BASIC TOOLS FOR DATA COLLECTION

Many different methodologies can be used for data collection and analysis. For people new to the world of monitoring and evaluation (M&E) the list can appear quite daunting. However, most methodologies are based around the same set of basic tools. These tools are listed in this short paper, and are described in more detail in other papers in this section of the M&E Universe.

The tools listed below can be used on their own, or can be applied as part of wider methodologies. For example, a survey could be designed and implemented as a stand - alone tool, but could also be implemented as part of a wider methodology, such as a Randomised Control Trial (RCT). Similarly, case studies or stories of change can be used in isolation, but can also be used as part of a wider methodology, such as Most Significant Change (MSC).

Within M&E, some complex methodologies are designed to cover both data collection and analysis. However, the basic tools listed below are not associated with specific analysis methods. All can be analysed using a range of different techniques and approaches. Some tools, such as case studies or focus group discussions, are more often analysed using qualitative techniques, whilst others, such as surveys, tend to be analysed quantitatively. But there are often exceptions to these rules.

Most of the tools listed below can be used at any stage of a project or programme cycle. They are routinely used during project or programme design, planning, monitoring, review, evaluation and impact assessment. The tools can be used for any purpose, including project or programme management, learning, and accountability to different stakeholders. They can be applied within any type of work, including service delivery, capacity development, advocacy and mobilisation. They are used in both development and humanitarian settings.

Data collection tools

A list of basic data collection tools includes the following.

- *Interviews:* Interviews are probably the most common tool used in planning, monitoring and evaluation. They can be carried out with one person at a time (individual interviews) or groups of people. They can be administered formally or informally. They can be carried out face-to-face or through remote media such as telephone and Skype. Interviews can also be conducted through written questions via letters or email. Interviews may be structured, semi-structured or open-ended. Structured interviews are based around a core set of questions that are always asked in the same order. Semi-structured interviews also contain a core set of questions, but allow the interviewer to ask supplementary questions, or change the order in which questions are asked.

- *Focus group discussions:* Focus group discussions (FGDs) are facilitated discussions, held with a small group of people who have specialist knowledge or interest in a particular topic. They are used to find out the perceptions and attitudes of a defined group of people. FGDs are typically carried out with around 6-12 people, and are based around a short list of guiding questions, designed to probe for in-depth information. FGDs are often used to solicit the views of those who would not be willing or able to speak up at larger group meetings. They may also be used to access the views of minority or disadvantaged groups, such as women, children or people with disabilities.

- *Observation:* At its most simple, observation involves 'seeing' things – such as objects, processes, relationships, events – and formally recording the information. There are different types of observation. Structured or direct observation is a process in which observations are recorded against an agreed checklist. Expert observation is usually carried out by someone with specific expertise in an area of work, and involves the expert observing and recording information on a subject. Observation may also be carried out as a participatory exercise. Where this is the case the intended beneficiaries of a project or programme are involved in planning an observation exercise, observing, and discussing findings.

- *Photography and video:* Photographs and videos show still or moving images. Photographs can be used on their own, but are more often accompanied by written captions, providing additional information. Videos are often accompanied by a commentary. The use of photography and video has become increasingly common within M&E over recent years. This is partly because of improvements in mobile phone technology, which has increasingly enabled people to produce cheap, high quality audio-visual products.

□ **Casestudiesandstoriesofchange:** A case study is not a data collection tool in itself. It is a descriptive piece of work that can provide in-depth information on a topic. It is often based on information acquired through one or more of the other tools described in this paper, such as interviews or observation. Case studies are usually written, but can also be presented as photographs, films or videos. Case studies often focus on people (individuals, households, communities). But they can also focus on any other unit of analysis such as locations, organisations, policies or the environment. Stories of change are similar to case studies. However, they have a specific focus on change, and are only usually developed after a project or programme has started.

□ **Surveysandquestionnaires:** These are designed to collect and record information from many people, groups or organisations in a consistent way. A questionnaire is a form containing questions. It may be a printed form or one designed to be filled in online. Questionnaires may be administered in many different ways. A survey, by contrast, is normally a large, formal exercise. It typically consists of three different aspects: an approved sampling method designed to ensure the survey is representative of a wider population; a standard questionnaire that ensures information is collected and recorded consistently; and a set of analysis methods that allow results and findings to be generated.

An additional set of tools comes under the heading of community participatory tools. This includes exercises such as mapping, ranking, timelines, calendars and diagrams. These can be used as tools for collecting data from community level, and are often included as basic tools in M&E exercises. However, they are more properly used as participatory methods of data collection and analysis that also allow communities to analyse their own situation and make their own decisions. This set of tools is included in the M&E Universe paper on Participatory Learning and Action (PLA).

Other ways of collecting data

In addition to the tools described above, there are also three other basic methods of collecting data that are widely used: direct measurement; the review of secondary data sources; and informal monitoring.

□ harder to measure change directly. But in some sectors of work it is still relatively straightforward. In the health sector, for example, changes in blood sugar levels or height : weight ratios can be measured accurately. And in the livelihoods sector crop yields can be accurately recorded to directly assess change. Where feasible, direct measurement of change is usually the best method of data collection. But the tool used to collect the information (e.g. scales to measure weight, water testing kits to measure the quality of water, school registers to record attendance at school) is always different.

□ In social development, when somebody collects data for their own purposes it is called primary data. Sometimes, however, information can be used for planning, monitoring or evaluation that has been collected by other people or organisations for their own purposes. This is known as **secondary data**. Secondary data might include government statistics, NGO reports, newspaper or website articles, hospital records, research studies, evaluations conducted by other agencies, and community records – to name just a few. Secondary data is often a valuable source of information that can supplement other forms of data collection.

□ Finally, most staff involved in projects and programmes build up an enormous fund of knowledge about those projects and programmes and the changes they influence. This knowledge comes through talking to different people, informally observing things when visiting the field, reading emails and reports, and generally being engaged in normal project/programme management activities. This kind of **informal monitoring** is frequently underused within M&E, but in some circumstances may be the most valuable kind of information. At the very least it often provides an important supplement to the information collected through more formal tools and methodologies

Summary

Although there are many complex M&E methodologies that can be used to collect and analyse information, many, if not all, are based around the same core set of tools and methods described in this paper.

For readers new to M&E it is important to remember this. A quick search of the internet will reveal hundreds of different M&E methodologies with complicated names. Some are designed for very specific purposes and may require specialist skills to administer. But most are variants on a theme, or are old ideas re-packaged. If an M&E practitioner can understand and apply the most basic tools of data collection then they should be able to apply almost any methodology for data collection and analysis.

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CHOOLS