and Training

Foreword

The Training Programme for Iraqi Personnel in Egypt (TRIP) is a project in cooperation with Iraq, financed by the German Federal Ministry for Economic Cooperation and Development (BMZ) with technical assistance by GIZ. Its aim is to contribute to the process of reconstruction of Iraq and Iraq's transition to a market economy.

The project is operating under specific political and economic circumstances and, therefore, the implementation of capacity development measures for Iraqi TVET personnel is taking place in Egypt. TRIP is focused on developing the capacity of technical and management staff from the Iraqi formal technical and vocational education and training system to improve the employability of Iraqi skilled workers and executives and help meet the demands of changing labour market conditions.

The project's capacity building measures range from technical areas in TVET (e.g. engineering, administration, agriculture) to TVET-System Management and TVET-Strategy & Policy Development. The latter were defined as additional focus areas at the request of the Iraqi partners during a planning workshop in May 2009. They are closely linked to the ongoing TVET-reform process in Iraq which endeavours to develop a National TVET-Strategy for Iraq. The TVET-Strategy will be based on the new National Iraqi TVET-Vision that was developed as a joint undertaking by multiple Iraqi stakeholders.

TRIP follows a capacity development approach. It combines 'face to face' measures held in Cairo (such as workshops, round table meetings, and conferences) with additional elements to foster the transfer, application and multiplication of learning outcomes in Iraq (such as instruments for Monitoring and Evaluation, multiplier concept etc.).

These measures complement the training courses in technical disciplines and have received very positive feedback from participants. At the same time, they are a great opportunity to build capacity in results and quality-oriented Monitoring and Evaluation – not just of the interventions undertaken under this cooperation, but also of any interventions undertaken by Iraqi institutions in the realm of formal technical and vocational education and training.

It was in this spirit that TRIP organised a series of trainings on Monitoring and Evaluation with a particular focus on results and quality. This manual seeks to present the key concepts behind results and quality-oriented Monitoring and Evaluation as well as selected instruments to put it into practice.

We do hope you find this manual a helpful companion in any efforts towards achieving a labour market-oriented technical and vocational education and training system in Iraq.

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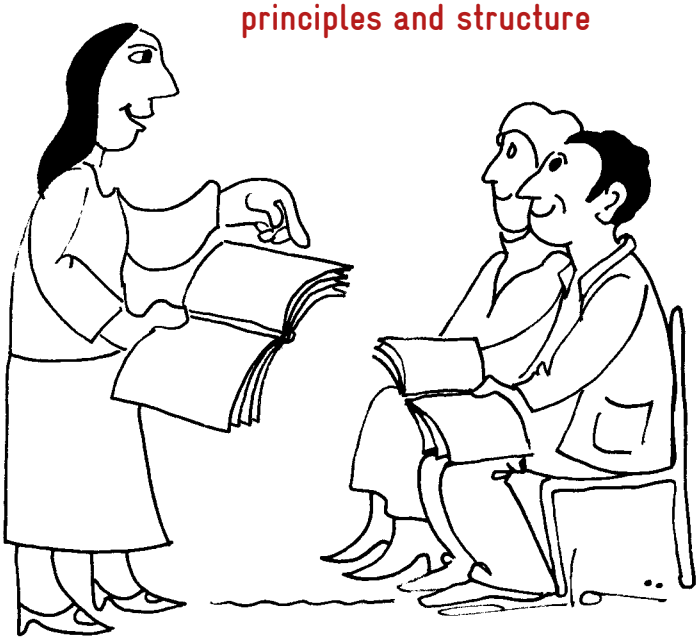
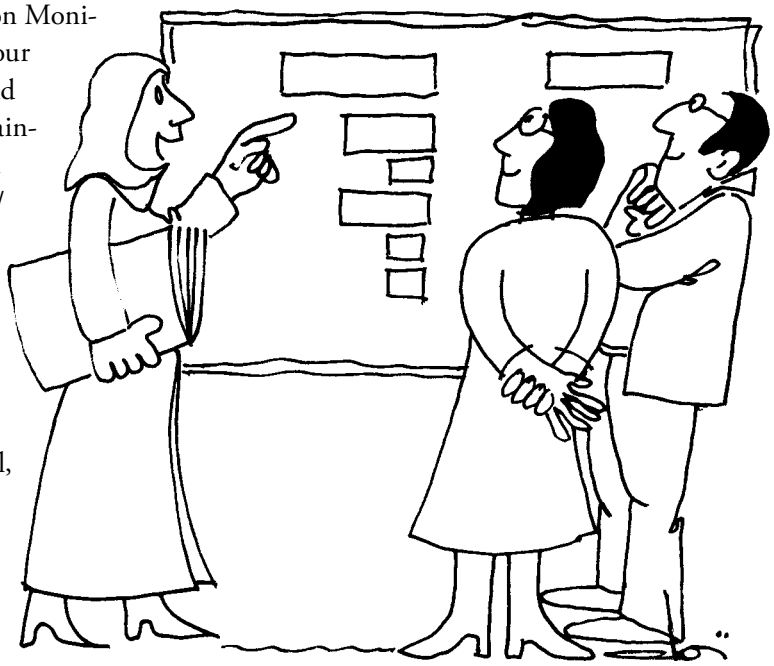
1 Introduction

About this manual: purpose, principles and structure



This guide provides an overview of current approaches to Monitoring and Evaluation (M&E).

This guide provides an overview of current approaches to Monitoring and Evaluation (M&E). It describes how to design M&E systems and presents specific instruments that can be used for data collection, analysis, documentation and communication.
This manual is based on the documentation of a series of workshops on Monitoring and Evaluation in Labour Market-oriented Technical and Vocational Education and Training (TVET) Systems for Iraqi Personnel organised by TRIP/ GTZ in Egypt in 2009.
The documentation was developed by Dorsi Doi Germann (FAKT/ University of Flensburg) in cooperation with Ashraf Safwat, Atef Abdel Malak, Hanan Mikhail, Manal Samra, Mohammed Tosson, and Lamia El Shazly.
The book 'Participatory Impact Monitoring' co-authored by Dorsi Doi Germann and Eberhard Gohl on behalf of GATE/ GTZ in 1996 provided the basis for the workshops. This manual also draws many inputs from the guidelines 'Developing results-based monitoring systems for TVET-related projects' authored by Eva Castañer in cooperation with Edda Grunwald and Silvia Werner on behalf of GTZ in 2007.
This guide follows the following principles.
It addresses the main issues, not all issues.
It combines some theoretical background with specific examples, mostly drawn from TVET-related development experience. It uses brief texts and illustrations, most of them showing situations from everyday life that may or may not be directly related to TVET. It refers to other sources of information for more details or other aspects not covered in this guide.
The manual is structured as follows: Chapter 1 clarifies some basic terms, gives an overview of the international context, and introduces some of the main features of M&E. Chapter 2 introduces some concepts



This guide describes how to design M&E systems and presents specific instruments.

of planning that serve as the basis for M&E. Chapter 3 clarifies further the concepts of results-based monitoring and evaluation.

The fourth chapter describes how to design M&E systems and presents instruments for data collection, analysis and follow-up.

Clarification of basic terms

When people from different backgrounds work together, they need a common understanding of vocabulary to avoid misunderstandings. This is especially important in the field of monitoring and evaluation.

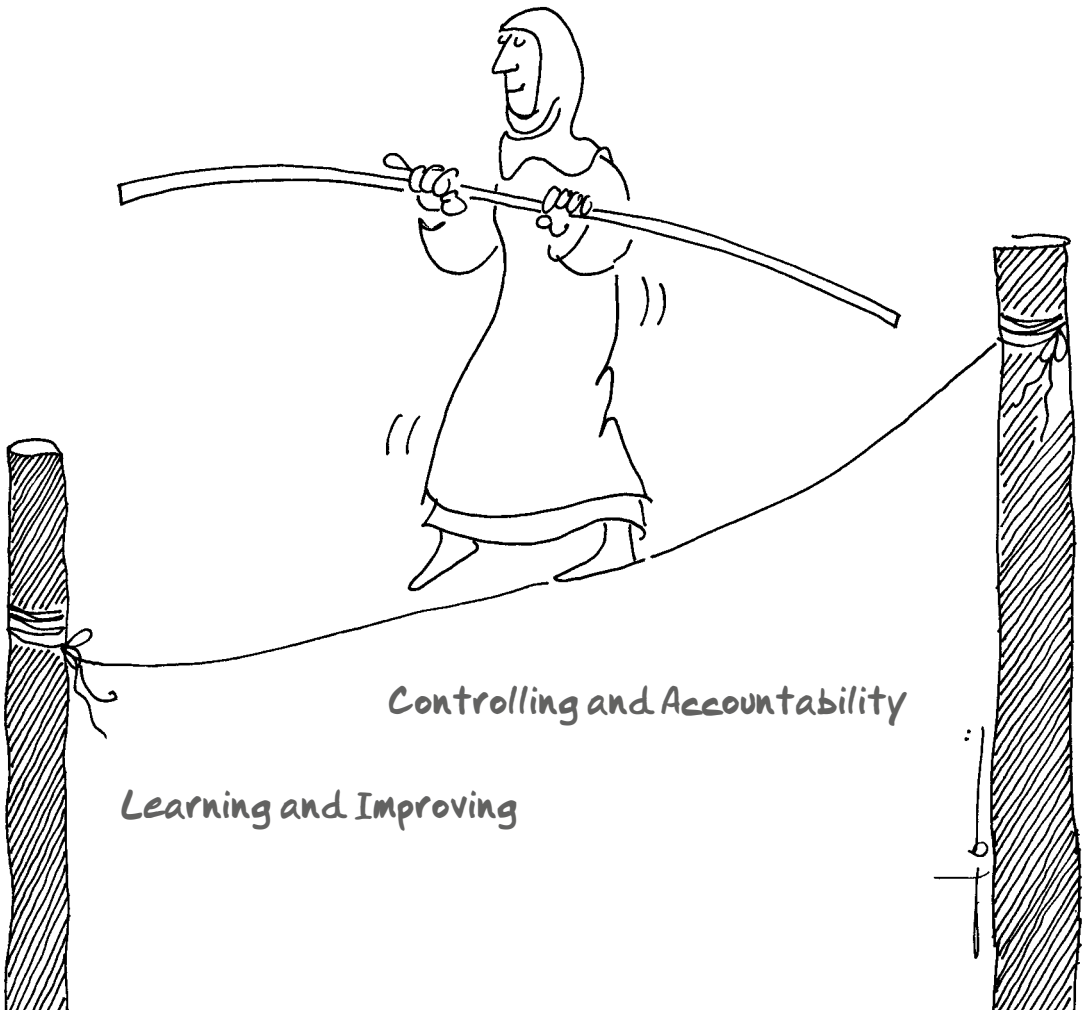
International publications use a variety of terms to refer to development interventions and their effects. To avoid confusion, we present here an overview of the basic terms we use in this manual.

We use the term...	to refer to[1] ...
Accountability	Obligation to demonstrate that work has been conducted in compliance with agreed rules, standards, roles, responsibilities, or plans.
Attribution	Ascription of a causal link between observed changes and a specific intervention. This is often very difficult to 'prove' in a strict sense. Usually, evaluators try to establish a degree of attribution that is reasonably convincing.
Beneficiaries	Individuals, groups or Organisations that benefit directly or indirectly from a development intervention.
Effect	Intended or unintended change due directly or indirectly to an intervention. Often also referred to as 'results'. Depending on how far reaching these effects are, they are referred to as outputs, outcome or impact. Please note that whether a certain change may be considered an outcome or an impact depends on the specific design and scope of the intervention.
Empowerment	The process of assisting all stakeholders to achieve their full potential. It may include aspects of technical skills development, access to information, transfer of responsibilities, increased decision making power, and coaching to improve self esteem.
Evaluation	Assessment of an ongoing or completed development intervention. It should cover the rationale, design, implementation and results of the intervention. Evaluations should be as systematic and objective as possible. The aim is to determine the relevance and fulfilment of objectives, development efficiency, effectiveness, impact and sustainability.

1 Adapted from: OECD DAC (2002-2008): Glossary of Key Terms in Evaluation and Results Based Management

Impact	Long-term effects directly or indirectly produced by an intervention. They may be positive or negative, intended or unintended. The **intended** impact of an intervention is sometimes also referred to as 'indirect benefit' or 'goal'. Depending on the design of a specific intervention, it may cover aspects such as changes in the attitude of society towards women in blue-collar jobs, an improved living standard for employees or a lower rate of unemployment. In turn, the impact or long-term goal can be seen to contribute to an ultimate or overarching goal such as 'poverty reduction'. Please note that these are just examples. The actual impact will vary depending on the design and scope of a certain intervention.
Intervention	Support given to partners to promote development. This support may be provided by donors or non-donors. Examples are policy advice, projects, and programmes. This may happen as part of international cooperation or as a national or local endeavour to promote development.
Monitoring	A continuing collection and analysis of data of an ongoing development intervention. Its aim is to provide indications of the extent of progress and achievement. It should cover activities, outputs, the use of funds, indications regarding the achievement of the objectives, and some indications regarding unexpected effects or changes in the environment of the development intervention.
Objectives	The intended positive changes to which an intervention is expected to contribute. Depending on how far reaching these objectives are, they are referred to as outputs, outcome, and impact. They can also be called 'intended results'.
Outcome	Change which can be directly attributed to an intervention. It may be intended or unintended, positive or negative, short-term or medium-term. The **intended** outcome of an intervention is sometimes also referred to as 'direct benefit' or 'purpose'. One example may be that the trainees in an apprenticeship programme have improved their skills and are more likely to find employment. In order to achieve this, the intervention needs to produce the right outputs and these need to be appropriately utilized by the different stakeholders.
Outputs and Use of outputs	The products, capital goods and services which result directly from an intervention. Examples may be improved teacher training and a new curriculum which is better adapted to the needs of the labour market. Outputs are utilized by the different stakeholders in order to achieve the desired outcome. Following our example, managers and staff at TVET institutions use the new curriculum to re-orient their training approach and schedules and teachers implement the newly acquired didactic methodologies in class.

Participation	The process of different stakeholders, including the beneficiaries, working together. True participation is more than just passively taking part in an activity. Participation in M&E means the different actors work together to design the M&E system, carry it out and interpret the results. It also means they openly share information and experience and use a language that all can understand. The purposes of participation are to achieve better results and to empower all stakeholders.
Partners	Individuals and/or Organisations that work together to achieve agreed objectives. They may include governments, civil society, non-governmental Organisations, universities, professional and business associations, multilateral Organisations, private companies, etc.
Programme	A set of interventions designed to achieve specific objectives within a defined time frame and specified resources. Programmes usually have a wider scope than projects: they may cut across several sectors, themes or/ geographic areas. Sometimes there is not much difference between a large project and a small programme – the use of these two terms need not be too rigid.
Project	An individual development intervention designed to achieve specific objectives. Usually, it starts from a certain problem that needs to be solved or a vision that people want to achieve. It follows a sequence of tasks within a defined time frame and uses specified resources. Projects can be parts of larger programmes. In this case, they are often called components.
Results	Intended or unintended changes due directly or indirectly to an intervention. Often also referred to as 'effect'. Depending on how far reaching these results are, they are referred to as outputs, outcome or impact. Please note that whether a certain change may be considered an outcome or an impact depends on the specific design and scope of the intervention.
Results chain	A sequence of results linked by a causal logic. Those results which are more closely linked to the intervention (outputs, use of outputs) are necessary to achieve the next levels of achievement (outcome, impact). It is often also referred to as 'impact chain'.
Stakeholders	The stakeholders of a development intervention are the Organisations, groups or individuals who have a direct or indirect interest in a certain issue, a development intervention or its results. These different stakeholders usually have different interests and look at the issue from different perspectives. They often have different expectations of the development intervention.
Target group	The intended beneficiaries of an intervention.



M&E is a balancing act between multiple purposes

International context

During the last decade there have been many efforts to make development cooperation more effective. These efforts aim to ensure that all development efforts really contribute towards achieving sustainable development and reducing poverty. A series of international declarations provide a framework for this.

The Millennium Development Goals (MDGs) provide specific targets for reducing the different dimensions of poverty. The Millennium Declaration outlines international commitments to human rights, good governance and democracy. The Paris Declaration on Aid Effectiveness (2005) and the Accra Agenda for Action (2008) set out principles on how international development cooperation should be managed.

A new understanding of international development cooperation has emerged, calling for effective partnerships and mutual accountability among development partners. All stakeholders are increasingly under pressure to legitimate their expenses and to show that their policies are improving the living conditions of their beneficiaries.

A direct consequence of this is the need to monitor and evaluate the results and impacts of all development efforts – national and international. Only by doing this can we know whether we are achieving our goals, such as the MDGs or other nationally specific development targets.

Multiple purposes of Monitoring and Evaluation (M&E)

Monitoring and evaluating policies, projects and any other kinds of interventions serves several purposes:

- **Steering**: by keeping track of what is being done, checking whether progress is being made with regard to pre-established objectives and – if necessary – proposing measures for improvement;
- **Accountability**: by providing empirical evidence of the effectiveness of an intervention to legitimate it; by assessing the performance of different actors involved in an intervention and thus making them accountable to each other and the wider public;
- **Learning**: by drawing lessons from experience to continuously improve the relevance, effectiveness, efficiency, impact and sustainability of our work;
- **Organisational development**: by appropriately involving all members of an organisation in the M&E process and sharing the responsibility for M&E and the lessons to be learned from it.
- **Communication**: by providing numbers, facts and 'stories' that help explain what we do and how we are contributing to achieving certain development goals.

In any of these cases the underlying question is: **Are we doing the right things right**?

Challenges of M&E

As we have seen in the previous section, M&E can serve several purposes. One of the challenges of M&E is directly related to that: How can an M&E system do justice to all these expectations and still remain manageable?

Another challenge is specifically related to the evaluation of impacts and is about answering the question: 'What would have happened without the development intervention'? We need to answer this question if we want to know whether the results we observe are due to the intervention or not. Finally, there is a specific challenge related to the fact that TVET is a bridge between the economic and the social sectors. Usually, educational statistics do not link up with labour market information systems. Making these connections is crucial for the strategic programming of TVET policies.
There is no single answer to these challenges. Each development intervention will need to find its own appropriate answers. In practice, this means carefully balancing out expectations and constraints. The following sections can provide some guidance to do this.

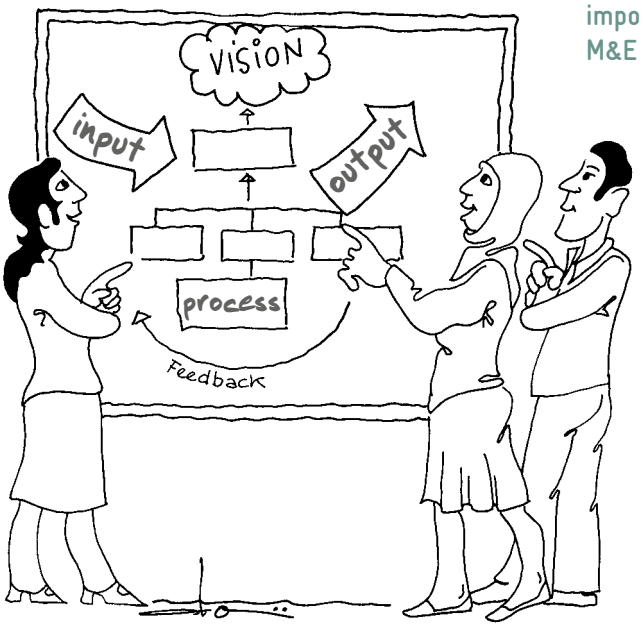
Principles of M&E

The main principles are:

Focus

Focus on what is really important to the main stakeholders. To 'focus' means finding out what are really the key questions that

Good planning is an important basis for M&E



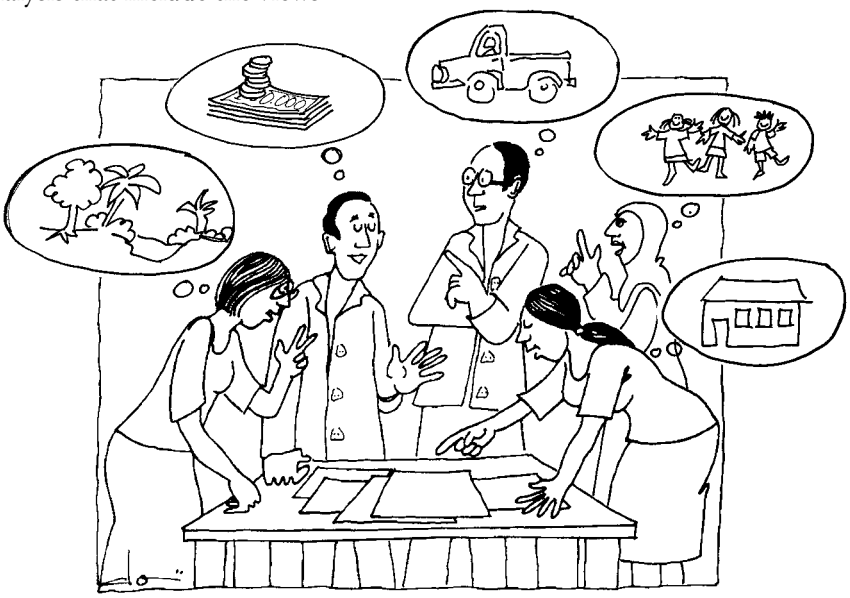
need to be answered. For this we need to know the main objective the intervention is trying to achieve, how it works and who it works with. Good planning and clear planning documents are an important basis for focused M&E.

Simple

Keep the M&E system as simple as possible. To do so, it is important to choose a basic methodology and customise it so that it really fits the context. It is better to invest time and money in appropriate data collection and good analysis that include the views of different stakeholders than to be overwhelmed by large quantities of data.
Other important principles are:

Useful

M&E must provide useful information for the different stakeholders. In the case of TVET, this can include elements of labour market monitoring, school management, integration of general education and TVET, cooperation between schools and companies, etc.



M&E must provide useful information for the different stakeholders

Participatory

Participation is the process of different stakeholders – including the beneficiaries – working together. True participation is more than just passively taking part in an activity. In M&E, it means the different actors work together to design the system, carry it out and interpret the results. All stakeholders involved in M&E need to develop a common vision and agree on how to share the responsibilities – not just for M&E but for the development intervention as a whole.

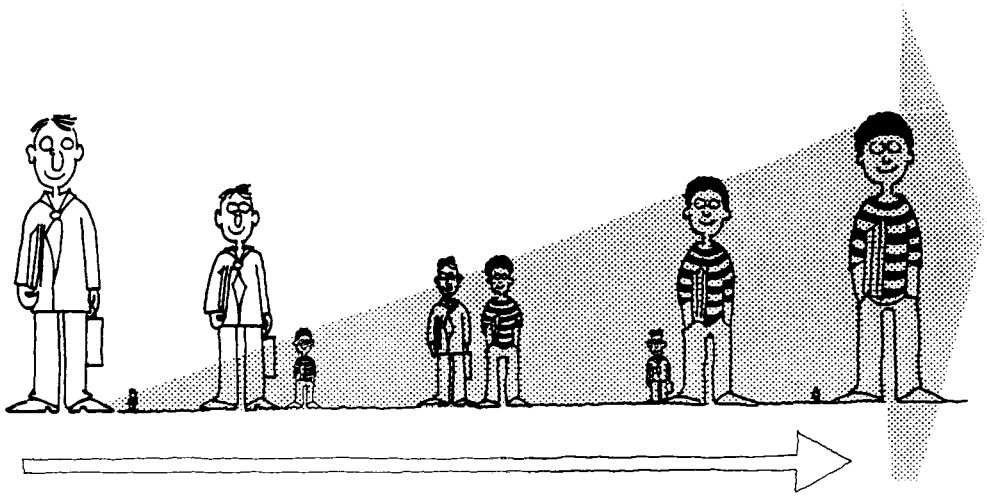
This will require a continuous process of communication, clarification, negotiation and agreement between the different individuals, groups and organisations. All this requires time, patience, tolerance, perseverance, and flexibility.
Participation serves two purposes. First, by including the views and expertise of the different stakeholders, better results are achieved. Second, participation empowers all stakeholders through the open sharing of information, experiences and expertise.

True participation empowers all stakeholders

Empowering

Empowerment is the process of assisting all stakeholders to achieve their full potential. It often involves a 'strong' partner helping a 'weaker' partner to grow. At the beginning of such a process, the stronger partner is very active providing different kinds of support to the other partner. Gradually, the weaker partner becomes more capable and begins to take on more responsibility. Eventually, a point is reached, where the helping partner can withdraw because the other is capable and strong enough to manage on his own.

Empowerment may include aspects of skills development, access to information, transfer of responsibilities, increased decision making power, and coaching to improve self-esteem. To be empowering, M&E should be open to learn from failures as well as successes. This requires trust and a management culture that supports learning from experience rather than 'blaming'. It also requires all participants to openly share information, experiences and expertise and to use a language that everyone involved can understand.


Empowerment is assisting all stakeholders to achieve their full potential

Timely

M&E must be timely so that its results can still be used for improvement of the intervention itself. It should ideally start at the beginning of the intervention.

Adaptive

M&E is about learning from experience. Early M&E results will not only give us important clues on how to improve the implementation of a development intervention, but will also help us improve the M&E system. We may discover that certain indicators are too difficult to measure or certain instruments for data collection do not yield the expected results.
It is important to keep the M&E system flexible to adapt it to real needs.

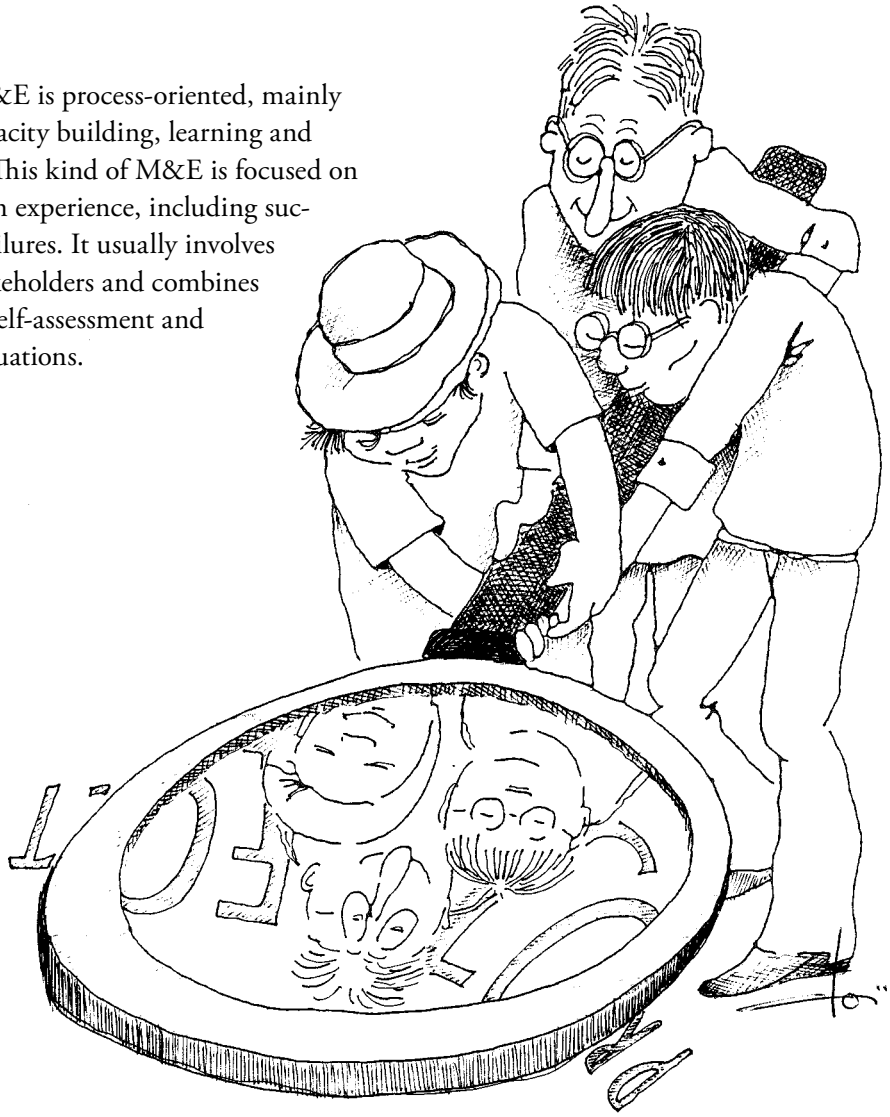
Approaches to M&E

There are different types of approaches to M&E, as shown in the pictures below and on the opposite page.

Controlling M&E is results and control-oriented, mainly aimed at accountability and Legitimisation. This kind of M&E tends to highlight success stories and conceal failures. It often uses external evaluators and can be intimidating for the people and institutions being observed.

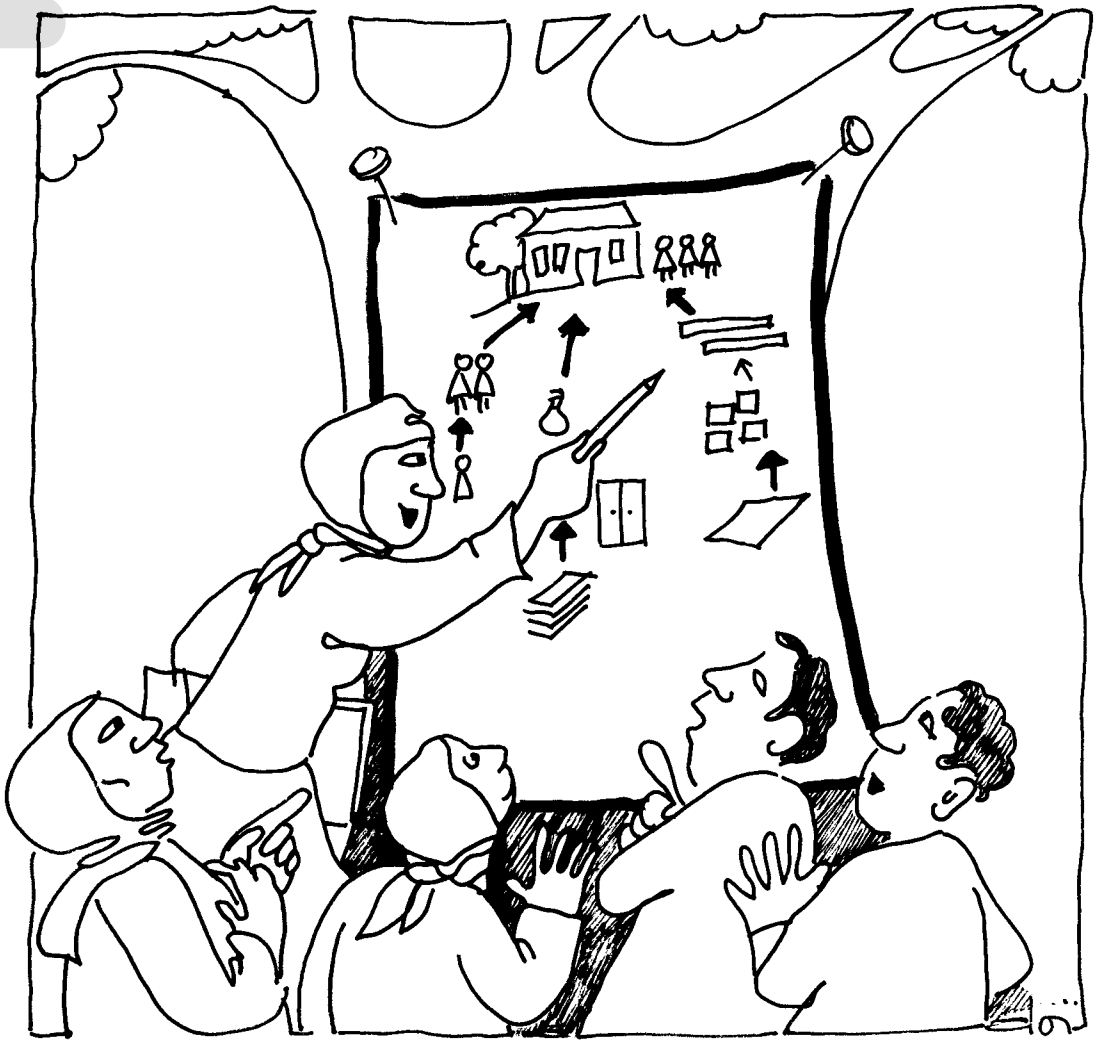
Controlling M&E can be intimidating

Learning M&E is process-oriented, mainly aimed at capacity building, learning and innovation. This kind of M&E is focused on learning from experience, including successes and failures. It usually involves different stakeholders and combines elements of self-assessment and external evaluations.



Learning M&E involves different stakeholders

2 Planning as the basis for M&E



Planning is a structured process

Planning is a structured process which should decide what a certain intervention wants to achieve and how it will go about it. Usually two types of planning are distinguished:

In **strategic planning**, an overall approach is agreed in order to achieve a major goal or vision. The strategy provides a framework to work in, but usually does not spell out specific activities. Usually strategic planning is the responsibility of top management advised by senior staff / coordinators.

In **operational planning**, more specific objectives are defined, a schedule of the necessary activities to achieve them is established, and resources are assigned (who does what, when and with which resources). Operational planning is mainly the responsibility of senior staff / coordinators and done in cooperation with other staff.

During the final stages of the planning process a document is written up, usually called a proposal. It usually focuses on the strategic overview of the whole intervention and gives some orientation for the operational planning.

The proposal should briefly describe the context of the intervention, clearly state its objectives (ie. what the intervention wants to achieve - the following section explains this

in more detail), its rationale (ie. how it will go about achieving its objectives and why this seems appropriate - see the section 'results chain' for more details) and a budget. A proposal should also explain why the issue addressed by the intervention is important (relevance), who will be involved in and affected by the intervention (see the section on stakeholder analysis for more information), what may hinder its success (see the section 'risk analysis' for more details) and how this will be dealt with.
Usually the proposal does not specify all the activities in detail but indicates examples of the kind of support to be provided. Further details are specified and scheduled during the operational planning.

Proposals may take on very different forms. This often depends on the requirements specified by the different funding agencies. (Funding agencies may be international donors, line ministries in country or any other institution providing support to development interventions). Usually, proposals combine narrative, diagrams and tables. Once approved by all parties, the proposal becomes a contractual commitment. It also becomes the main reference for further operational planning, implementation and M&E.
In the following section we look in more detail at some concepts that provide the link between planning and M&E.

Objectives

Objectives are the intended results of a development intervention.

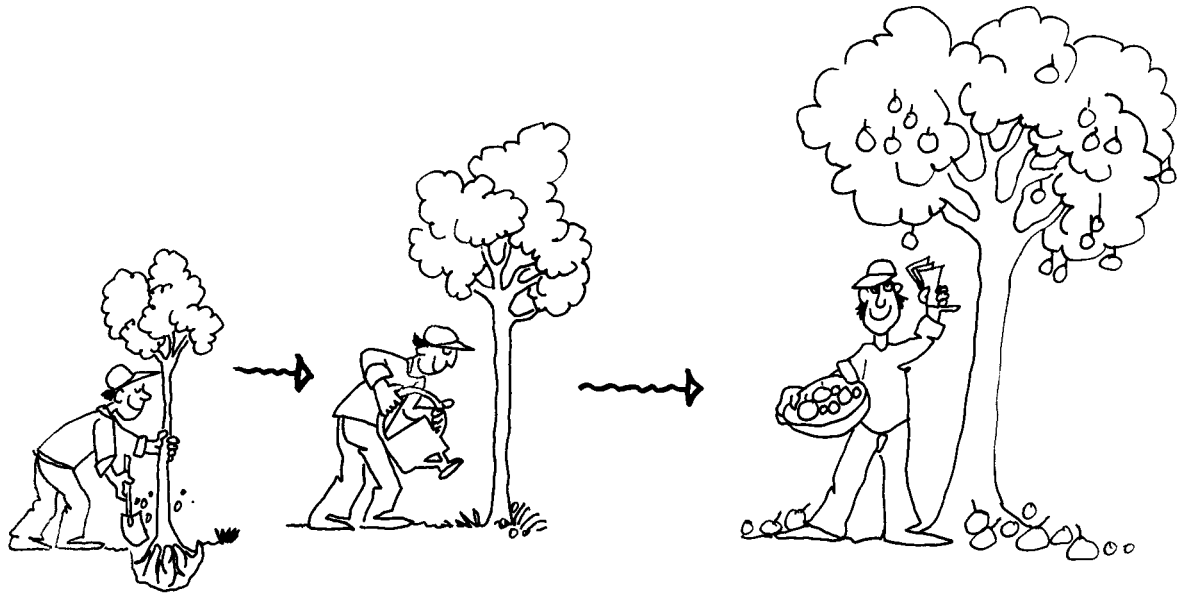
Objectives are the intended results of a development intervention. Depending on how closely connected to the intervention these intended effects are, they are referred to as outputs, outcome or impact. Please note that different agencies and organisations use different terminology. The best is to clarify and agree on a common terminology among the partners involved in an intervention.

Impact: Development interventions are usually driven by the will to achieve a certain vision. 'Elimination of poverty' as endorsed by the Millennium Declaration is an example of this. It expresses a vision shared by all humanity: that all people shall live free from any dimension of poverty. This serves as an inspiration and driving force. This kind of impact is also sometimes called 'overarching development goal' or 'aggregated impact'. Another kind of impact is more closely related to the development intervention and is sometimes referred to as 'indirect benefit' or 'long-term goal'. Examples may be changes in the attitude of society towards women in blue-collar jobs, an improved living standard for employees or a lower rate of unemployment. A single development intervention can *contribute* to achieving this kind of objective but it is unlikely to achieve it by itself.
Outcome: What development interventions can do is to help achieve a long-term goal by addressing certain aspects of it. Hence, a development intervention is designed to solve a specific problem or to make use of a concrete opportunity. This specific objective is usually called outcome, purpose or direct benefit. An example may be to improve the employability of young people in certain occupations within strategic economic sectors in the country, including increasing their preparedness to become self-employed.
Outputs: The proposal should also cover another level of objectives, usually called outputs. These are the products, capital goods and services which result directly from the intervention. They are necessary in order to achieve the desired outcome. Examples may be improved teacher training, a new curriculum which is better adapted to the needs of the labour market, modularised courses to make training more flexible, the inclusion of entrepreneurial aspects, the testing of new learning environments in the workplace, etc. There is a direct relationship between the problem an intervention wants to address and the expected outputs and outcome of the intervention. The relationship between the outcome and the long-term goal is usually less direct. In a proposal, the relationship between the problem, the expected outputs, outcome and impact should be clear and understandable. Results chains can be a very useful way to visualise this.
The next section explains what a results chain is and looks at the different kind of objectives in more detail.

Results chain

A development intervention can be described as a logically connected sequence of inputs and outputs to achieve certain changes. What we mean by 'logically connected' is a *causal* logic. It is based on the principle of cause and effect. The following picture shows a simple example of a cause-and-effect sequence.

We engage in a development intervention *because* we are convinced that it will help solve a certain problem. This 'conviction' is based on the analysis of the current situation, on previous experience and our knowledge. The rationale behind it is called a *cause-and-effect hypothesis*. A results chain shows the cause-and-effect hypotheses underpinning a certain intervention.
A results chain usually covers the following elements: inputs, activities, outputs, use of outputs, outcome, and impact (positive and negative/risks). The picture overleaf shows an example of a results chain. Including risks in the results chains allows developing strategies to counter those risks.

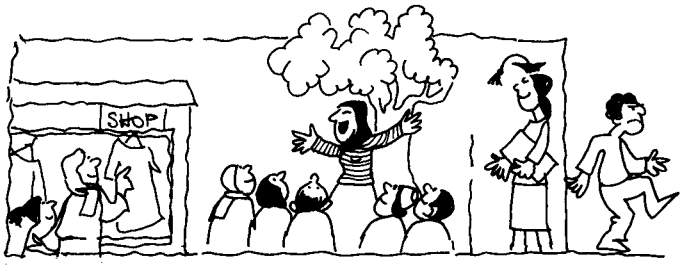


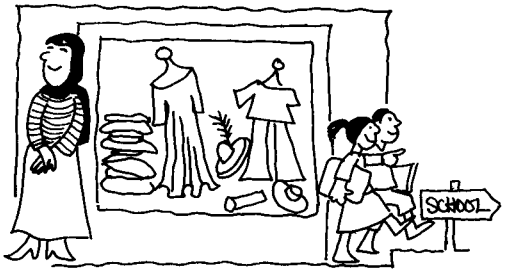
Causal logic
IF I plant a tree... ... and IF I take good care of it... THEN... I will harvest many fruits.

Projects and programmes require **inputs** (manpower, material, time and money). With the help of these inputs, **activities** are implemented (for example meetings, study tours, market analysis, teacher training, installation of infrastructure, etc.).
Activities result in certain **outputs** (these may be: market driven curricula, modularised training courses, network of trainers to exchange experiences, vocational counselling service for youth and their parents, job fairs for employers and job seekers, newly equipped TVET centres, etc.).
If these outputs are appropriately **used** by the stakeholders (for instance school managers, teachers, trainers, students, parents, employers, job seekers) of the intervention, they should lead to the achievement of the development intervention's **outcome** (e.g. the knowledge, skills and attitudes of young women and men match the demand of the labour market in five occupations in the two most strategic economic sectors for national development).
The **outcome** is **directly connected** to the intervention in terms of time (changes occur during the implementation and should be achieved before the end of the development intervention), location (changes occur in those provinces, cities or schools where the development intervention operates) and stakeholders involved (changes affect students, schools and enterprises directly involved in the development intervention). This is why it is also called **direct benefit**.
As we have seen in the previous section, the achievement of the outcome may lead to further long term results and indirect benefits, usually called **impact** (for example the rate of unemployment decreases, the living conditions of employees improve, the number of women entrepreneurs increases, other schools in the country also improve their curricula, etc.). In turn, this impact can contribute to the **overarching goal** of 'poverty reduction' or 'elimination of gender disparity'. This is sometimes also called **highly aggregated impact**.
The **impact** is **less closely connected** to the intervention in terms of time (maybe it only becomes visible several years after the end of the development intervention), location (for example, employers favour job seekers who have graduated from a reformed TVET programme; other schools may like the idea and start working in the same way; or the

Examples of positive impact
Graduate becomes an accepted politician.
Daughter studies.

Examples of negative impact (risk)
Divorce

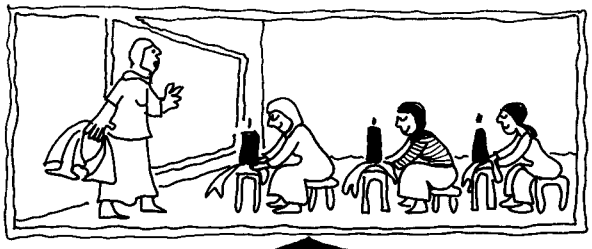




Impact
Graduate becomes a successful and wealthy entrepreneur

Outcome
Graduate generates first income

Use of outputs
Graduate utilizes her new skills



Outputs
Participants acquire new skills in a TVET course

Activities
Preparation of a vocational training course

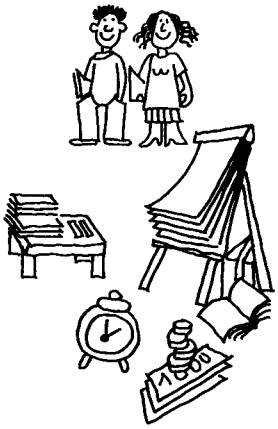
A results chain describes the objectives and rationale of a development intervention

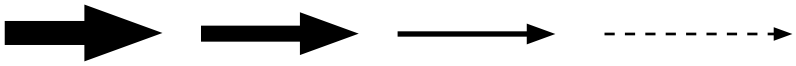
central government may pass a law to reform all TVET programmes in the country) or stakeholders involved (employers may send their employees to further training in order to keep their skills up to date with the changing demands of the labour market). This is why it is also called **indirect benefit**. As you can see from the examples above, the likelihood of achieving the different kinds of objectives decreases as you proceed along the results chain. In other words, the certainty of the cause-and-effect hypotheses is higher for changes which are close to the intervention (for example: the alumni of a TVET course based on the new curriculum are better prepared for the needs of the labour market) and lower for those that are less directly connected (they find a suitable job and are able to retain it for more than six months).

The boundary between direct impacts and indirect impacts is often called 'attribution gap'. This indicates that the changes beyond this 'gap' are beyond the direct control of the development intervention and depend on other factors (other development interventions, economic growth in the whole country, improved levels of general education, effects of armed conflict, etc.).
In fact, the certainty of attribution decreases gradually along the results chain. This is why sometimes it is also called 'attribution continuum'. The 'gap' should be understood as a segment along this continuum, rather than a clear-cut boundary line.

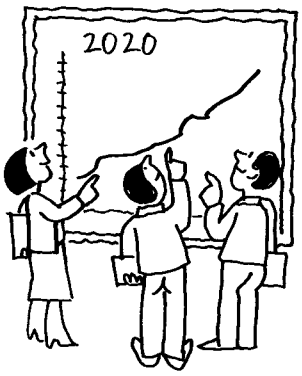
The following chart shows an example of the gradual decrease of influence / attribution of a development intervention.

A development intervention is a sequence of changes

Resources are mobilized …	… to undertake certain **activities** or measures …	… which have certain consequences (**outputs, use of outputs**) …
		
- People - Material - Time - Finance	Market research Curriculum development Training of trainers Meetings with representatives of the private sector Policy advice to local government	Outputs: Database on market needs Appropriate curricula Networks of qualified trainers, supportive entrepreneurs and local authorities Use of outputs: Training courses are implemented following the new curriculum, using new training methodology and oriented towards the needs of the labour market. Local enterprises contribute to the implementation and financing of training. Young people attend these courses.



Strength of the influence/ attribution

… which induce short or medium term changes for the beneficiaries, (**outcome**) …	… which lead to longer term indirect socio-economic improvements (**impact**), - which contribute in the long run to Millennium Development Goals (**highly aggregated impact**)
	
The young participants' knowledge, skills and attitudes match the demand of the labour market. (employability)	First indirect benefits may be: - employment - new businesses starting up This may lead to: - better income - increased self confidence of young workers - improved productivity and competitiveness of local enterprises Which in turn may lead to: better general living conditions These changes contribute to the improvement of long term goals / MDGs like Poverty reduction, Gender Equality…

Scope of the intervention

It is important to note that whether a certain change may be considered an outcome or an impact depends on the specific design and scope of the intervention. The following example shows how a specific change – greater openness of employers to employ women for blue-collar jobs – can be considered an output or an impact, depending on the scope of the intervention.

An awareness raising campaign directly aimed at building trust among employers towards women in blue-collar jobs will consider an improved attitude of these employers towards women employees as its 'outcome'. It will aim to achieve these attitudinal changes as the direct benefit of its work.

An intervention which aims to improve the quality of training in technical occupations, at the same time as ensuring equal access to this training for boys and girls, may eventually (i.e. in the long term and indirectly) lead to attitudinal changes in employers – simply because there will be more well trained women in the labour market. In this case, the attitudinal changes would be referred to as 'impact', since they are not the direct objective of the intervention.

Equally, if an intervention is designed to improve the quality of training but does not actively support improved matching mechanisms between job seekers and potential employers, its output may be to improve the knowledge, skills and attitudes of the job seekers, but the achievement of actual employment will remain beyond the scope of the direct influence of the intervention and is therefore considered an impact or indirect benefit.

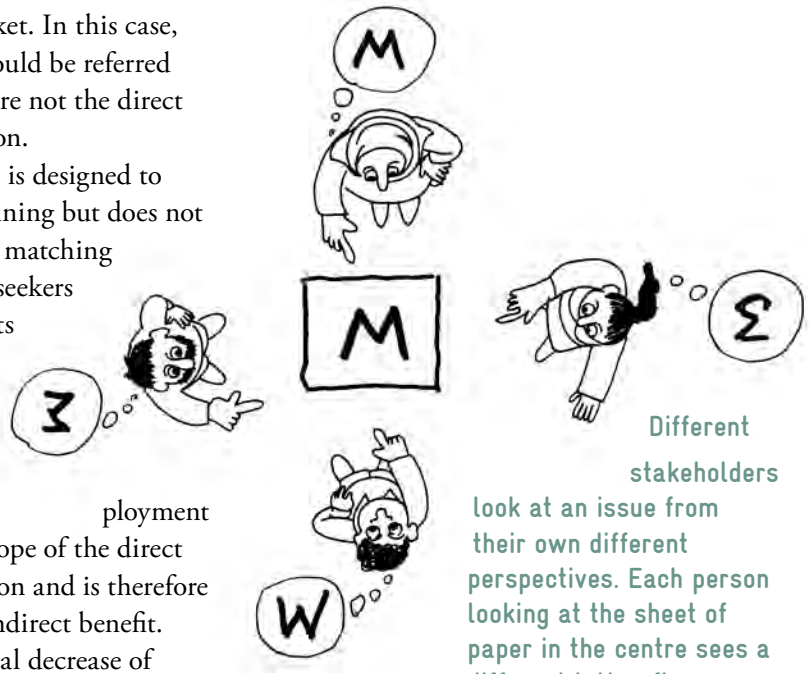
This means that the gradual decrease of influence / attribution of a development intervention has consequences for planning and for M&E.

For planning, it means that we should design the intervention in a way that means we can realistically achieve the outcome. The outcome of the development intervention is the contractual commitment between the funding agencies (these may be public institutions in country or international donors) and all cooperation partners. No development intervention should commit itself to achieve more than it can realistically achieve.

For M&E it means that when we observe certain changes, we have to question whether we can reasonably attribute them to the development intervention.

Stakeholder analysis

All development interventions require the cooperation of many different individuals, groups and organisations – also called stakeholders. In the case of TVET-related

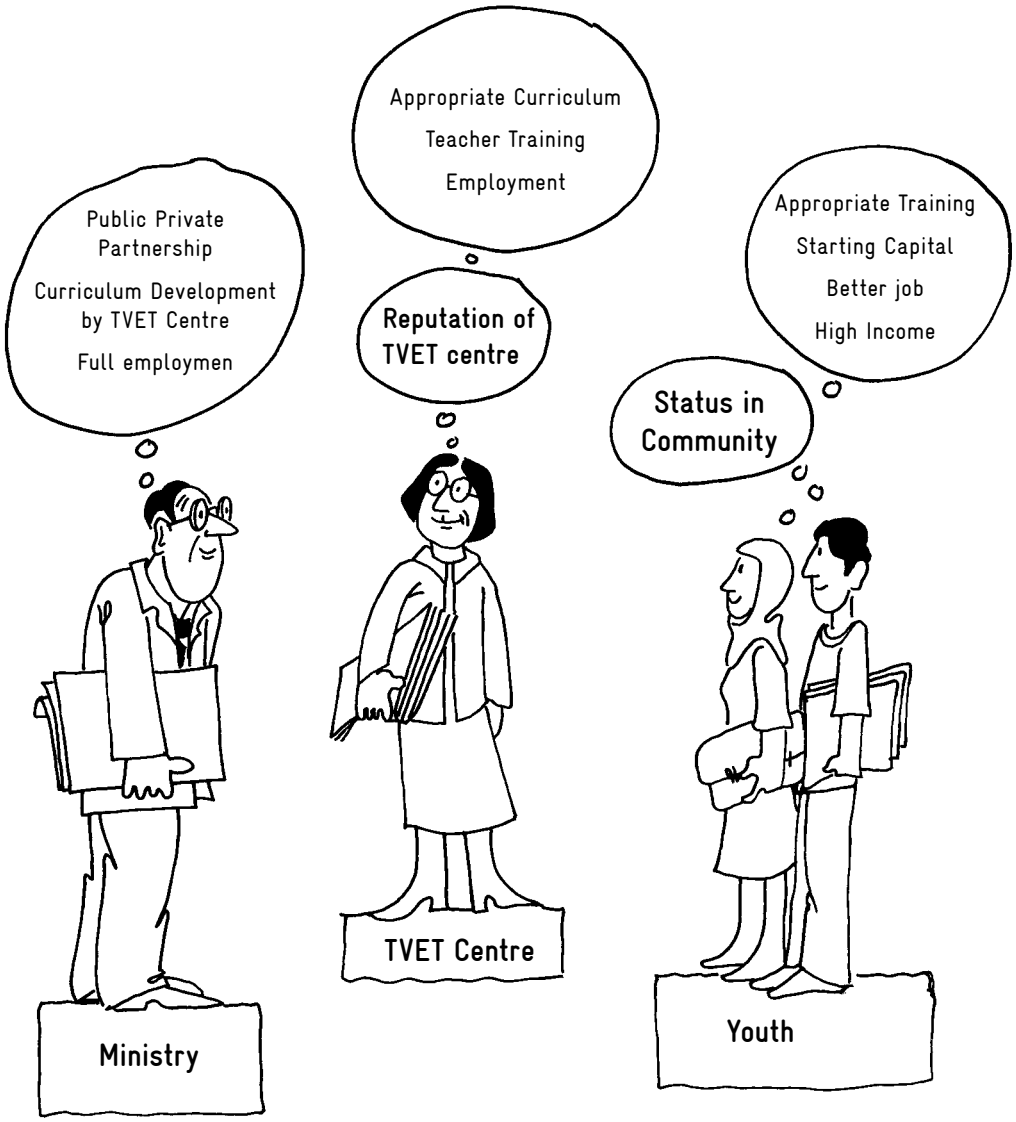


Different stakeholders look at an issue from their own different perspectives. Each person looking at the sheet of paper in the centre sees a different letter, figure or symbol. Who is right and who is wrong?

interventions the stakeholders may include teachers, trainers, students, parents, employers, job seekers, as well as staff and managers of schools, TVET-centres, employment offices, and the ministries of education and labour.

These different stakeholders often have different backgrounds and interests. Their perspective and expectations regarding the intervention can be very different.

The stakeholder analysis helps to identify the different stakeholders, understand their perspective on the intervention and their relationships to each other. This is important to make sure that the development intervention addresses the needs of the different groups. It also helps to see how each of them can contribute to the implementation of the intervention. For M&E purposes, it is important to know which kind of information, data and lessons learned may be most useful for each of the stakeholders.



The stakeholder analysis helps to identify the different stakeholders, understand their perspectives on the intervention and their relationships to each other

Risk analysis

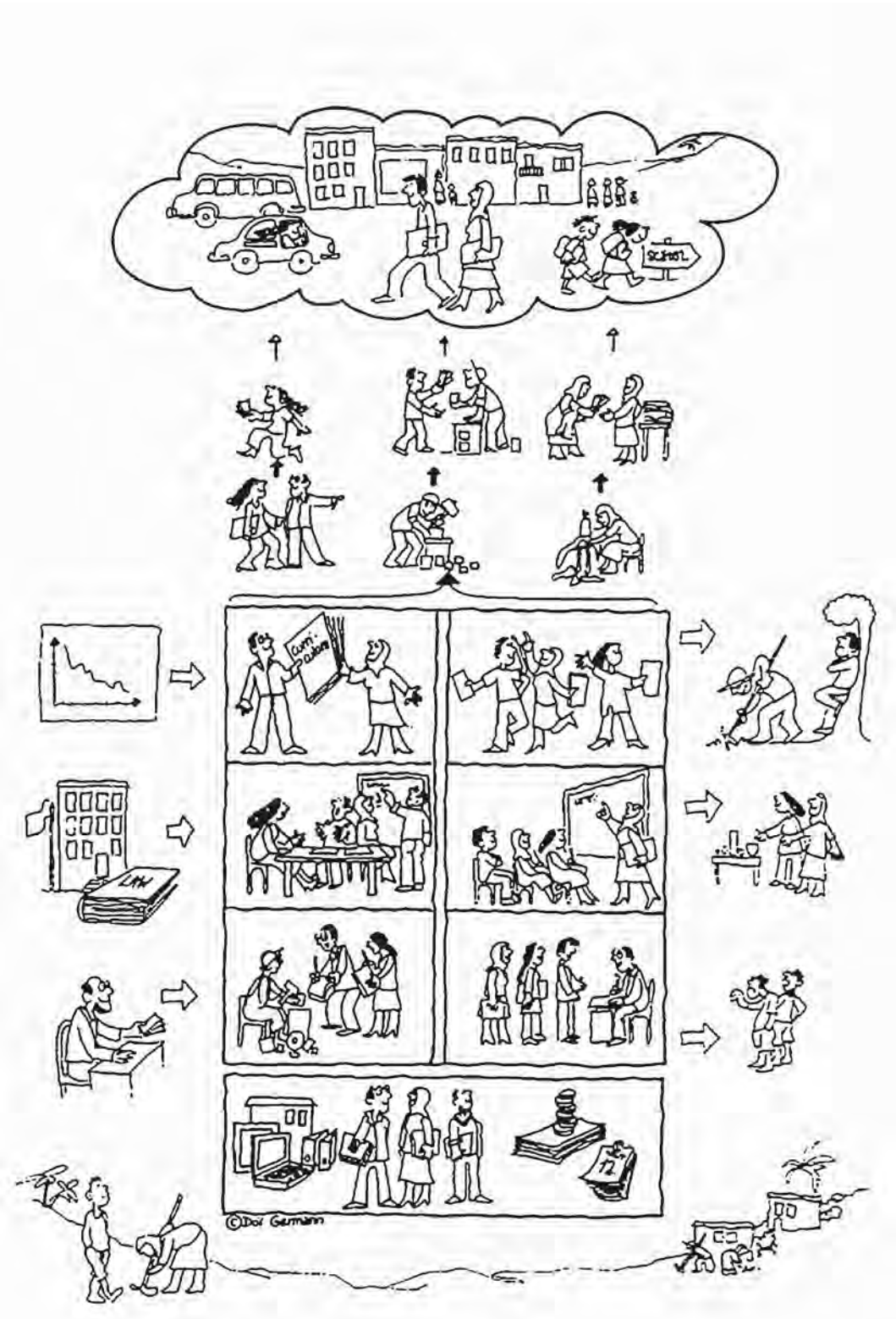
Risk analysis is a technique that identifies and assesses the factors that may endanger the success of an intervention. They may hinder the actual implementation of the development intervention or the achievement of its objectives. Examples of risks may be an economic crisis, armed conflict, natural disasters, conflicting values among stakeholders, existing discrimination patterns towards different groups because of age, gender, ethnicity, religion, etc.
Risk analysis is also used to develop preventive measures to reduce the probability of these risks occurring or to reduce their likely impact on the intervention's capacity to achieve its objectives.
The following steps are usually followed:

1. Identify and categorize the risks according to the severity of their negative impacts.
   What is likely to happen and how would it effect the achievement of the intervention's objectives?
2. Assign a probability to the risks.
   How likely is it that the problem will occur?
3. Develop risk management strategies.
   How can we avoid the risks?
   How can we Minimise their impact?
4. Monitor risks, conditions and assumptions.
   Have the identified risks actually affected the intervention? How?
   Are our risk management strategies working?
   Are there other, new risks we need to take into account?

Dealing with complexity

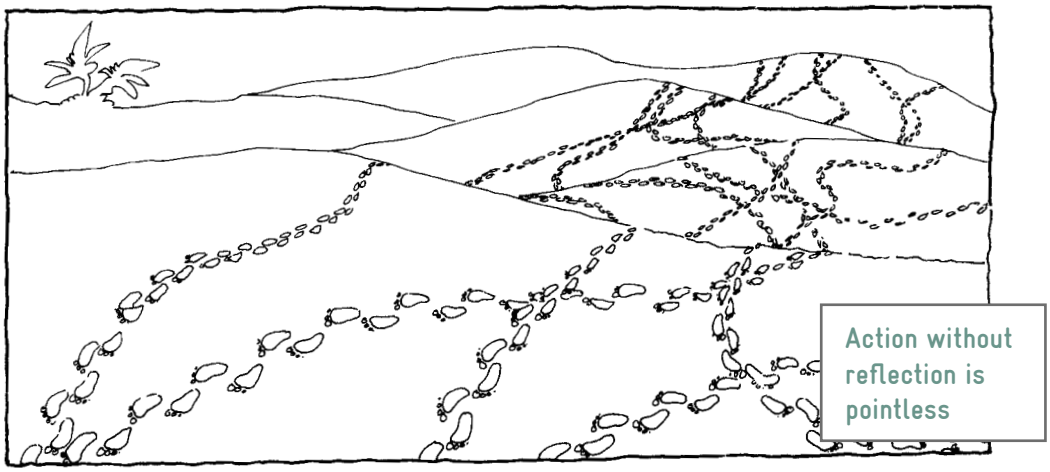
The previous sections illustrate well that no development intervention takes place in a vacuum. It is embedded in a complex environment and interacts with it. The following picture shows how the results chain of a development intervention is affected by external influences and produces both expected and unexpected changes in its environment.

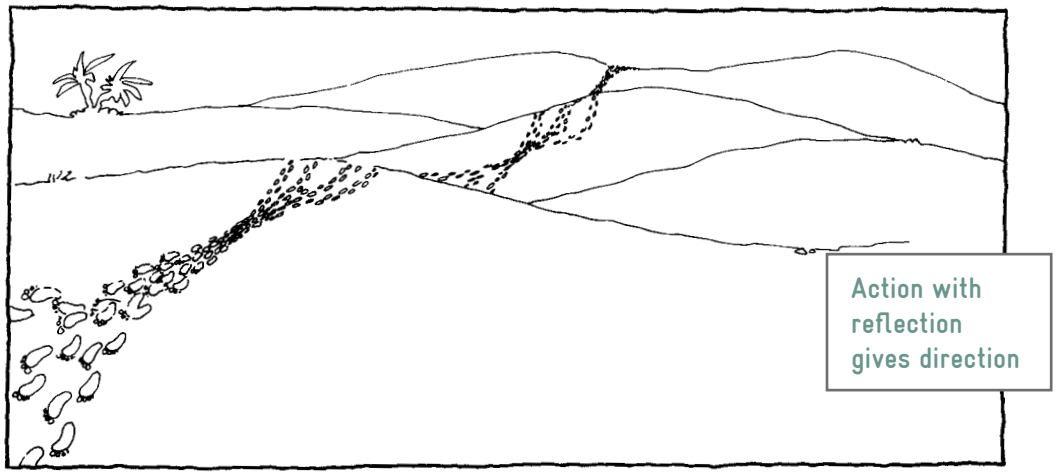
It is neither possible while planning to foresee all changes a single intervention may cause, nor is it possible in the course of M&E to always attribute a certain change or impact to one special event or intervention. This is why it is important to design an M&E system that not only follows the strict linear logic of the results chain but also allows additional information to be gathered which may help us become aware of other important aspects. Such extra information may also provide useful insights into why things are happening in a certain way.
The next chapters give some ideas on how this can be done.



The results chain of every development intervention is affected by external influences

3 Monitoring and Evaluation – definitions, differences and similarities





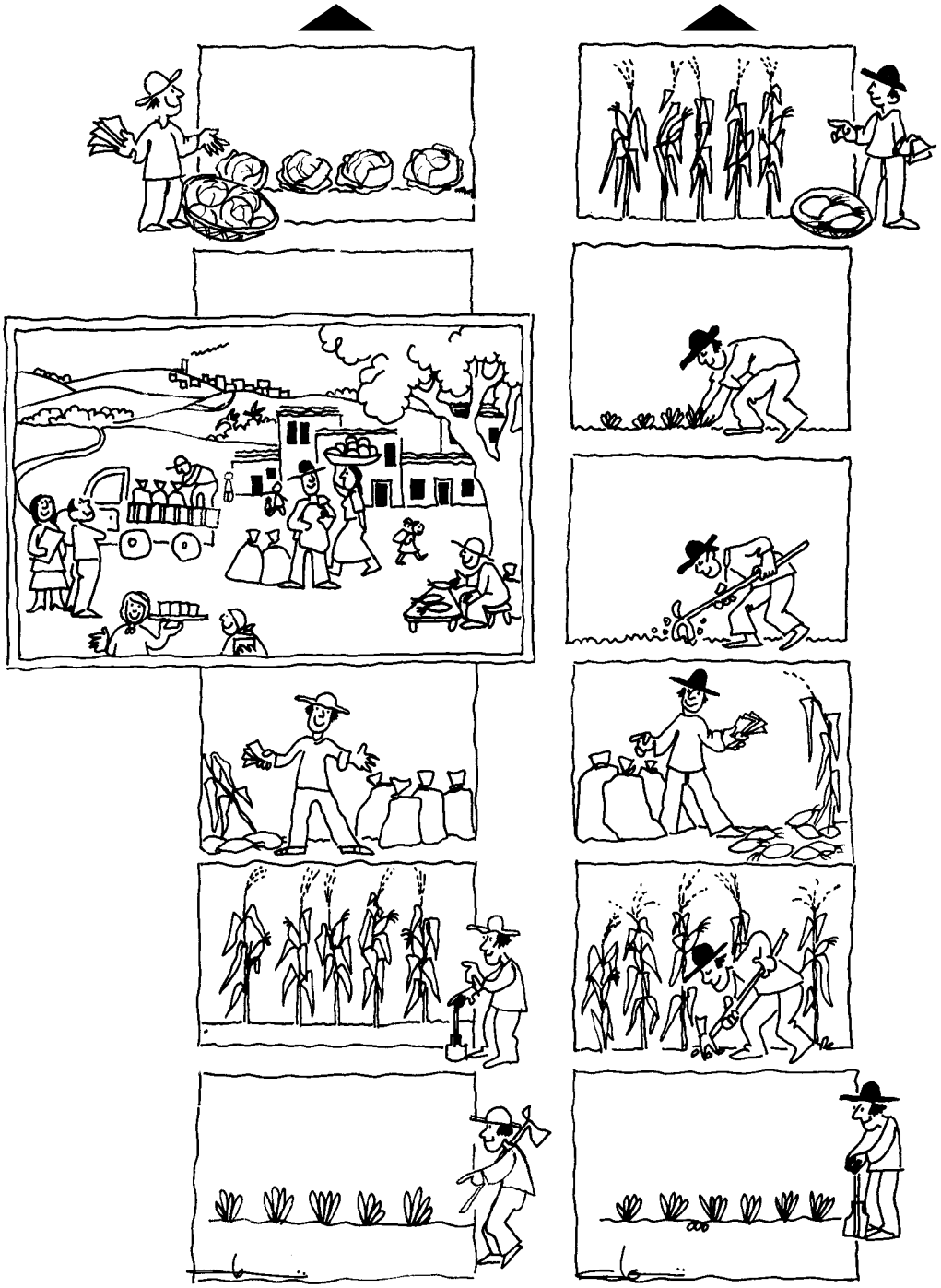
Monitoring

Monitoring is the routine collection, analysis and use of information about an ongoing development intervention. Its aim is to provide indications of the extent of progress and achievement. It should cover activities, outputs, the use of funds, indications regarding the achievement of the objectives, and some indications regarding unexpected effects or changes in the environment of the development intervention. It uses the operational plan as a reference and is usually carried out by individuals and organisations directly involved in the development intervention. The leading question is "Are we doing things right?"

Evaluation

Evaluation is an assessment of an ongoing or completed development intervention. It should cover the rationale, design, implementation and results of the intervention. Evaluations should be as systematic and objective as possible. The aim is to determine whether the intervention fulfils a series of internationally recognised criteria, such as effectiveness, efficiency, relevance, impact, and sustainability. It is usually carried out in cooperation with external evaluators or entirely outsourced. The reference is the intervention's entire results chain, to a certain extent even beyond the attribution gap. The leading question is "Are we doing the right things?"

Differences between monitoring and evaluation



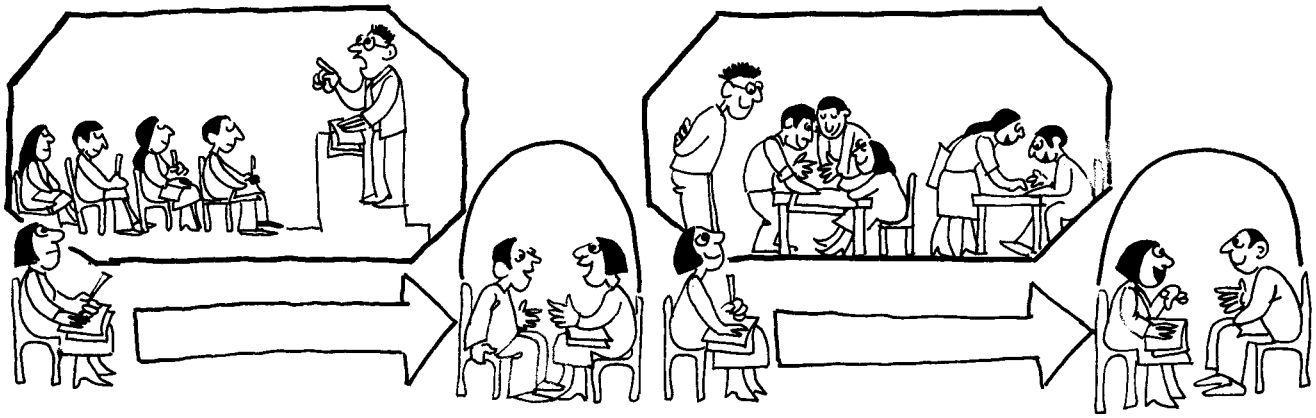
This development intervention is monitored and evaluated.

This development intervention is monitored only.

Based on the above, the main differences between monitoring and evaluation are:

- **Aim**: the aim of monitoring is to check whether the implementation of a development intervention is on track and to serve as a basis for evaluation. The aim of evaluation is to determine the relevance and fulfilment of objectives, development efficiency, effectiveness, impact and sustainability.
- **Frequency**: monitoring is carried out as a continuous process with frequent reflection loops, while evaluation is carried out at certain moments in time and reflection spans longer time intervals. In other words, monitoring is like a film (a continuous sequence of small pictures with focus on a specific field) while evaluation is like a large scale photograph (the image of the situation at a given moment in time).
- **Scope**: monitoring tends to focus on certain aspects of the intervention, such as use of funds, activities, outputs and the use of outputs. Its reference is the operational plan. Evaluation has a wider scope. It deals with more strategic issues and assesses the achievement of the outcome and further impacts. In complex processes involving different levels and many stakeholders, monitoring takes place at each individual level, while evaluation tries to link the lessons learned across the different levels.
- **Responsibility**: responsibility for monitoring usually lies with the staff or stakeholders responsible for implementation, while evaluation is usually the responsibility of senior management.
- **Personnel**: monitoring is usually carried out by individuals and organisations directly linked to the development intervention, while evaluation is usually carried out in cooperation with external evaluators or entirely outsourced.

Similarities between monitoring and evaluation



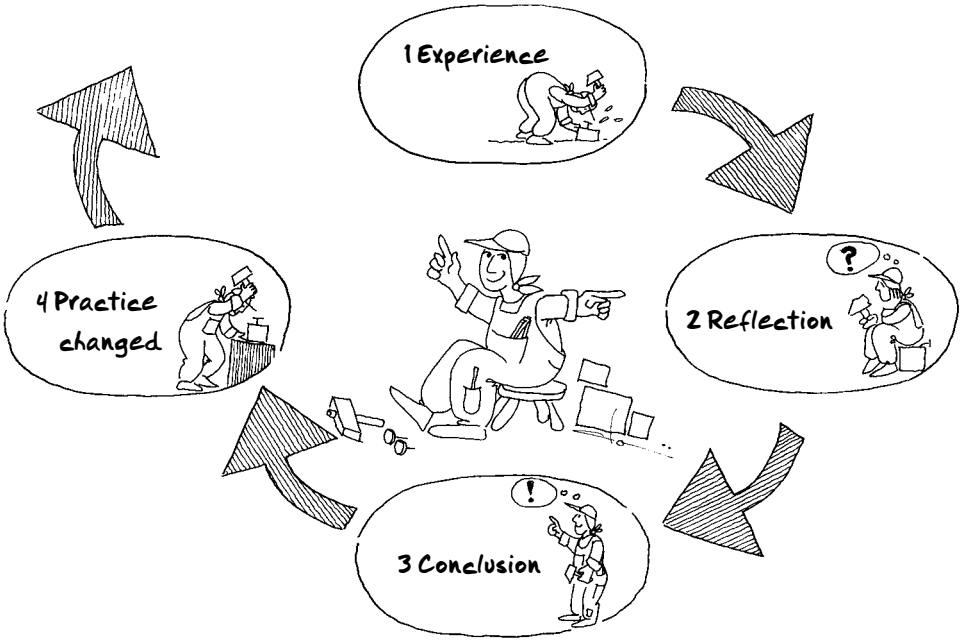
Monitoring and evaluation are reflective processes

What monitoring and evaluation have in common is that they are both reflective processes aimed at learning from experience. They follow the same basic processes:

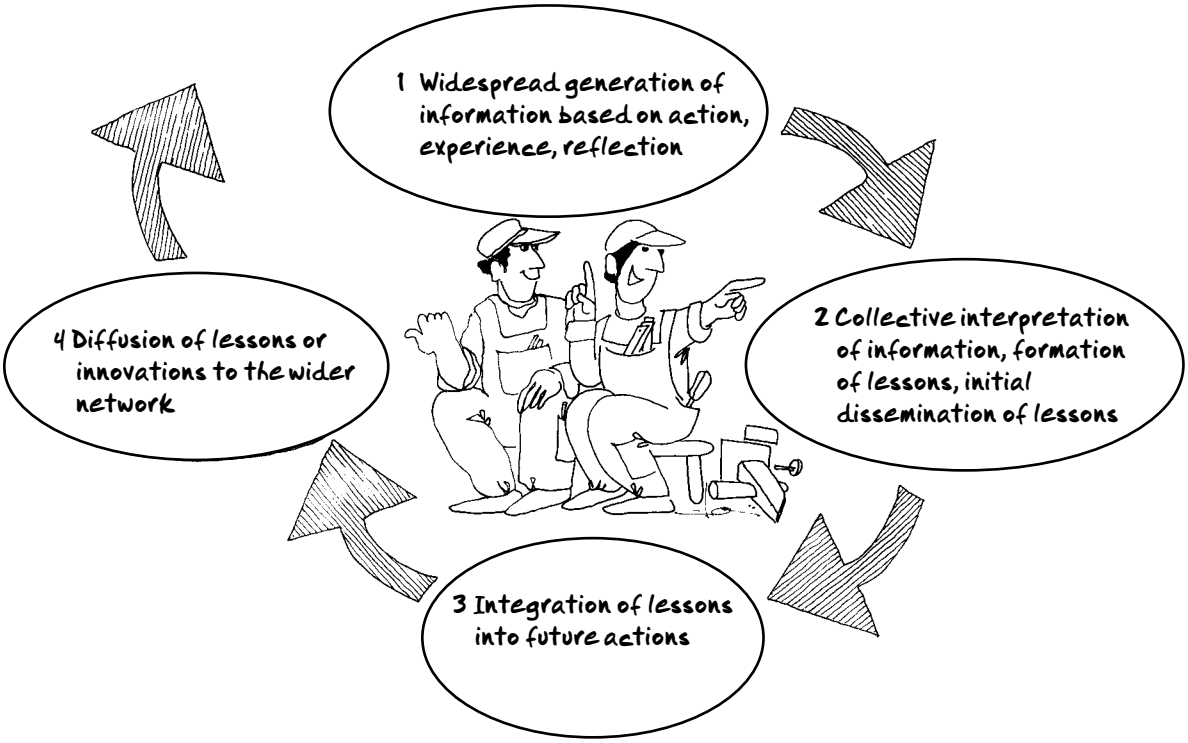
1. Observation and collection of information
2. Reflection (analysis and assessment of findings)
3. Decision making regarding new action to be taken

The following diagrams show how the principle of reflection can be carried out at many different levels of a development intervention: individual, organisation, local networks, up to the national scale.

The experiential learning cycle for individuals[2]:



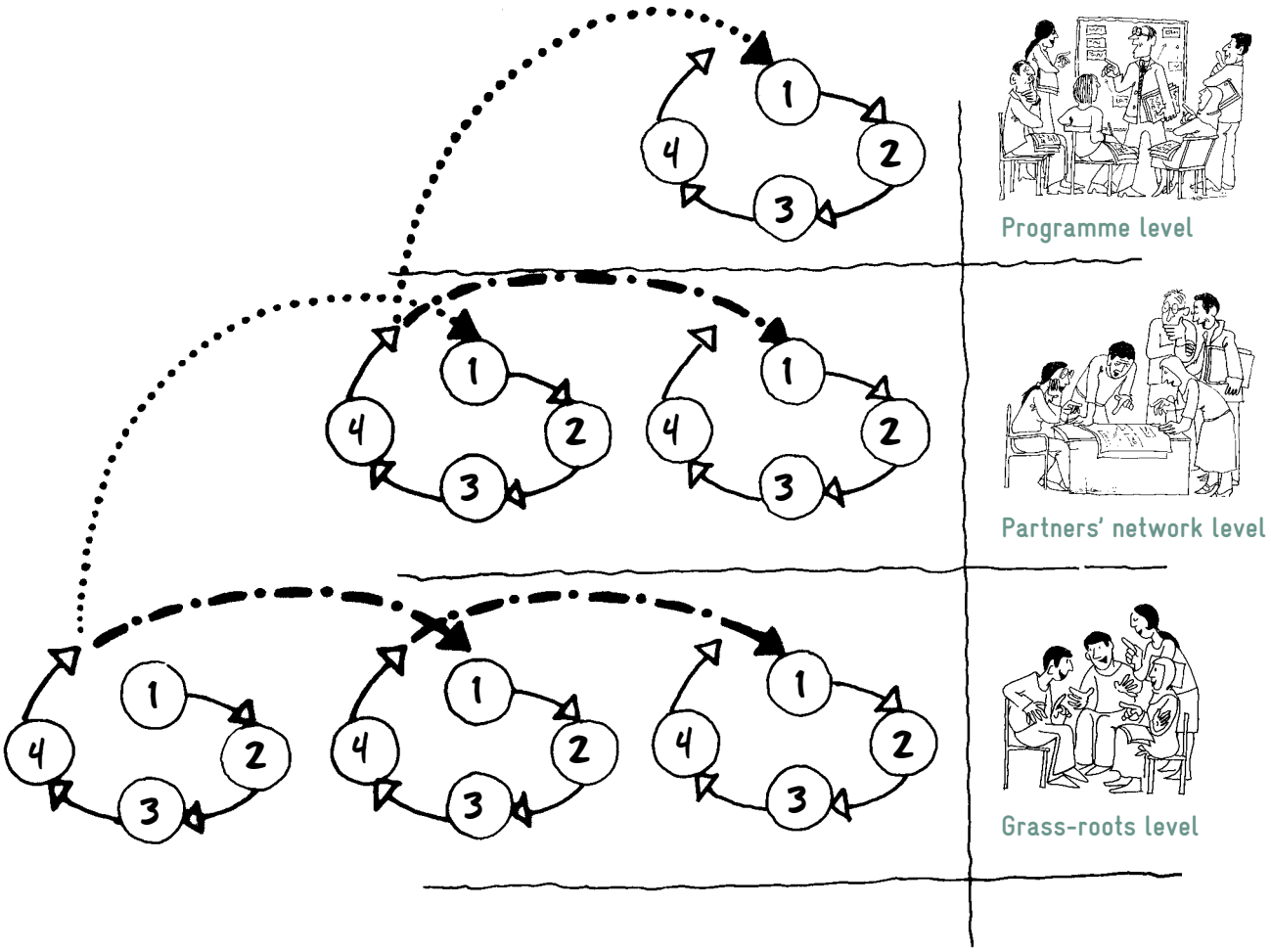
The joint experiential learning cycle for groups, organisations, networks[3]:



2 Adapted from David Kolb, adapted in RECOFT: Training Design and Facilitation in Community Forestry Development – A Trainer's Manual

3 Adapted from Dixon and Ross in Senge, adapted in RECOFT: Training Impact Assessment Trial based on lessons learning approach

Reflection can happen across several levels: Multilevel experiential "learning system in action" for the different levels of complex interventions[4]:



4 Adapted from RECOFT: Training Impact Assessment Trial based on lessons learning approach, numbers refer to the steps of the joint experiential learning cycle shown in the joint experiential learning cycle for groups, Organisations, networks

Results-oriented M&E

Monitoring and evaluation have long been used as management tools in order to keep development interventions on track. In the past, the focus was mainly on *inputs* and *outputs*. Over the last decade, development partners have come increasingly under pressure to show that national and international policies are achieving their objectives. This requires a broader understanding of M&E.

As we have seen in Chapter 1, M&E now pursues multiple purposes, such as steering, accountability, learning, organisational development, and communication. A direct consequence of this is the need to monitor and evaluate the *results* of development interventions.

Results-oriented M&E means that – while the definitions and differences explained in the previous sections remain valid in principle – monitoring and evaluation are much more closely connected than they used to be in the past.

Orientation towards results requires developing a whole M&E system that is geared towards measuring those changes, which will help to assess whether the development intervention is achieving its objectives. In such as system, monitoring serves as the basis for evaluation. This means that the boundaries between monitoring and evaluation are less strict since both processes are closely connected with each other.

The criteria presented in the following section show the kind of questions a results-oriented M&E system is expected to answer. This gives us some clues as to the kind of information it will need to deliver.

Criteria for evaluation

The following five criteria have been developed by The Development Assistance Committee (DAC) of the Organisation for Economic Cooperation and Development (OECD) and are internationally recognised as guidance for evaluation of projects, programmes and policies. We have adapted the wording slightly so that it also fits development interventions promoted by local or national institutions.

Relevance:

The extent to which the development intervention is suited to the priorities and policies of the target group, recipient and promoting institution. In evaluating the relevance of a development intervention, it is useful to consider the following questions:

- To what extent are the objectives of the development intervention still valid?
- Are the activities and outputs of the development intervention consistent with the overall goal and the attainment of its objectives?
- Are the activities and outputs of the development intervention consistent with the intended impacts and effects?

Effectiveness:

A measure of the extent to which a development intervention attains its objectives. In evaluating the effectiveness of a development intervention, it is useful to consider the following questions:

- To what extent were the objectives achieved / are the objectives likely to be achieved?
- What were the major factors influencing the achievement or non-achievement of the objectives?

Efficiency:

Efficiency measures the outputs – qualitative and quantitative – in relation to the inputs. In a purely economic context, this would imply using the least costly resources possible in order to achieve the desired results

and comparing alternative approaches to achieving the same outputs, to see whether the most efficient process has been adopted.

In the context of development interventions, this kind of analysis needs to take into account that reform processes require considerable upfront investments (of time, human and financial resources) before they can be scaled up and unfold their intended benefits at all levels (outputs, outcome and long-term impact).
For example, the cost per graduate of developing an entirely new TVET system may seem very high if only the first group of graduates are taken into consideration. However, the cost per graduate will continue to decline as new groups graduate.
When evaluating the efficiency of a development intervention, it is useful to consider the following questions:

- Were activities cost-efficient with regard to the benefits (outputs, outcome and long-term impact)?
- Were objectives achieved on time?
- Was the development intervention implemented in the most efficient way compared to alternatives? (Please note that 'alternatives' here can only apply to other approaches which would have produced a similar degree of benefits at all levels (outputs, outcome and long-term impact).
- At which time intervals does it make sense to carry out such analysis? (Please note that if this analysis is conducted 'too early', the results may be distorted because the break-even point of the investment has not been reached yet).

Impact:

- The positive and negative changes produced by a development intervention, directly or indirectly, intended or unintended. This involves the main effects resulting from the development intervention according to the local social, economic, environmental and other development indicators. The examination should be concerned with both intended and unintended results and must also include the positive and negative impact of external factors, such as environmental and financial conditions.

When evaluating the impact of a development intervention, it is useful to consider the following questions:

- What has happened as a result of the development intervention?
- What real difference has the development intervention made to the beneficiaries?
- How many people have been affected?

Sustainability:

- Sustainability is concerned with measuring whether the benefits of a development intervention are likely to continue after extraordinary funding has been withdrawn. Development interventions need to be socially, environmentally as well as economically sustainable.
- When evaluating the sustainability of a development intervention, it is useful to consider the following questions:
- - To what extent did the benefits of a development intervention continue after extraordinary funding ceased?
- - What were the major factors that influenced whether the development intervention was sustainable or not?

4 Results-oriented M&E: Step by step

TVET-related development interventions can vary greatly in terms of their objectives, their complexity and their environment. Therefore, there is no one size fits all M&E system for TVET-related interventions. Different guidelines propose different steps for developing an M&E system. In any case, the underlying questions are:

- What do we need to monitor and evaluate?
- How are we going to monitor and evaluate it?
- How will we use the monitoring and evaluation results?
- Who will do what (and by when)?

Based on these questions, the following sections describe some basic steps for developing a results oriented M&E system that is well adapted to a particular intervention.

Step 1: Defining areas of observation and indicators	What do we need to monitor and evaluate?
Step 2: Choice of appropriate methods for data collection	How are we going to monitor and evaluate it?
Step 3: Analysis and follow-up	How will we use the monitoring and evaluation results?
Step 4: Establishing a schedule and assigning responsibilities for M&E	Who will do what (and by when)?

Step 1: Defining areas of observation and indicators

Selecting suitable areas of observation and developing appropriate indicators is the most important step in developing the M&E system of a development intervention. It requires time, expertise, patience and communication among the different stakeholders. Everything else will build on this step.

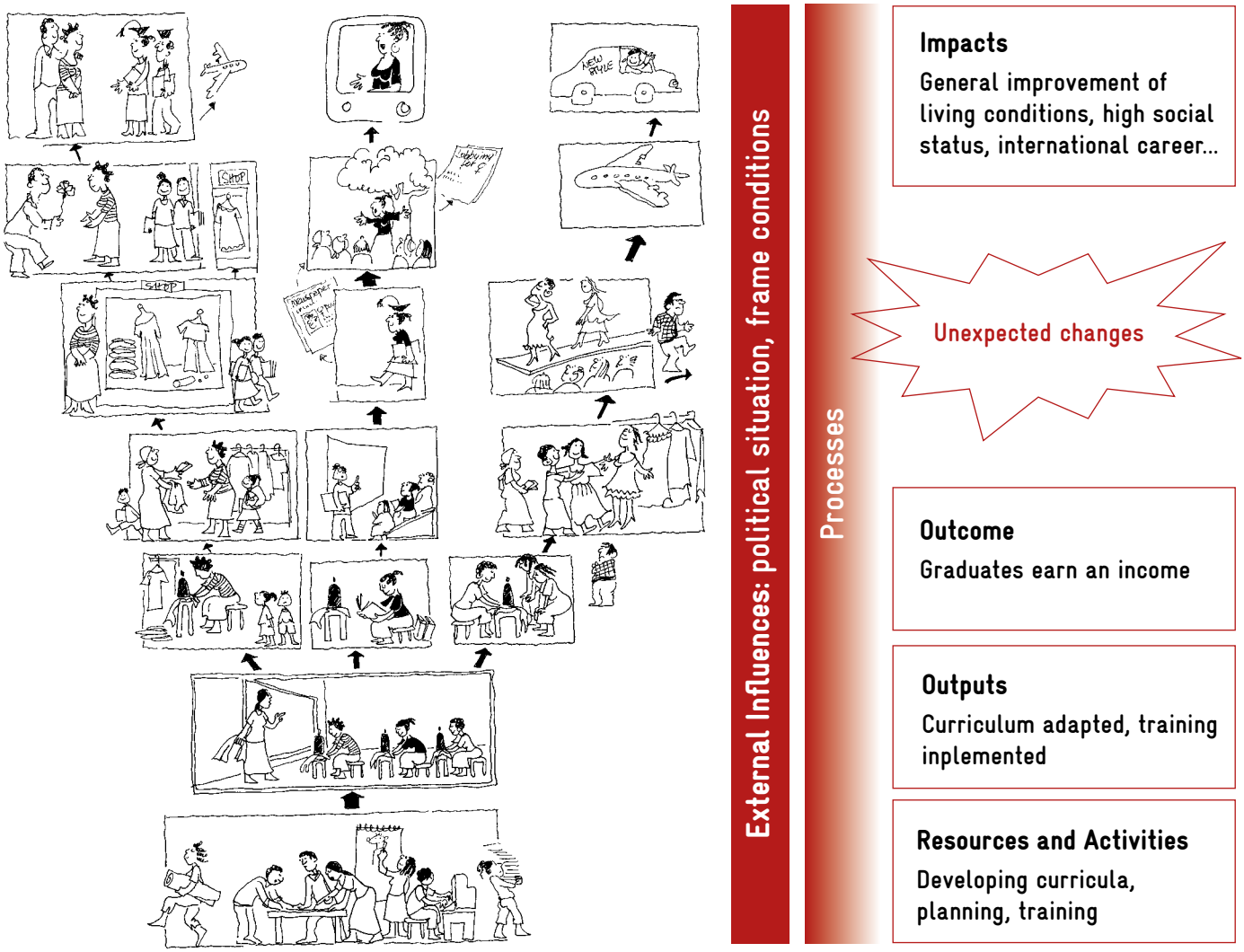
The objectives, results hypotheses and rationale of the development intervention as laid out in the proposal provide the basis for defining the areas of observation and their respective indicators.

The information in the proposal is often complex and highly aggregated. One first step is to 'unpack' this dense information into more manageable pieces of information. This is ideally done during a workshop where different stakeholders involved in the development intervention can contribute their views and understanding.

The objectives of such a workshop would be to:

- develop a common understanding of the development intervention, with particular focus on outcome and outputs;
- further elaborate the results hypotheses based on the information contained in the proposal, with reference to roles of the different stakeholders, specific risks, potential negative results, etc.;
- agree on the areas of observation that should be covered by the M&E system
- operationalize the often complex and highly aggregated indicators contained in the proposal.

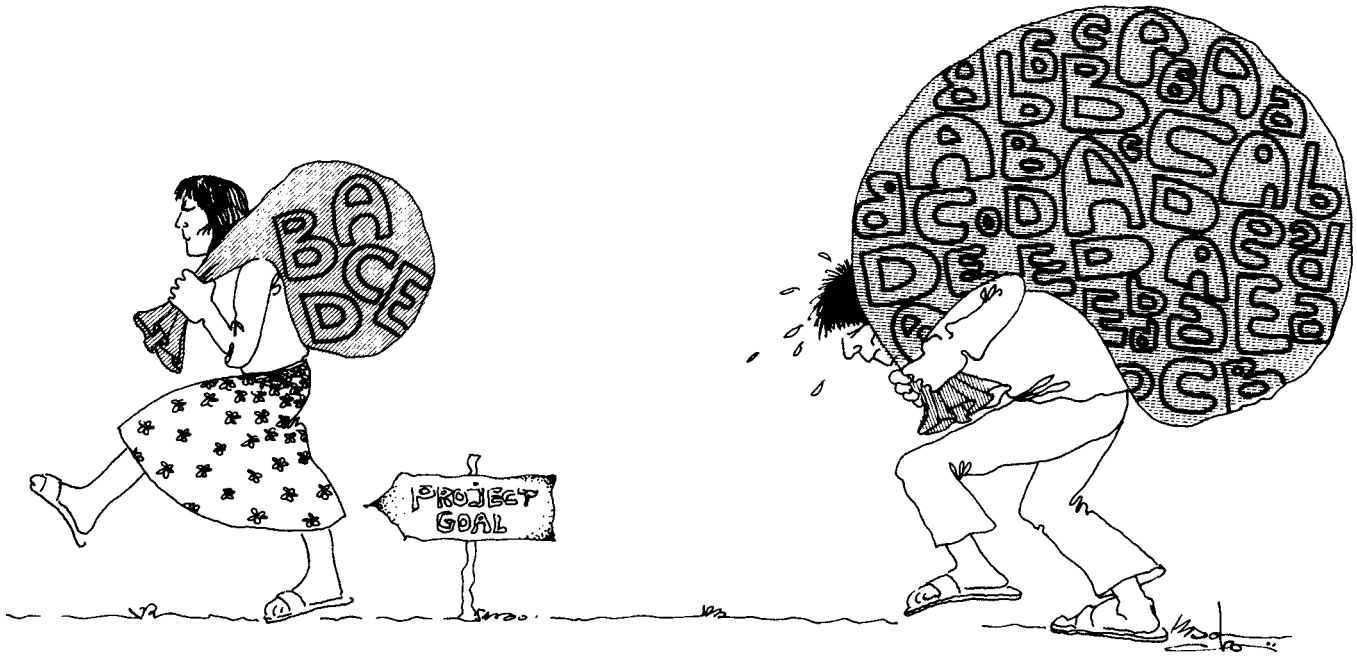
Areas of observation



The areas of observation usually coincide with the different levels of inputs and results of the development intervention

The picture above shows different areas of observation in a development intervention. They coincide with the different levels of inputs and intended results along the results chain: resources, activities, outputs, use of outputs, outcome, and impact. Additional areas of observation include external influences (these may bear risks and opportunities), potential unintended results of the development intervention (these may be positive or negative) as well as processes (for example division of tasks, coordination between groups, conflict management, communication, learning processes, etc).

We need to collect as much information as necessary and as little as possible to keep the effort and amount of information manageable. The DAC Evaluation Criteria presented in the previous chapter may serve as guidance. They are not set in stone and can be adapted to the specific needs of each development intervention.
Experience shows that there is a general tendency to be rather too ambitious at this stage of the process. The challenge is to focus on those aspects of the intervention that are most relevant for its success or failure. Take a look at the following picture. The woman on the left monitors relevant areas of observation only. The man on the right tries to monitor many areas of observation. He is exhausted.



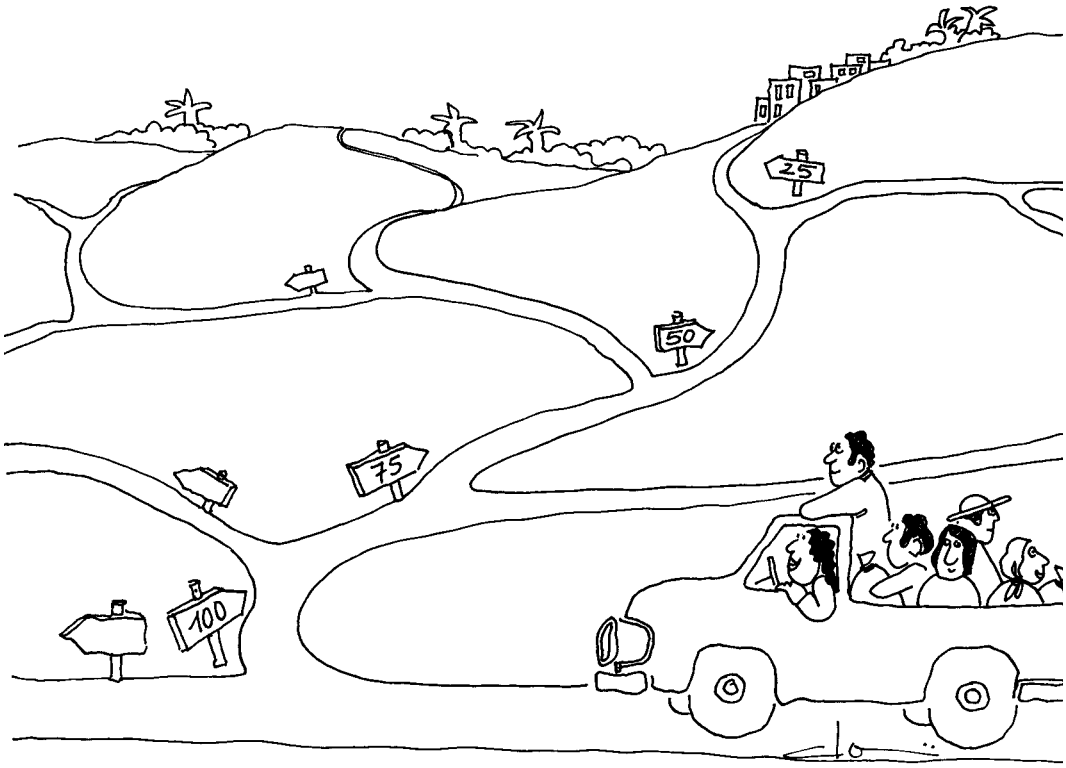
Collect as much information as necessary and as little as possible

The clue for this lies in the question: "What is this particular intervention trying to achieve and for whom?" The more specific the answer to this question is, the better it will serve as the basis for a results-based M&E system. Indicators help us to be more specific in the way we formulate our intended results and help us track their achievement.
The following sections contain further information on indicators and some practical tips for developing them.

Indicators

Indicators: definition and function

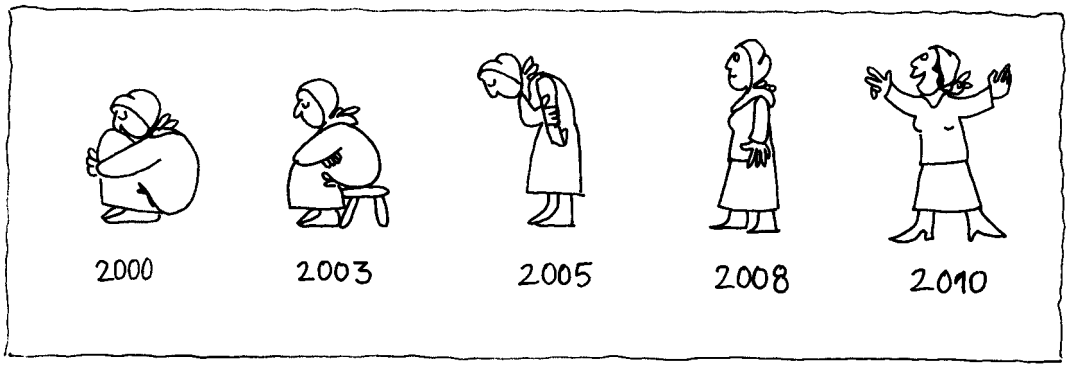
According to the DAC Glossary of Key Terms in Evaluation, an indicator is "a quantitative or qualitative factor or variable that provides a simple and reliable means to measure achievement, to reflect changes connected to an intervention, or to help assess the performance of a development actor."



Indicators help keep the development intervention on track

Indicators serve to measure change because their value changes over time. It is by comparing the value of the indicator at different points in time that we can measure change. For example, in the picture on the previous page, the distance to the town decreases as the car moves along the correct road. The consecutive values of the indicator 'distance to destination' help us to assess whether we are getting closer to our objective or 'destination'.

This is a very simple example. When speaking about the changes induced by a development intervention it is not always that easy to find an appropriate indicator. The main difficulty lies in finding one that is 'powerful' enough to signal complex changes and at the same time simple enough to be measured without too much effort.
Take the picture below as an example.



An indicator must be 'powerful' enough to signal complex changes

An indicator must be 'powerful' enough to signal complex changes
How do we see that the self-confidence of this woman is growing over time? What are indicators for self-confidence? Different stakeholders may propose different indicators, such as 'body language', 'degree of activity', 'speaking in public', and 'participation in decision making'.

Participatory elaboration of indicators

The following steps are helpful to select and elaborate indicators in a participatory way.

1. As part of the workshop mentioned at the beginning of this section, organise group discussions among individuals who are knowledgeable about the intervention and its different areas of observation.
2. Brainstorm and Visualise a list of all possible indicators for each area of observation. The guiding question is "How can we observe that there is change in this area of observation?" (For example participation of women in technical trainings, preparedness of TVET graduates for self-employment, fulfilment of employers' expectations towards TVET graduates).
3. Discuss each indicator within the group and check if the indicator is appropriate (does it really say something about what we want to know?) and measurable (is data available or can it be gathered without too much cost and effort?).

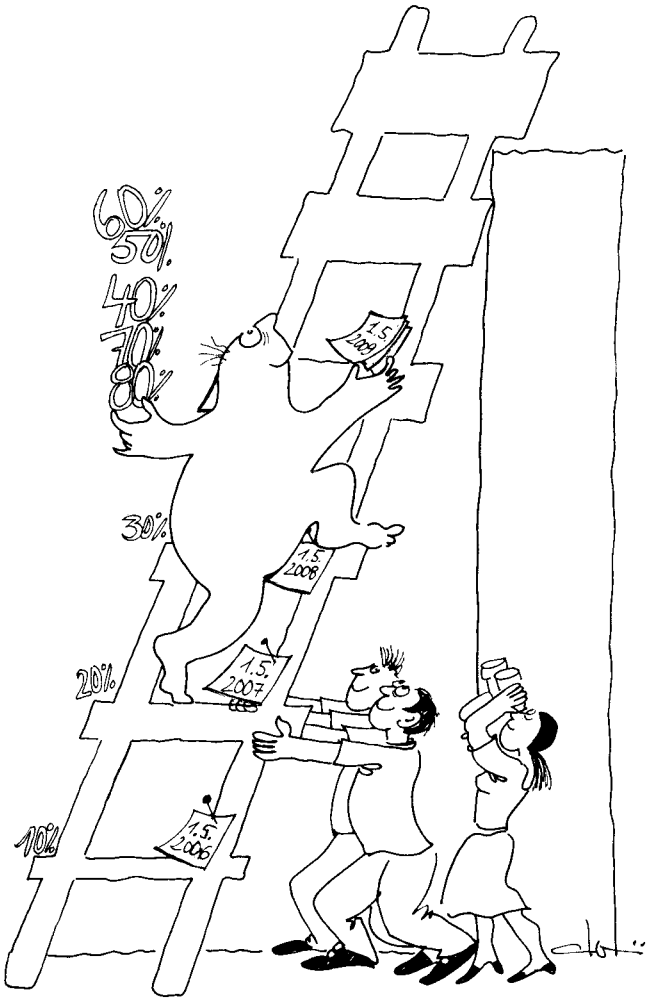
4. Delete those indicators which are not suitable or difficult to use or too expensive to measure.
5. From the remaining list, select the indicators you think are best suited to measure the changes which are most relevant for your intervention. The guiding principles should be how to measure the achievements of your intervention's outcome for the relevant target groups.
6. Agree on appropriate milestones for the different indicators. What can you realistically achieve by when? To be able to measure change you will need to compare the subsequent values of the indicator with data from the beginning of the development intervention (baseline data).
7. Check and discuss from time to time whether the selected areas of observation, indicators and milestones are still appropriate for your information needs. Replace and change indicators if necessary. Remember that indicators at outcome level are often contractual commitments and may need renegotiating, with the institution funding or commissioning the development intervention.

Formulating indicators: the five elements

A good indicator should be an appropriate measure of what we want to observe. It needs to be specific so that it can be measured and the information it provides can be interpreted correctly.
Each indicator must cover the following elements:

- **WHAT does it measure?**
  This is the area of observation or a specific aspect of it, such as employment of TVET graduates, satisfaction of trainees and employers with quality of training courses, etc.
- **WHO benefits?**
  This is the target group of the specific area of observation we are looking at, such as TVET trainees, TVET training staff, employers, etc.
- **WHERE do we observe this indicator?**
  For example, we may choose to compare results from different geographical regions or different TVET centres.

Note: beneficiaries are never a homogenous group of people. It may be relevant to observe different subgroups distinctly. For example, it is standard development practice to collect data disaggregated by sex. Other aspects may be age, level of income, educational background, place of origin, etc.



A good indicator needs to be time bound and measurable

- **WHEN do we observe this indicator?**
  At which point in time do we gather information on this indicator? For example, if we want to measure the satisfaction of trainees in terms of whether a certain course improves their chances of finding a job, we may get different results depending on whether we conduct the survey immediately at the end of the course or six months later. Immediately at the end of the course, graduates can actually only estimate whether it will help them to find a job. Their level of satisfaction may change (for better or for worse) once the TVET graduates have come in touch with the labour market.
- **HOW MUCH?**
  The actual value of the indicator is what we use to observe changes over time.
  The objectives of the development intervention are expressed in terms of the indicator value that we want to achieve. Ideally, we should collect baseline data (the value of the indicator at the beginning of the development intervention) and then collect data again at appropriate intervals.

For example, our indicator may be that employers are satisfied with the level of knowledge and skills acquired by the graduates of a certain course and consider that it improves their productivity at the work place. If our baseline data reflects a level of satisfaction of 30% and our objective is to achieve a level of satisfaction of 75%, we can observe how this value changes over time as the first trainees from reformed TVET programmes enter the labour market.

Formulating indicators: quality criteria

There are many criteria that can be used as guidance when formulating indicators. The most frequently mentioned are "SMART" and "SPICED" or any combination of the two. Both are acronyms, where each letter stands for a certain quality criterion.
As you can see in the lists below, sometimes one letter can stand for more than one criterion.

SMART Indicators

Specific	Measured changes should be attributable to the development intervention and be expressed in specific terms.
Measurable	Changes can be measured, for example via 'numbers' (quantities, percentages, etc.) or through the observation of other evident changes which can be described. These descriptions can then be clustered and classified in such a way that they, too, can be expressed in terms of numbers.
Acceptable	This may refer to several aspects, such as: • The indicator and its measurement are acceptable for the people concerned, for example based on socio-cultural aspects. • All stakeholders of the development intervention agree that the indicator reflects what needs to be measured. • The effort required for data collection and analysis is acceptable in terms of costs (money, time, human resources, material, etc.).
Achievable	It should be feasible for the development intervention to achieve the value of the indicator defined as an objective.
Relevant	This may refer to two aspects: • It measures an important (relevant, meaningful) aspect of the development intervention. • The indicator reflects what needs to be measured.
Realistic	It should be feasible for the development intervention to achieve the value of the indicator defined as an objective.
Time bound	The indicator is formulated in such a way that it is clear at which point of the development process it needs to be measured. Time indications may be fixed in advance (for example: end of first year of implementation) or specified according to progress (for example: after completion of a certain course or market study etc.)

SPICED Indicators:

Subjective	Certain respondents have a special position or experience that gives them unique insights into certain aspects of the development intervention. In this sense, what may be seen by others as 'anecdotal' becomes critical data because of the source's particular value.
Participatory	Indicators should be developed together with those best placed to assess them. This means involving a development intervention's ultimate beneficiaries, but it can also mean involving local staff and other stakeholders.
Interpreted	Locally defined indicators may not mean much to other stakeholders, so they often need to be explained within the context of the development intervention.
Cross-checked **(Compared)**	The validity of assessment needs to be cross-checked, by comparing different indicators and progress, and by using different respondents, methods, and researchers.
Empowering	The process of setting and assessing indicators should be empowering in itself and allow groups and individuals to reflect critically on their changing situation.
Diverse **(Disaggregated)**	There should be a deliberate effort to seek differentiated data for a range of groups, especially men and women. This information needs to be recorded in such a way that these differences can be assessed over time.

Direct and indirect indicators

A direct indicator measures a certain phenomenon directly. For example, the income of employees can be measured directly through the monthly salary stated on their pay check.

An indirect indicator measures a certain phenomenon indirectly. For example, the income level of different members of a community may be estimated based on their expenses for food or other commodities, their type of housing or their access to certain services.

There are direct and indirect indicators

Indirect indicators are also called proxy indicators. There can be several reasons for using indirect indicators:

- Measurability: sometimes the subject of interest cannot be measured directly. This is the case for qualitative aspects, such as self-esteem, living conditions, good governance, or certain behavioural changes.
- Sensitivity: in certain contexts, it may be too sensitive to ask for information on certain subjects, such as income, etc.
- Cost-efficiency: sometimes data is already available on a certain subject and can serve as an indirect indicator for what we want to know. Example: number of mobile phone contracts in a certain region as an indication for the level of income.

Quantitative and qualitative indicators

Indicators may relate to quantitative or qualitative aspects of the development intervention. By quantitative aspects we mean changes that can be directly and easily expressed in terms of 'numbers'. These may be absolute quantities (for example, the number of students enrolled) or relative quantities (for example, the rate of employment of TVET graduates as a percentage of the total number of graduates).

By qualitative indicators we mean the observation of other evident changes which can be described in 'words' (for example: 'I find this training very helpful'; 'taking part in a TVET course has changed my life'; 'employing a female TVET graduate has changed my perspective on the suitability of women for blue-collar jobs'; 'I enjoy being a TVET trainer', etc).

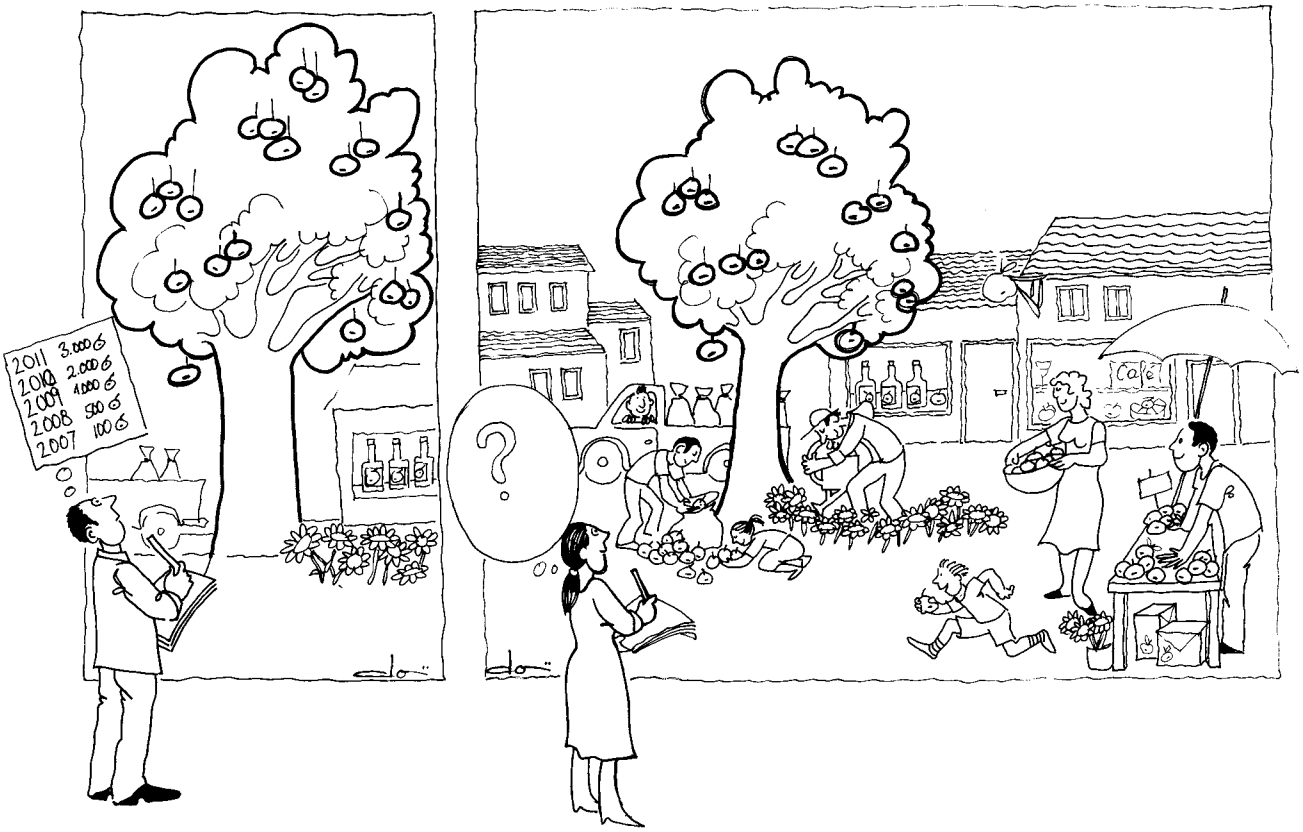
In order to make qualitative aspects measurable, these descriptions can be structured, clustered and quantified in such a way that they, too, can be expressed in terms of numbers. For example, we can structure all the information referring to job satisfaction of TVET trainers in chronological order (to get a sense of how it

changes over time), cluster it (what criteria do they use to define the term satisfaction) and quantify these clusters (how many trainers state that they are happy / unhappy according to which criteria).
This shows that identifying areas of observation, defining appropriate indicators and choosing appropriate methods for data collection are closely connected with each other. We will take a closer look at his in the section "Step 2: Choice of appropriate methods for data collection and analysis".

Indicators and key questions

Indicators are helpful instruments to structure and focus the M&E system. At the same time, they bear a certain risk of narrowing down our view to only a few aspects and losing sight of the development intervention as a whole.

Key questions can help to look at important areas of observation from a wider perspective than single indicators may allow us to do. They are usually open questions and can help us detect unintended changes, understand how different aspects of the development intervention relate to each other, and understand why certain things are happening.
As with qualitative indicators, the information gathered through key questions can be structured, clustered and quantified to make it measurable.

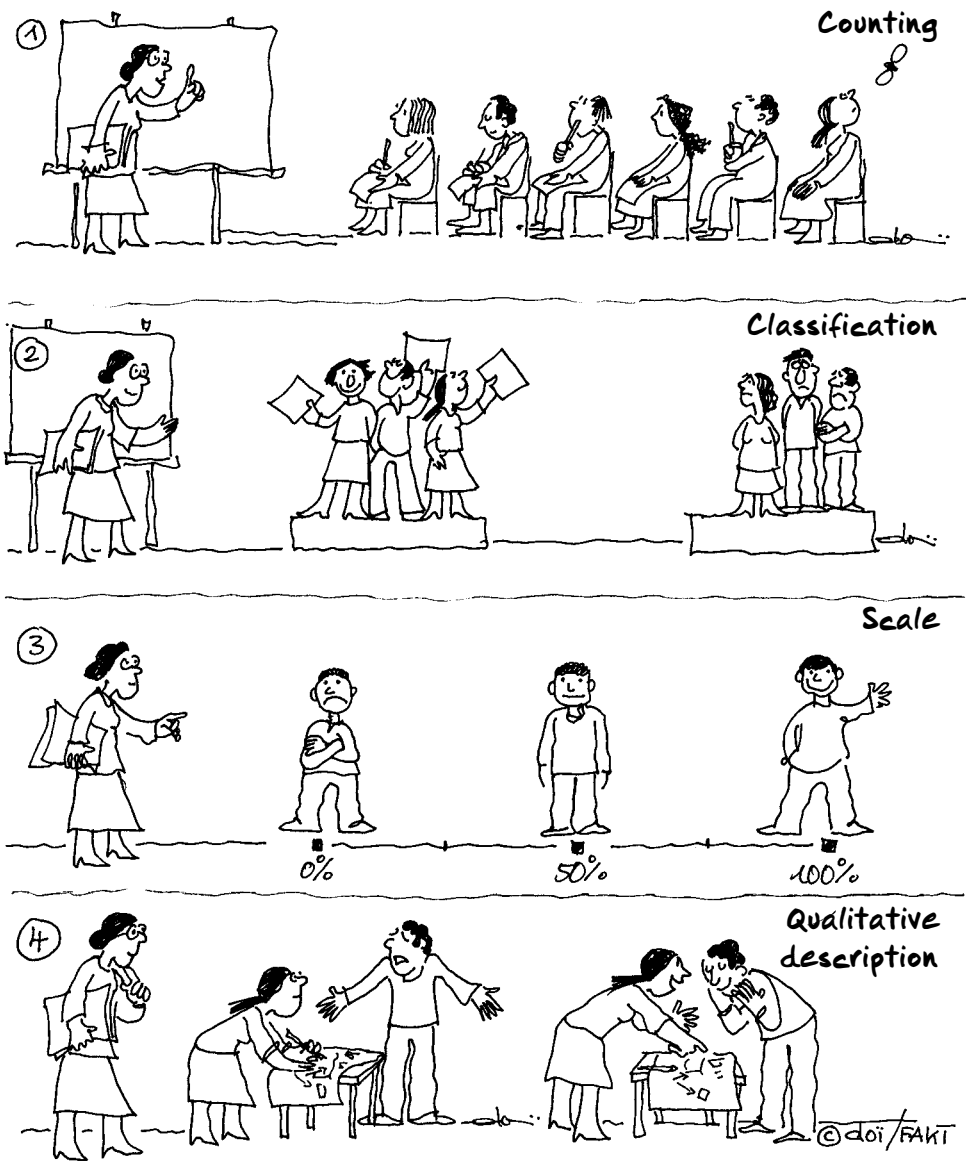


Indicators and key questions complement each other

Step 2: Choosing appropriate methods for data collection

As we have already seen in the previous section, identifying areas of observation, defining appropriate indicators and choosing appropriate methods for data collection are closely connected with each other.
The following example can help to understand what this means in practice.

Example:
Improving the quality of training
In order to find the right indicators, you need to be very clear about the changes you want to be able to measure. At first sight, 'improve the quality of training' may seem specific enough as an objective. But what does it mean in practice? What kind of improvement do we mean? Which type of indicator is more suited to reflect what kind of change? And how can we best measure it? Look at the different images in the picture below.



There are four basic ways to organise information: counting, classification, scale, and qualitative description

The first image uses the level of enrolment (**counting** the number of students taking part in the courses) as an indirect quantitative indicator for improved quality. We can easily measure it by recording the number of students enrolled in each course over a period of time. If we compare values at different points in time, we will get information on whether demand for the courses is rising or falling. This is what the indicator 'number of students enrolled during a given period of time' *does* tell us. If we gather gender disaggregated data (counting the number of female and male participants separately), we can learn whether the demand rises or falls differently for boys and girls.
What it *does not* tell us is *why* male or female students are opting for this particular course. Is it because it is the best offer in the market? Or is it because there are no other opportunities? Are they under pressure from their peers or family? Is their choice based on reliable information about the demand of the labour market? Or do they opt for this course to get a degree in order to proceed to higher education?

The second image shows us a **classification**. It clusters (classifies) students depending on whether they have passed a certain exam or not. We can easily measure this by keeping records of examination results and counting how many students pass or do not pass. This data allows us to calculate the ratio between the two values (passed/not passed) and how it changes over time. This gives us an indication of prevailing trends: Does the proportion of students that passes the exams increase or decrease over time?
What it *does not* tell us, is *why* this trend is happening. It may be because the quality of training has improved. But there may also be other reasons: If a scholarship programme has been established, the positive trend may indicate that now trainees can concentrate on their training instead of having to earn money on the side.

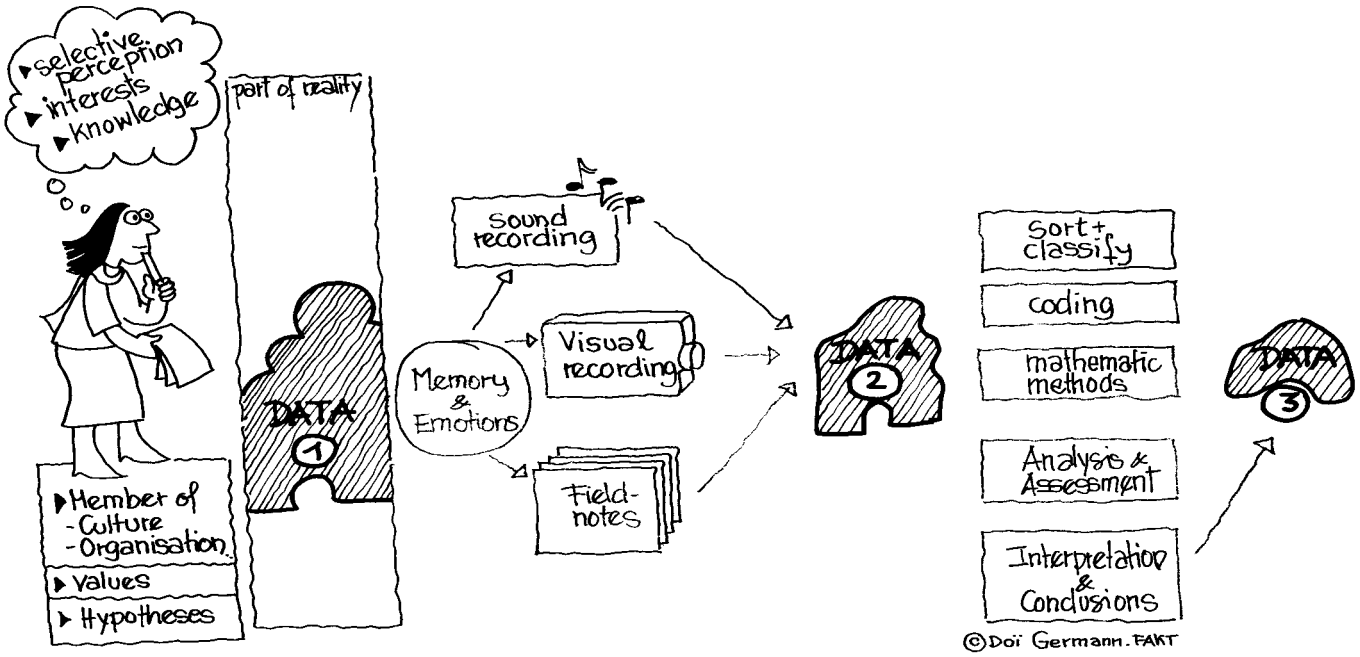
The third image shows us how we can use a **scale** (high – medium – low) for measuring a qualitative indicator. In this case it may be 'satisfaction with the usefulness of the training with regard to finding appropriate employment'. One way to measure this is to conduct a survey among graduates six months after completing the training. Changes over time in the value of this indicator may give us an idea of whether the training courses are increasingly oriented towards the needs of the labour market. What this indicator and measurement *does not* tell us is which aspects of the training they value particularly.

The fourth image in the picture stands for **qualitative description** of information. This may cover other aspects or processes related to the quality of training, such as mutual assistance among students as an indication of group cohesion, openness to ask for help, good command of the subject matter by the helping student, etc. Descriptive methods of data collection may include case studies, success stories, or lessons learned summarised in a report. They are particularly useful to complement the information gained via quantitative approaches. They help to explore questions such as *why* things are happening a certain way or *how* certain changes affect our intervention. As mentioned in the section about qualitative and quantitative indicators, these descriptions can then be structured, clustered and quantified in such a way that they, too, can be expressed in terms of numbers and how they change over time.
Conclusion: What this example shows us is that – depending on what we need to know – we need to choose an appropriate combination of areas of observation, indi-

cators and methods of data collection and analysis. It also shows us that we need to be systematic in our collection of information in order to know what we are collecting and what not. Although this may seem a daunting task, the example shows that this is manageable if we remember that there are only four basic forms of expressing information: counting, classification, scale and qualitative description.

Bias and triangulation

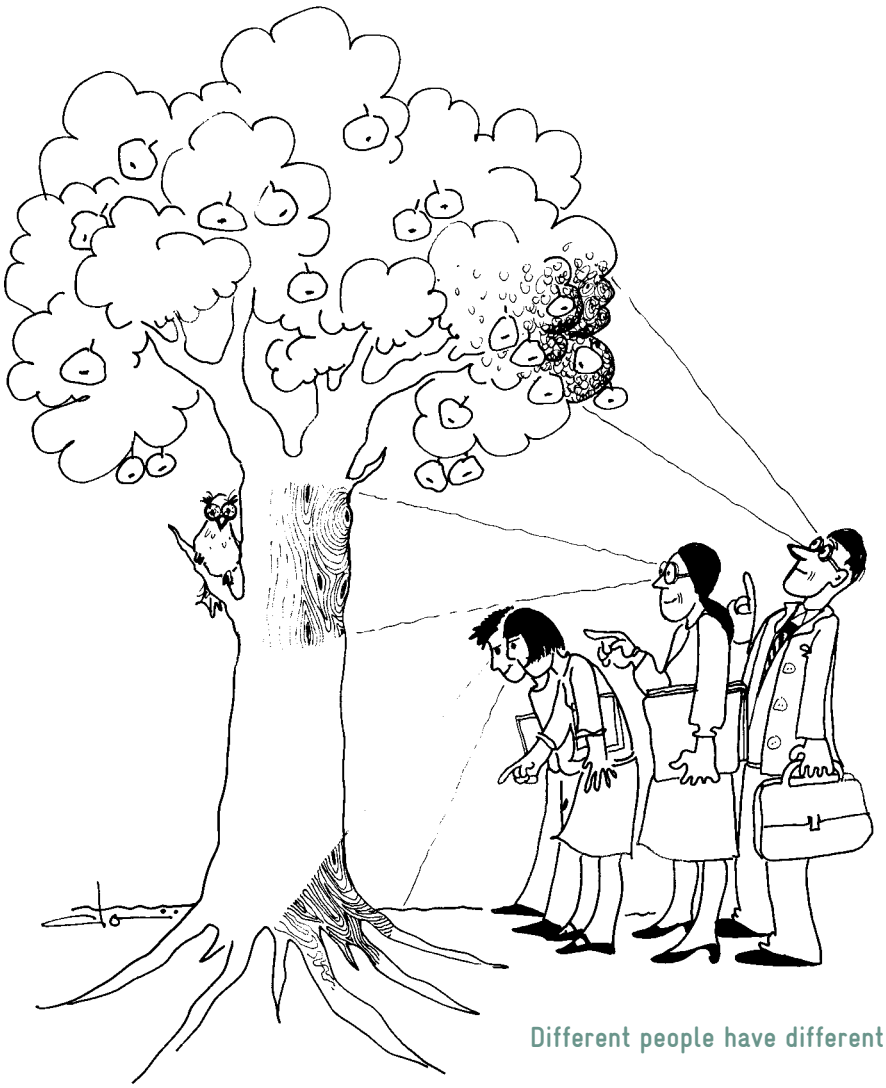
In the context of M&E, the term 'bias' is used to express that the M&E results may be inaccurate or only present part of reality. This often happens unconsciously and is often due to the fact that M&E is conducted from a certain perspective.



Bias occurs unconsciously and reduces the confidence in our findings

This perspective may be based on our knowledge, professional background, experience, age, education, etc. It can influence the kind of questions we consider important; the indicators we find relevant; the respondents we decide to talk to; the methods we use for data collection, analysis and reporting. Because of all this, bias reduces the confidence in our findings.
No matter how well we design our M&E system, we have to accept that we will never obtain perfect results. In social and behavioural science, true 'objectivity' does not exist, since people always have different perspectives.

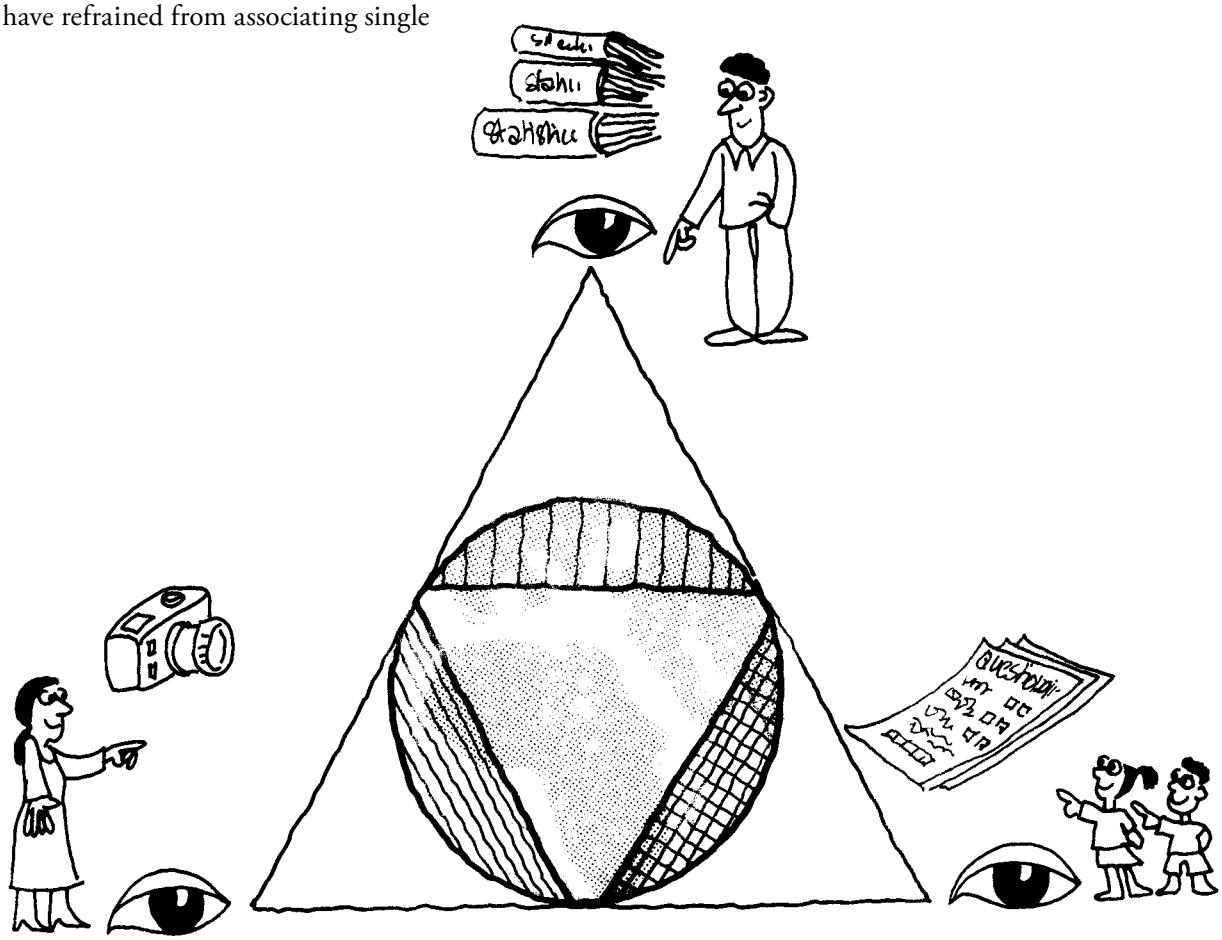
As we have seen in the previous example, there are many possible ways to explore the changes produced by a certain development intervention. This does not mean we have to cover *all* possible angles, but combining more than one perspective will increase the reliability of our findings.



Different people have different perspectives

This is based on the principle of triangulation, which implies that M&E should strive to combine different approaches (for example qualitative / quantitative), methods (for example survey / observation / focus group discussion), sources of data (for example TVET graduates / labour market experts / employers), and researchers (multidisciplinary evaluation teams / different studies carried out by different experts).

The following sections describe examples of data collection instruments commonly used in TVET-related development interventions. We have refrained from associating single instruments to specific levels along the results chain. The reason for this is that the results chains of different development interventions are not always equally "long" and therefore the kind of information collected by a given instrument may be linked to the level of use of outputs in one development intervention while for another development intervention the same kind of information may already refer to its outcome.



Triangulation combines different approaches, methods, sources of data, and researchers.

Study of available (secondary) data

Secondary data can provide useful information for M&E

Purpose:
The study of available data serves to provide information on certain topics that may be related to different areas of observation of a development intervention. This data may be administrative records which are already being collected by statistical agencies, TVET centres, labour market information systems etc.

Advantages:
It is always useful to know what kind of data is already available and try to make as much use of it as possible for the M&E system of a development intervention. This reduces the considerable costs of data collection. Sometimes this data is easily available from statistical services and can even be requested in a format or level of aggregation that particularly fits the needs of a specific development intervention.

Disadvantages:
Sometimes data is difficult to obtain, is not up to date or is of poor quality (incomplete, unclear) or not reliable (depending on the initial purpose of their collection, they may have been adapted to suit certain purposes).

Conclusion:
Depending on the specific focus of the development intervention, we need to decide which of the data available might be useful and how we can adapt our M&E system to make best use of available data, for example by using proxy indicators based on easily available data instead of indicators which may require the costly collection of new data.

Records (lists, spreadsheets, databases, monitoring formats)

Purpose:
Records are used for a structured collection of data and pieces of information. Different computer-based applications can be used to store data and process them based on Standardised queries. Lists are less complex and can also exist as hardcopies only.

Most development interventions keep lists or databases for the monitoring of inputs and outputs provided by the intervention's team, cooperating institutions, intermediaries, and/or external service providers. They may also cover aspects related to the use of outputs by the intervention's target group. Records may cover qualitative and quantitative aspects. A simple way to keep quantitative records is a spreadsheet (for example

Records are used for a structured collection of information

excel or any similar programme), where we can enter quantitative data and conduct simple calculations and create graphs for analysis. We can also enter qualitative data by using classifications or scales.
Memos and so-called 'running files' are simple ways to collect descriptive qualitative information. Memos are often produced for a specific occasion and with a certain focus (for example after a study tour or a series of visits to TVET centres). Running files are regularly updated and may contain entries on any issue that is deemed relevant. Both memos and running files can be more or less Standardised. A Standardised version will provide a series of key questions that have to be answered following a pre-established format. These are relatively easy to aggregate and Analyse. The opposite option would be to leave the structure deliberately open to allow a wider scope of entries. These kind of entries require more work at the analysis stage because they have to be clustered first. Examples of records referring to the development intervention as a whole may include lists of activities conducted by the development intervention (such as market analysis, workshops, teacher training, advice and

training services for partner institutions), cost monitoring and data sheets about the participation of partner institutions in these activities.
Other records may be directly linked to the actual provision of TVET courses. They may use specific monitoring formats for individual TVET centres covering aspects such as enrolment and graduation, involvement of the private sector in training and employment offers and qualitative aspects regarding improvements in curriculum development, financial management, human resources management, equipment and infrastructure, etc.
This data may be aggregated into a data bank of training providers (covering aspects such as courses offered, enrolment, graduation, gender ratio of staff and students, cooperation with the private sector, quality aspects, etc.).

Advantages:
Records can be used for the regular and systematic collection of data by different actors in different places. If they are well structured, they can be easily aggregated and provide regular inputs for reporting and quality assurance.

Disadvantages:
Depending on how many activities a development intervention has, databases can be numerous and complex. Databases have to be updated and reviewed regularly after being established. If the records kept by a development intervention are not at all connected to existing methods of data collection, they constitute an additional burden for the local organisations involved in data collection.

Conclusion:
The different kinds of records can be very helpful to generate information and data that can be updated and aggregated at regular intervals and at different levels. The best strategy is to cooperate with local institutions. This can serve as a capacity building measure. It may require adapting the scope of information gathered to the needs of the local institutions. This way, data collection, aggregation and analysis can be more sustainable.

Surveys

Surveys are the most commonly used method for collecting data in a large population.

Purpose:
Surveys are the most commonly used method for collecting data in a large population. They may cover quantitative and qualitative aspects. Surveys can be administered in person, by mail, over the phone, via email or online (using an internet platform).
Surveys use structured or semi-structured questionnaires, offering respondents the choice among a series of answers to each question. These may include yes/no or scaled responses. The more structured they are, the easier it is to compile the data from a large number of respondents.
The quality of data depends largely on the precise formulation and combination of questions. Questionnaires should therefore be developed by a combination of professionals who are knowledgeable about survey design and the subject matter in question.
It is advisable to conduct a test run with a small number of respondents to make sure that the questions are properly understood and that the answers do provide the kind of information required.
In the context of TVET-related development interventions, surveys can be used to assess the quality of TVET - in terms of whether the TVET reform actually leads to better chances of stable and appropriate employment. By 'stable' we mean e.g. employment that is formalised with a contract and lasts for at least six months. By 'appropriate' we mean e.g. employment in an occupation that matches the employee's education and training.
Surveys can also be used to assess the progress of TVET reform at the level of single TVET institutions, including aspects related to curriculum development, school management, involvement of the private sector in training provision, etc. This kind of information can be directly linked to the national system for supervision (quality assurance) of TVET providers. Respondents may include trainees, teachers, trainers, instructors, administrators, public and private training providers, enterprises involved in the training as well as employers of graduates from TVET courses.

Advantages:
- Surveys can be a very **cost-efficient** means of collecting data from a large

number of respondents and across large geographic areas. This is particularly so for surveys administered online and via email.

- Surveys using structured and semi-structured questionnaires are **easy to Analyse** as data entry and tabulation can be done with relatively common software packages (for example with Excel spreadsheets, SPSS, etc.).
- Surveys via post, email or the internet are **less intrusive** than telephone or face-to-face- interviews and the respondents may choose the time for responding at their own convenience.
- Surveys via post, email or the internet can help to **reduce the interviewer's bias** since there is no direct communication (verbal or non-verbal clues that may influence the respondent's answers).

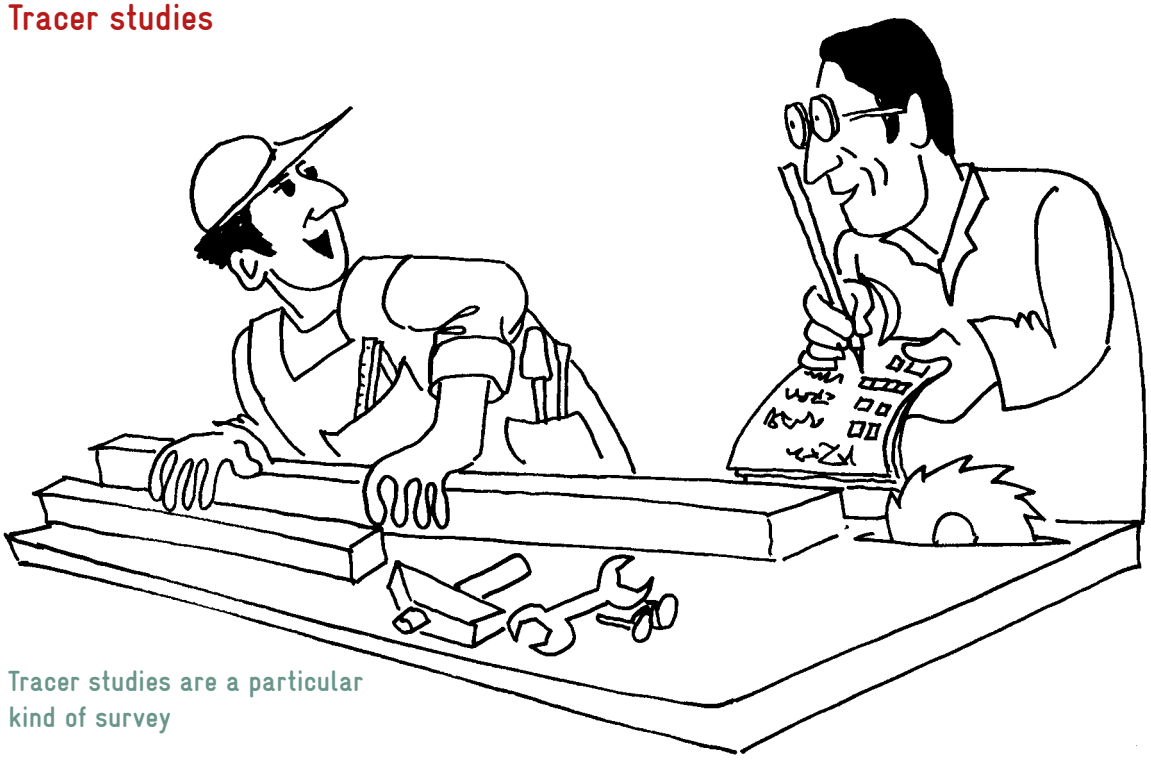
Disadvantages:

- Response rates vary widely from one survey to another. **Low response rates** can considerably lower the reliability of the results.
- Surveys administered by post, email or the internet and using structured questionnaires run the risk of losing **the 'flavour' of the response**. This can be partly overcome by providing a few open questions where respondents can give their opinion on further issues not covered in the questions or where they can modulate some of their answers. These open questions provide useful information and insights that might otherwise have been lost.
- Surveys using written questionnaires are **not suitable for all situations and all people**. There a different reasons for this: They require a relatively high level of literacy and in certain situations there may be fear that the information may be misused for other purposes.
- Surveys administered by post, email or the internet may **not always reach their intended respondents**. Sometimes a manager may delegate the task to another staff or someone else may use the questionnaire as a hoax.

Conclusion:

Most M&E systems are likely to use some kind of survey to collect data from a variety of respondents and on a variety of issues. They can be complemented by records, individual interviews and focus group discussions to get additional insights and information.

Tracer studies

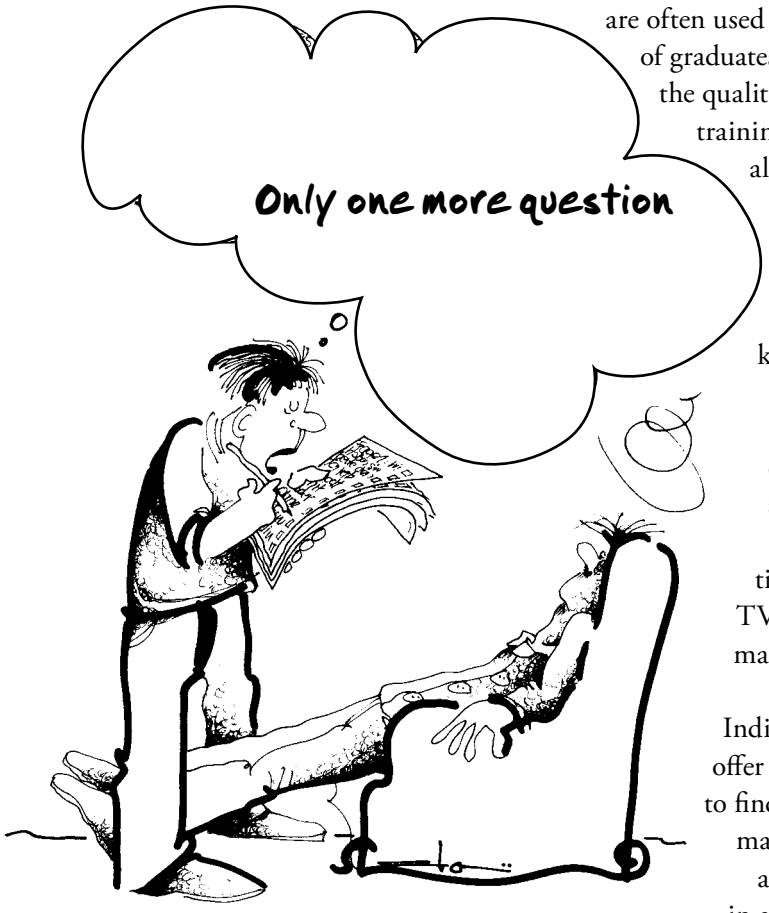


Tracer studies are a particular kind of survey

Purpose:
Tracer studies are commonly used to assess the effect of a TVET-related development intervention on employability, satisfaction with employment or career, and socio-economic improvement of graduates or institutions who received support from the intervention. The assessment may include the comparison with graduates of other courses or institutions which have not received assistance by the development intervention. Tracer studies are a particular kind of survey often based on questionnaires and databases. Their respondents may be a combination of TVET graduates, trainers, and employers. Apart from the questions focused on the graduates / employees, the questionnaires will commonly include questions related to the employers' current skill requirements, their use of current technology, and their planning based on how they perceive future trends. The advantages and disadvantages are those of regular surveys. An additional disadvantage may be the considerable effort required to trace graduates of certain TVET courses, especially if the time frame is very long and records are not regularly updated.

Conclusion:
The 'classical' understanding of tracer studies is that they are used to assess long-term impacts of TVET-related development interventions. However, experience shows that it can also be useful to conduct them immediately upon course completion, shortly afterwards (approximately 3-6 months after course completion) and at latest 2.5 years after graduation. One reason is that this allows reducing the often high costs of tracing the respondents. Another is that it is at this time that tracer studies provide the most reliable information on the causal links between the result (e.g. increased employability) and the development intervention. A particularly useful design is to conduct a survey among TVET graduates and complement it with individual interviews with managers of TVET centres and employers.

Individual interviews



Interviews can help gather valuable data, but can be time consuming

Purpose:
Interviews are most often used to gather detailed information from a person's particular perspective as an expert or representative of a group of stakeholders. Interviews can be structured, semi-structured or open. They may be used to gather quantitative and qualitative information. They are particularly suited to collect descriptions of situations, hypotheses regarding the success of the development intervention, satisfaction levels of different stakeholders, and individual perspectives and opinions.

In the context of TVET-related development interventions, individual interviews are often used to assess the satisfaction of graduates and employers with the quality of TVET and further training measures. They are also used to assess the progress of a comprehensive TVET reform process from the point of view of particularly knowledgeable individuals or from representatives of certain groups of stakeholders (teachers' associations, employers' association, representatives of public and private TVET institution, policy makers, etc.).

Individual interviews also offer an excellent opportunity to find out detailed information from individuals affected by or taking part in a development intervention. This can provide the knowledge basis for a case study.

Advantages:

- By using individual interviews, the views of individual respondents and the reasons for their views can be discovered, without any influence from other participants.
- Individual interviews are especially suited for getting insight into process issues.
- Interviews are also one of the best ways to engage low-literacy populations. Structured interviews can take the place of questionnaires for clients who may have difficulty filling out forms

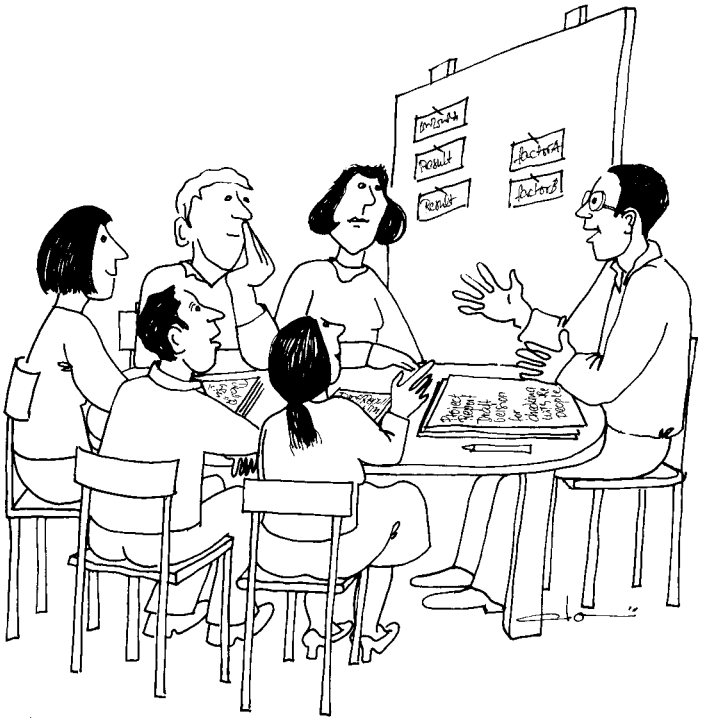
- The main benefit is the level of detail that can be obtained. In open and semi-structured interviews, the interviewer has a chance to follow-up on questions and probe for meaning.
- It can be easier to discuss an issue in-depth with one person than with a group.
- It helps avoid the scheduling problems of trying to arrange meeting dates with large numbers.

Disadvantages

- This practice requires a lot of time and the contribution of professionals: specific skills are needed to plan, conduct and interpret an interview.
- Obtained results are difficult to aggregate because they contain many details that are not comparable with the information obtained from other interviews. This makes it difficult to draw general conclusions and lessons learned.
- Interviewer bias: the behaviour, body language and appearance of the interviewer influence the respondent.
- Confidentiality: field notes often contain too much confidential information for wider circulation. This means that all records need to be transcribed into a format appropriate for circulation.

Conclusion:

Individual interviews cannot be the main element of an M&E system but are a useful means to complement other instruments. They are particularly suited to seeking specific information and perspectives from experts or representatives of certain groups of stakeholders and can provide the basis for a case study.



Usually, focus group discussions are enjoyable for the participants

Focus group discussions

Purpose:

A focus group discussion is a small group of people assembled for a guided discussion of a specific topic or issue. The objective is to gather information from each of the different members of the group at the same time to allow everyone involved to learn from the interaction between them.

Focus group discussions can for example be used in market research, for needs assessments, to explore policy issues and their relevance for the development intervention, or to analyse and interpret the preliminary results of an evaluation.

In a focus group discussion the interviewer guides a conversation among a small group of people (6 – 10 people) for ½ to 2 hours. This is generally semi-structured: there is a checklist of the main topics to be discussed but the group facilitator also encourages an

open and wide discussion to get as much information as possible.
It is often recommended that several group discussions are conducted to make sure that a wide range of different opinions in an organisation or community are included. It is important to make the group members feel free to state their opinions openly.

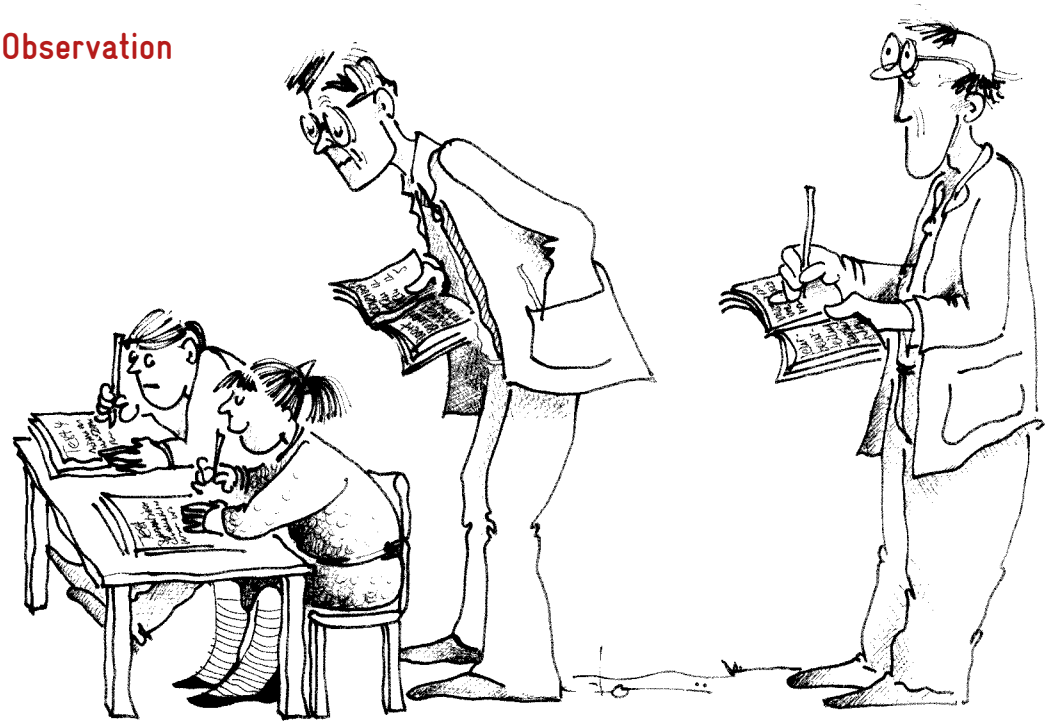
Advantages:

- Participants get to know each other's responses. As they hear what others say, people make additional comments. It is not necessary to reach consensus.
- Group discussions provide rich and in-depth data that paints a broad picture
- It is a highly efficient qualitative data collection technique: in one hour the facilitator gets the opinion of 6 to 10 people.
- This method also provides qualitative control on data collection. Participants tend to provide checks and balances on each other which weed out false or extreme views.
- Easy to find out about shared views.
- Generally, focus group discussions are enjoyable for the participants.

Disadvantages

- The number of questions which can be asked is limited. With 8 people in one hour, no more than 10 questions may be discussed
- Facilitating and conducting a group discussion requires considerable group process skills. The discussion should never be dominated by a few people.
- It is not easy to take notes during the discussion. It is therefore helpful to have two facilitators.

Observation



Open observations are known to all

Purpose:
Observation is often used to verify and supplement information gathered through other methods (Triangulation). There are different types of observation:

- Participant observation: The observer takes part in the situation he or she observes.
- Non-participant observation: The observer watches the situation, openly or concealed, but does not participate.
- Open observations are known to all.
- Hidden observations are not announced.

Observations can be highly structured, with protocols for recording specific behaviours at specific times, semi-structured or unstructured, taking a 'look-and-see' approach. They are most reliable when they are conducted over a period of time to Minimise the chances of the time of observation being atypical.

Advantages:

- The trained observer has the chance to see things that may routinely escape conscious awareness or that respondents do not like to talk about. In this case, observations can give additional, more accurate information than interviews or questionnaires. They can also check on information collected through other methods (Triangulation)
- Trained observers may provide less biased descriptions than program staff, stakeholders or other involved persons. In this case, observations can provide highly detailed information from an external perspective on what actually occurs in a development intervention.
- Direct observation of a situation facilitates the understanding of the context of the development intervention and how it operates.

- Observation helps show both what happens (this is often reported anyway) and what does not happen (this is often forgotten or omitted in reports or interviews).

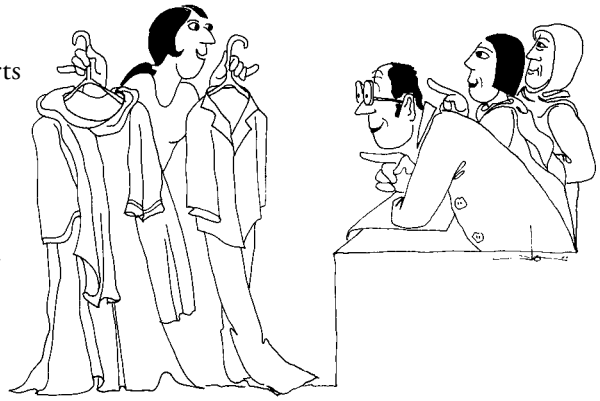
Disadvantages:

- Observations can be very time consuming, labour intensive, and expensive.
- Observers must be trained and be consistent with one another
- The situation on the day it is observed may not be representative by chance (due to external circumstances, it does not reflect the full range of activities normally covered by the intervention) or by default (things are done in a particular way because there is an observer in the room).

Conclusion:

Observation is a frequently used, unobtrusive data collection method. It can reduce certain bias by providing an external perspective but does not guarantee lack of bias, since the situation observed may not be representative. The presence of the observer is a certain bias in itself.

Tests and assessments



Tests and assessments may cover different aspects of the training, including theory and practice.

Purpose:

Tests and assessments are specific instruments for training evaluations. They may cover different aspects related to the content of the training, including theory and practice.

Specific tests and assessments can be developed for a particular TVET-related intervention. The development of testing and assessments standards should include inputs from representatives of the world of work (employers, production experts, etc.)
As TVET-reform advances and an increasing number of TVET centres and courses use the new approaches, these tests and assessments can be Standardised and made part of the official testing procedures. Standardised testing and assessment tools can be stored in a database accessible to all TVET centres.
Tests, assessment procedures and scoring principles can be certified to make results comparable across institutions.

Advantages:

- The results of tests and assessments are often more valid and reliable than perceptions or opinions
- Comparing scores before and after the development intervention is a strong method for assessing whether outcomes actually change over time

Disadvantages:

- The development of Standardised tests involving all necessary stakeholders can be costly and time intensive.

Conclusion:

Tests and assessments are an intrinsic part of any TVET measure. If testing is adapted to the requirements of the new curricula and the labour market, it serves at the same time as an M&E tool for TVET reform.

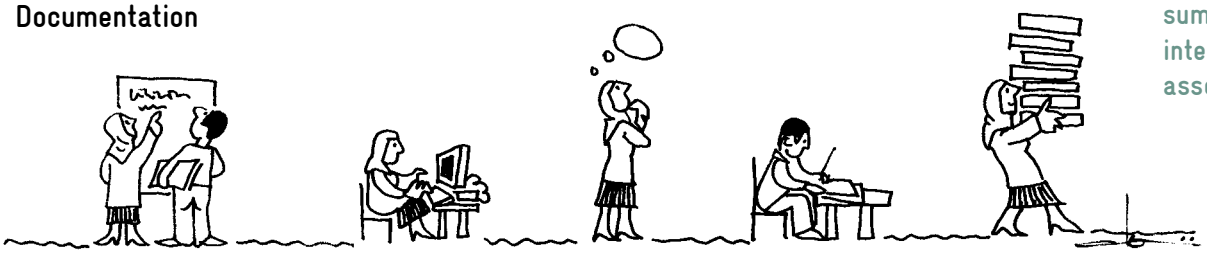
Step 3: Analysis and follow-up

In the previous section we have focused on the different methods for data collection. The next step is to make sense of all this information so that it can be used for the different purposes of M&E (steering, accountability, learning, Organisational development, communication).

Analysis

Documentation

Data needs to be described, summarized, interpreted and assessed.

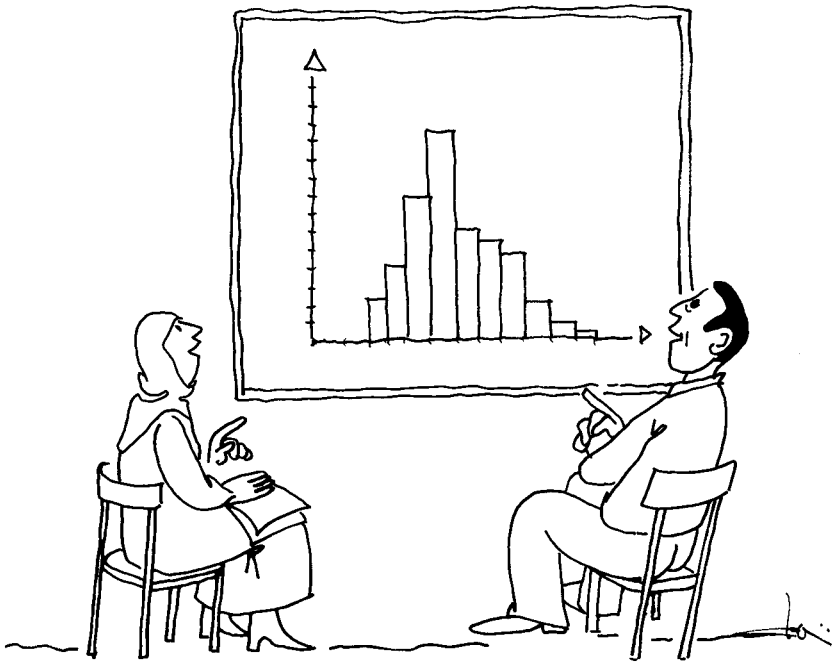


The quantitative analysis of data usually begins with a description and summary of the data. Data is presented and summarized in tables, graphs, charts, or other sorts of diagrams. As we have explained in the previous sections, qualitative data can be clustered and quantified for quantitative analysis. Quantitative analysis often uses the following measures:

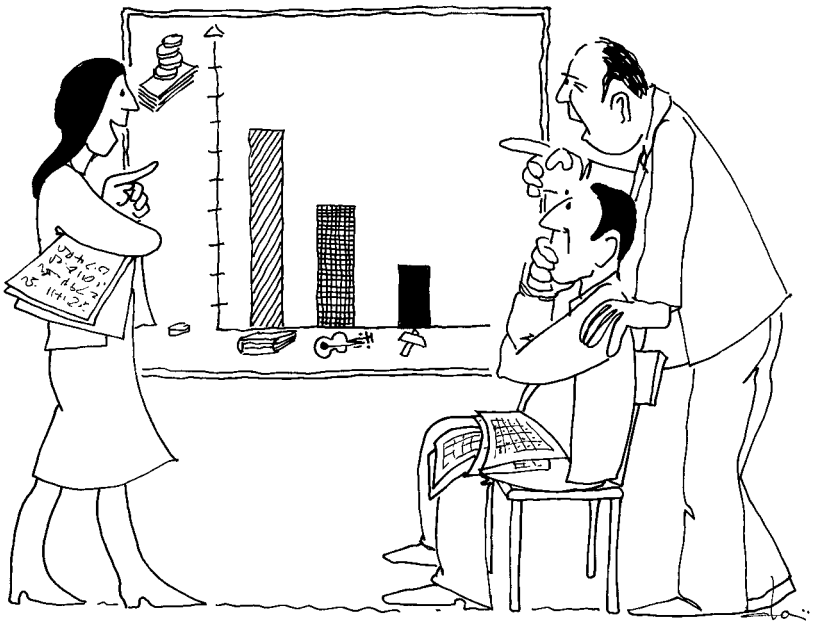
- Frequency - this is a simple count of the number of times a given response is given.
- Frequency percentage - this is the frequency of a given response to a question divided by the total number of people who answered the question.
- Mean - this is the average of a series of numeric scores (add the numeric responses and divide by the number of responses).
- Mode - this is the numerical response that occurred most often.
- Median - this is the number for which half of the numerical scores are greater and half are smaller.
- Difference in means - this is the simple difference in the average between two different groups or between a group at two different points in time.

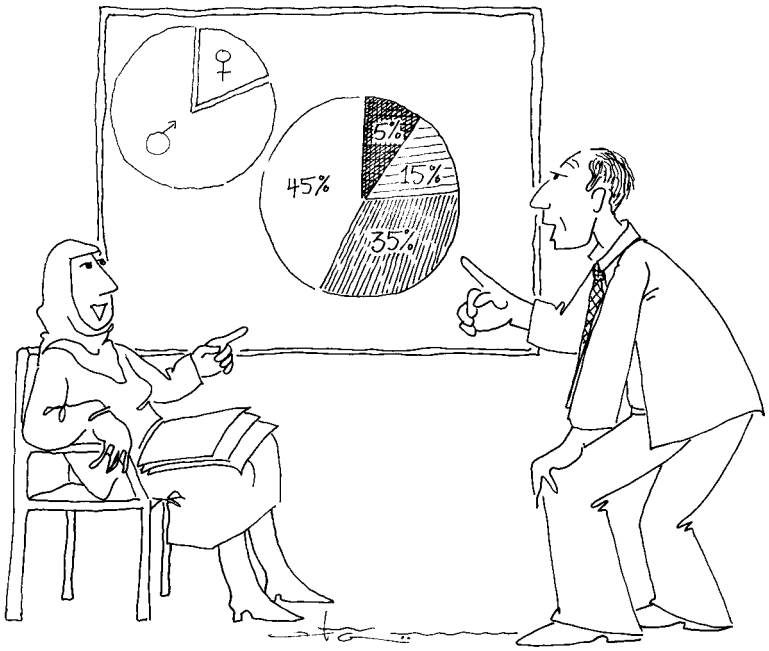
The following are frequently used diagrams:

A **histogram** typically shows the frequency of values that fall within a series of numeric ranges.

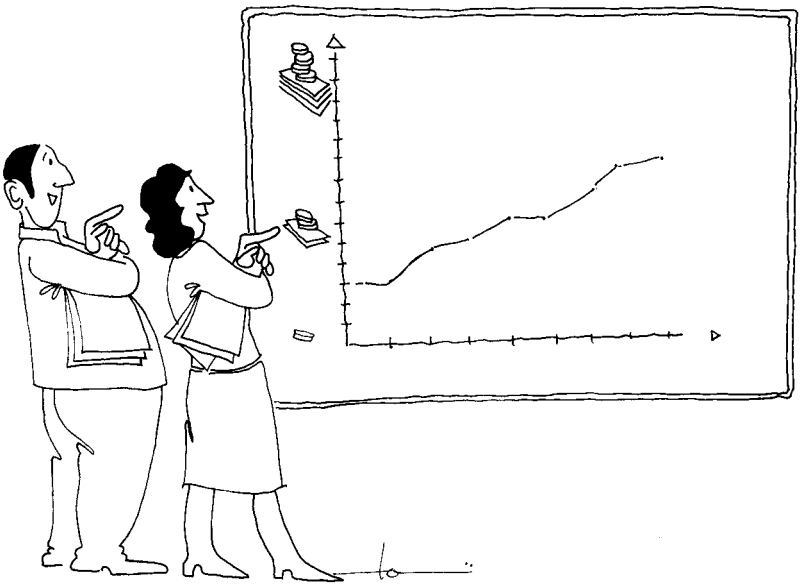


A **bar chart** uses bars to show frequencies or values for different categories.



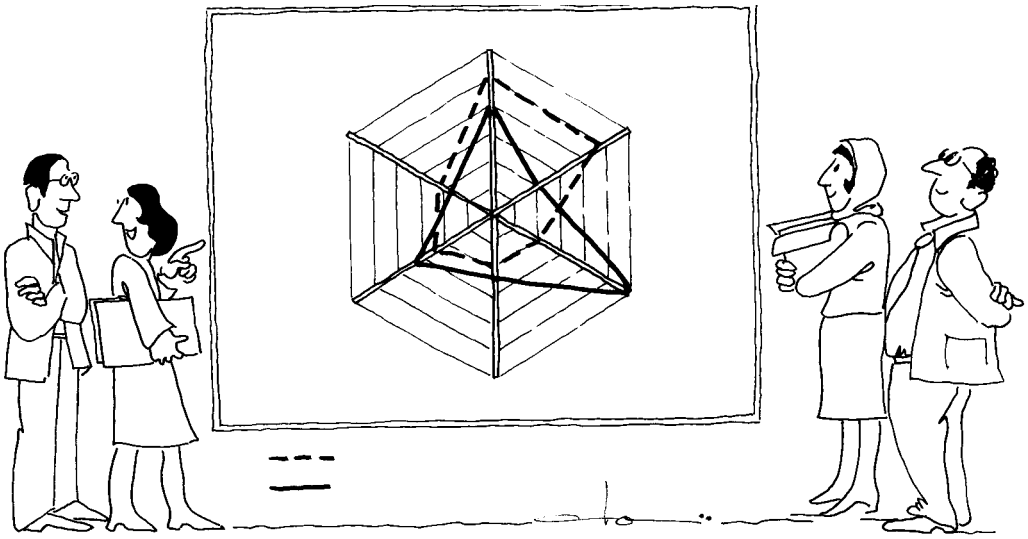


A **pie chart** shows percentage values as a slice of a pie.



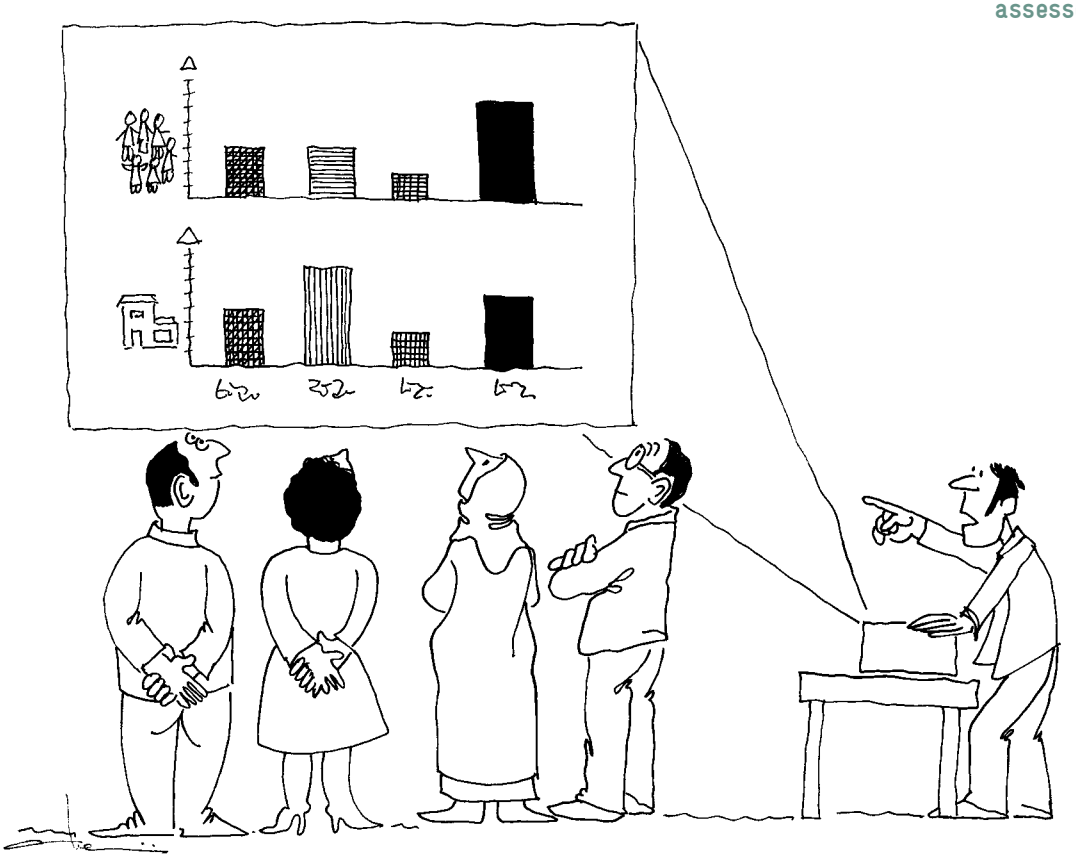
A **line chart** uses points for individual values and connects them with a line following their order (for example chronological order).

A **spider diagram** or **radar chart** shows data for three or more variables on axes starting from the same point.



Interpretation and assessment

Data needs to be interpreted and assessed.



The next part of the quantitative analysis is to interpret and assess the data in the context of the specific development intervention. The intervention's areas of observation, indicators and milestones serve as the reference. The following questions can help to guide the process:

- Are the results 'good' or 'bad'? (Compared against indicators and milestones)
- Are the results reasonable? (Are there any extreme values that may be due to errors of measurement or calculation?)
- How can the results be explained? (Why are the results as they are? Which processes have taken place?)
- What is surprising about the results? (What did we expect? What were our hypotheses? Are they still valid?)
- What is missing from the results? (Are there important questions we cannot answer yet? How could we get the necessary data? For instance by commissioning a specific study on a certain issue)

Lessons learned and recommendations

The final step is to identify lessons learned and formulate recommendations. These may refer to the management of the development intervention (How can the development intervention be improved, based on these findings?) or to policy processes related to the intervention (How can the TVET reform be improved based on these findings?).

Developing lessons learned and recommendations is important to ensure follow-up.

Follow-up

The design of an M&E system should include mechanisms for feeding back the results into management and policy making. In practice, this means identifying when and how it is most convenient to:

- Use M&E results for operational planning (for example, reschedule some activities, contract external service providers for advice or for the implementation of certain activities). This requires establishing clear reporting lines and a schedule of regular meetings at different levels to exchange information and adjust operational planning if necessary. For example, small teams working together on specific activities may meet on a weekly basis. Coordination meetings among different teams may be scheduled on a monthly or quarterly basis, depending on how closely their areas of responsibility affect each other.
- Use M&E results for strategic steering of the intervention (for example to formulate less ambitious indicators, develop a different strategy: abandon approaches that are not working and develop new ones which might work). This is usually done in a yearly strategic planning and M&E meetings involving stakeholders from all levels.
- Use M&E results to brief policy makers (identify the kind of briefing material that needs to be prepared for different stakeholders and establish crucial timing, for example related to the national development planning and budgeting cycle).

The following table gives an orientation on the interfaces between results-based M&E and planning:

Monitoring level	Planning base
Input and cost monitoring	Budget assignments
Activity monitoring	Yearly plans of operation of the programme components
Output monitoring	Milestones
Monitoring of use of outputs (products and services)	Results chains, indicators
Monitoring of direct benefit (outcome)	Results chains, overall objective indicators
Monitoring of Impact (indirect benefits)	Results chains, national, regional, sector indicators, MDGs

(Adapted from: "PROGRESS Promotion of Private Sector SMEs in the post MFA Era - Results-based Monitoring system", 2005)

Reporting lines

Reporting lines include schedules of who is to send which kind of data to whom and who will be responsible for aggregating data and forwarding it to the next reporting level. While quantitative data is usually processed and aggregated in spreadsheets and databases, qualitative data may be aggregated in periodical memos, running files, reports and case studies.

Standardised reporting formats

Standardised formats are used for the regular reporting of data and information. They are particularly suited for compiling and aggregating data across several reporting / M&E levels, for instance from individual service providers to an umbrella organisation or from local to central administrative units, etc.

This may be done within the particular structure of the development intervention or may also be integrated into national monitoring and evaluation systems and structures. It may be useful to 'break down' this overall reporting format in order to develop the monitoring formats for the TVET centres and other institutions involved in the development intervention.

Depending on the complexity of the intervention, it may be useful to establish standardised reporting mechanisms across the different levels. Each level would then be responsible for aggregating the information received from the previous level before passing it on to the next level.

The contents should give accounts on qualitative and quantitative developments during a fixed, predetermined period. In results-based M&E, the reports focus on the following areas:

- The degree and underlying causes for the achievement of the objectives and important milestones against the indicators specified in the proposal. The references for comparing results are the baseline, the targets for the reporting period and benchmarking with others. It can be a great advantage if the baseline survey has been carried out employing the same standardised reporting formats and reporting lines.
- Lessons learned at each monitoring level, in order to produce useful information for programme staff and management, partners and policy makers in country, and international donors involved in the development intervention
- Any aspects that are relevant for the quality assurance of the local TVET system.

In any case reports should always include a section with specific conclusions and recommendations.

Meetings and workshops

Meetings and workshops are useful for exchanging information and making decisions

Regular meetings and workshops at different levels are useful for exchanging information and making decisions on how to adapt the development intervention to a changing environment. Workshops are often used to analyse and interpret data and develop recommendations. Information can be shared and decisions made at regular meetings in order to 'translate' M&E results into action. Guidelines for conducting monitoring meetings help to focus on important issues and ensure that enough time is invested in reflecting on the causes for successes and failures as well as in developing strategies for the future.

Systematic documentation of meetings helps to ensure that the results can be used for further planning and reporting.

External communication

Promotional material describing the development intervention and its progress can be a useful means to get new stakeholders on board, raise public awareness on the importance of certain reform processes and to support policy dialogue.
Here it is important to choose the right media (leaflet, internet platform, newsletter, radio programme, policy brief, etc.) for its target audience.

Step 4: Establishing a schedule and assigning responsibilities for M&E

A crucial step to put the M&E system into practice is to establish roles and responsibilities. This is usually documented in a table or diagram which also reflects the schedule of M&E activities.

Example: Plan of Monitoring / Monitoring Matrix

Expected change, (Indicator/ Output)	Initial value	Source of information, methods	Responsible persons	Involved organisations, individuals	Date, period of monitoring and reporting	Users of information, form of report	Remarks
...							

The following questions may help to establish the roles and responsibilities:
Who are the:

- Users of M&E results?
- Managers of the M&E process?
- Actors responsible for data collection and processing?
- Actors responsible for producing reports?
- Actors responsible for feeding M&E results into policy processes?
- Actors responsible for producing public awareness material?

Glossary of English and Arabic Terms

Monitoring and Evaluation glossary of terms[5] **بعض المصطلحات المستخدمة فى دورة المتابعة و التقييم**

Base line	خط الأساس
Baseline data	بيانات أساسية - بيانات خط الأساس
Beneficiaries	المستفيدون
Capacity development	تطوير القدرات
Coding	تكويد
Conclusion	خلاصة
Data analysis	تحليل البيانات
Data collection	جمع البيانات
Data interpretation	تفسير البيانات
Direct impact	أثر مباشر
External evaluation	تقييم خارجي
Focus group discussion	مناقشات مجموعة التركيز
GIZ – Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH	وكالة التعاون الفني الألماني
Impact assessment	تقييم الأثر
Impact chains	سلاسل الأثر
Impact monitoring	متابعة الأثر
Indicator	مؤشر (قياس كمي او نوعى لأداء البرنامج)
Indirect impact	أثر غير مباشر
Internal evaluation	تقييم داخلي
Interview	مقابلة شخصية
Labour market	سوق العمل
Lessons learned	الدروس المستفادة
Logical framework	الإطار المنطقى
Logical framework approach	نهج الإطار المنطقي
Monitoring & Evaluation	المتابعة والتقييم
Monitoring area	مجال المتابعة
Monitoring teams	فرق المتابعة
Objective	هدف
Participation	المشاركة
Participatory approach	النهج التشاركى
Pre – test	اختبار أولى
Project / Program	مشروع / برنامج
Project cycle	دورة المشروع
Qualitative assessment	تقييم نوعى
Quality management	إدارة الجودة
Quantitative assessment	تقييم كمى
Questionnaire	استبيان
Recommendations	توصيات
Result based monitoring	المتابعة بالنتائج - المتابعة بالاهداف
Sound – recording	تسجيل صوتى
Stakeholders	المعنيين
Survey	مسح
Sustainability	استدامة
“TRIP “Training Programme for Iraqi Personnel	مشروع تدريب الموظفين العراقيين
TVET-Technical Vocational Education and Training	التعليم الفني و التدريب المهني
Visual – recording	تسجيل مرئى

5 For more detailed information visit the website http:// www.unfpa.org/monitoring/toolkit/arabic/glossary.doc

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