

TRIANGULATION

Triangulation involves examining changes or lessons learned from different points of view, or in different ways. It is used to improve the quality of monitoring and evaluation information, and to make analyses more reliable. There are many ways of triangulating information. These include comparing different sources of information, applying different methods, and using different investigators.

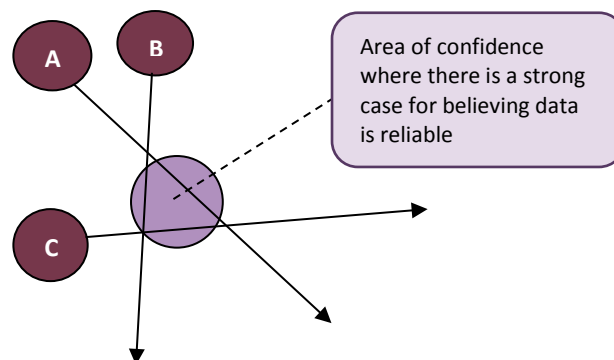
In monitoring and evaluation (M&E) many things can be measured quite simply. Basic activities undertaken or outputs delivered, such as wells dug, schools built or training courses delivered, can be measured easily. It is sometimes possible to accurately measure change at outcome level as well; for example recording exam results to show student attainment, or measuring height-weight ratio within a nutrition project.

But in some sectors of work it can be very hard, if not impossible, to measure outcomes directly. For example, in fields of work such as governance, capacity development, community mobilisation and empowerment, change is often subjective. In these cases triangulation is often used to improve the quality of M&E information, and make analyses more reliable.

The concept of triangulation is derived from map-reading. Theoretically, if you can get a compass bearing from three known points it is possible to accurately pinpoint your position. In social development, triangulation involves looking at changes or situations in different ways, in order to compare and contrast different viewpoints. This has the following potential benefits (see Denzin 1978).

- Data generated in different ways, or produced by different people, can help explain different aspects of an issue from different perspectives. This can *enrich* the data. For example, a change at village level may look very different from the viewpoint of men and women.
- Different pieces of data may *refute* or *contradict* each other. This means that the information, as it stands, is unreliable. Additional data collection might be needed to find out why there are differing accounts.
- Different pieces of data coming through independent sources might be consistent, which to some extent can *confirm* the accuracy of the data collected.
- Sometimes data coming through one source can help *explain* unexpected or confusing findings from another source.

The diagram to the right shows how different pieces of information can be put together to find a common area where data can be considered reliable (see Bakewell et. al. 2003).



Different types of triangulation

There are many ways of triangulating information. The most common are described below.

- **Data sources:** Possibly the most common way to triangulate data is to talk to different people. This often involves talking to different categories of people as well. For example, men and women may give different responses to questions based on different experiences and perspectives. Landless people living in a community will not necessarily provide the same information as people who own land.
- **Investigators:** Findings can often be influenced by the person or persons collecting the information, particularly when collecting qualitative data. For instance, women may give different answers to questions depending on whether the interviewer is male or female, young or old. It is often useful to collect information using different investigators. Not only might the answers be different, but different investigators might also analyse the information differently.
- **Methods:** Different methods of data collection can result in different findings, which can then be triangulated. For example, findings from interviews, observations and secondary data can be compared to check reliability. In some projects and programmes different data methods are deliberately chosen because they help complement each other, and offset each other's weaknesses.
- **Quantitative and qualitative:** It is widely recognised that quantitative and qualitative methods have their

own strengths and weaknesses. Nowadays, mixed methods evaluations tend to use both. Qualitative findings often help to explain quantitative findings, and may also help confirm or contradict those findings.

- **Conceptual frameworks:** Larger evaluation or research studies may look at situations through the lenses of different conceptual frameworks, such as feminist, human rights, social inclusion or economic analysis frameworks (Bamberger 2012).
- **Times and locations:** People may answer questions differently depending on the time of day, or according to the season. They may also respond differently when interviewed in their homes or in public places (ibid).

Dilemmas in triangulation

Triangulation can help make data more reliable. Clearly, the more ways of triangulation that are used, the more likely it is that any findings or analyses will be credible.

However, in social development triangulation may not be a smooth process, and it is likely that contradictions will occur. The more data is collected, the more contradictions will occur. Sometimes this will be the result of faulty data collection. But at other times it may reflect the biases of different stakeholders, including the investigators. In some areas the contradictions may be easily explained, but in other cases more work might need to be done to resolve issues.

Triangulation takes time and can be expensive. This can be a problem when budgets and timeframes are short. It is important to know when to stop. In theory, an evaluator or M&E practitioner could go on forever interviewing more and more people through different methods to try and come closer to the truth (probably generating more and more contradictions in the process). In practice, it is important to know when to stop, and when data and analyses are probably good enough.

References

- Bakewell, O; Adams, J and Pratt, B (2003). *Sharpening the Development Process; A practical guide to monitoring and evaluation*. INTRAC, UK.
- Bamberger, M (2012). *Introduction to Mixed Methods in Impact Evaluation*. Impact Evaluation Notes, August 2012. Inter Action and the Rockefeller Foundation, August 2012.
- Denzin, N (1978). *The Research Act: A theoretical introduction to sociological methods*, 2nd edition. New York, McGraw-Hill.

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