**Generic Notes on Intervention Logic**

**(also known as ‘Theory of Change’/‘Programme Logic’/‘Logic Modeling’)**

When we plan or design an intervention, we do so for a reason. In academic ‘speak’, planning or design has an inherent, theoretical approach, whether this is made explicit or not.

In development practice this is referred to by several terms, including, ‘theory of change’,’ intervention logic’, or ‘logic modeling’

This Note covers:

**A** Intervention logic as a tool in planning and design

**B** Intervention logic as a tool in evaluation

**A1 Intervention logic as a tool in planning and design**

Herewith some fundamentals of intervention logic which are useful for those who are considering, or in the process of designing interventions

**1.1 What is an intervention logic ?**

An intervention logic is an exploration and identification of the **changes we want to help bring about**, **in a given context**, and identification of how we think the associated **change processes might happen, why, and on what basis**

It involves :

* Identifying key issues of context which directly affect the choices we make
* Setting out hypotheses about how change will happen
* Making explicit the assumptions underpinning those hypotheses, including the risks
* Assessing the strength of the assumptions by indicating the quality of the evidence which supports them

**1.2 What is the difference between a ‘results chain’ and an ‘intervention**

**logic’ ?**

In common usage, a results chain asserts that A leads to B. An intervention logic explores how and why A leads to B, shows the intermediate steps, the transmission mechanisms, and the causal pathways

**1.3 Importance of assumptions**

Assumptions are at the core of both planning and subsequent evaluation exercises

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| *“Every programme is packed with beliefs, assumptions and hypotheses about how change happens – about the way humans work, or organisations, or political systems, or eco-systems … Theory of change or intervention logic is about articulating these many underlying assumptions about how change will happen in a programme.” (Rogers and Funnell, 2011)* |

The important thing is to work out what key assumptions underpin any proposed intervention, and make them explicit. For example,

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| If increased teacher salaries improve student learning, does that happen by …   * Making teachers feel valued and more motivated? * Reducing the need for teachers to do other jobs to top up their income? * Attracting more capable people to become teachers? * Increasing communities’ expectations and scrutiny of teachers? |

**1.4 Intervention logic is both a process and a product**

* a *theory of change/intervention logic is a thinking process* which helps us design what we do – ie a process for thinking about how a desired change on a particular issue might be achieved, generating ideas for intervening to bring about that change, exploring and weighing up different causal pathways and options;

and

* a *theory of change/intervention logic is a product* – (narrative and diagram (s) which is used to describe the intended pathway of an intervention – ie a communication tool to present the design decisions which have been made and articulate the programme’s key hypotheses and assumptions about how change is expected to happen.

**1.5 There is no standard format for an intervention logic product**

It is usual to communicate the intervention logic in narrative form accompanied by a diagram. There are a variety of ways of doing this. Being prescriptive about how it should look, risks significantly reducing the value of the theory of change/intervention logic product – making it less meaningful and reflective, and more skewed towards a specific set of administrative requirements.

**1.6 What are the uses of an** **intervention logic ?**

Intervention logic is a **helpful tool to stimulate and structure thinking** about an intervention (project, action, strategy…), and to involve multi-disciplinary teams in fruitful processes of reflection, challenge and innovation. An intervention logic is also **a tool** **which captures how we think about the core dynamics of an intervention, at a given time. It is a reference point, and, as such, should be kept up to date.**

* **It is a good antidote to optimism bias**

Intervention logic reminds us that change is not easy to bring about and that we need to pay attention to why the change has not already taken place – looking at both the incentives and the disincentives for change.

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| *“Recipients of free or subsidised mosquito nets for example, or water chlorination tablets, or schooling, or contraception, often prove bafflingly disinclined to use them … Aid that presumes the poor will always do the right thing will probably be as much as waste of time as the gym memberships we sign up to in early January”. (Esther Duflo and Abhijit Banerjee, Poor Economics, 2011)* |

* **It supports innovation – avoids ‘business as usual’**

Intervention logic thinking supports a reflective and creative process, which is fertile ground for innovation. Its starting point is an in-depth exploration of the changes we hope to bring about and the different change processes that might lead there, and this helps us resist the ‘activity trap’ – where we start with inputs and are drawn irresistibly to the activities we had in the last programme on this issue.

* **It precipitates action**

The emphasis on assumptions is fundamental to intervention logic. Rather than just noting them, we need to consider their implications and we need to act on them. The identification of assumptions can precipitate at least three key actions:

* Programme re-design: ie adding or changing activities;
* Prioritising key processes or indicators to follow during implementation;
* Developing a hypothesis which we want to test in an evaluation.
* **It encourages stronger intervention/programme designs**

Ultimately the critical reflection on different options for supporting change processes and the evidence for them - which is central to the theory of change/intervention logic thinking process - helps us develop better programmes which are more likely to achieve positive results.

* **It contributes to building an evidence base about what works**

A clearly articulated Intervention logic enables evaluation activity to be planned from the programme outset to test specific hypotheses and to assess if the intervention worked as expected. It increases our ability to learn about how and why a programme worked – and if it didn’t work, it helps us understand if that was because of poor theory/design *or* rather because of poor implementation.

* **It is a tool for communication and clarification**

As a product, an intervention logic can be a useful tool for communicating information about a programme and also for checking if there is shared understanding among different stakeholders (eg with government, implementing partners and beneficiary communities) about how change is expected to happen. It may illuminate different views about how the programme will work. For example - do field staff currently implementing the programme think it will work in the same way as those who initially designed it? It could be valuable to know if there are different views and explore why they differ.

**A2. Components of an intervention logic thinking process**

**2.1 Three key components**

Thinking about the logic of what changes we seek takes place at several stages throughout the project cycle: design, implementation, review and evaluation. See Annex 1 for a diagram illustrating this. Intervention logic involves three key components, which will be iterative and not purely sequential:

* Analysis of context and problem;
* Exploration of change processes and underlying assumptions;
* Assessment of the evidence for different change processes.

**2.1.1 Analysis of the context and problem**

Key analysis of the context and problem..

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| Key questions to support your thinking at this stage could include:   * What is the problem you want to address? * What is lacking? * What are the key factors (external/internal/immediate/long-term?) which influence this issue? What/who wants the change and for what reason? * What and who needs to change? * Why and how might the changes be resisted ? by whom ? |

**2.1.2 Exploration of change processes and underlying assumptions**

This is the starting point for generating ideas and options - mapping possible causal pathways for an intervention.

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| Key questions to support your thinking at this stage could include:   * What is the desired impact? * What other changes might be needed to reach that impact? * Are there local allies and any indigenous momentum for those changes? * Who else is trying to contribute to these changes and how? * Given this, what might we do? In what sequence ? When ? * What are our options and what assumptions underlie each ? |

Once we start to map possible change processes we need to identify the assumptions underlying them – make them explicit and interrogate them. Assumptions are ‘things we assume will happen’ or ‘things which need to happen in order for the programme logic to work’. They are sometimes based on our core beliefs so we don’t question them and it is often hard even to know we have them. Assumptions can be masters of disguise! A few strategies for uncovering them include:

* Working with others – we often see each other’s assumptions more clearly than our own.
* Use ‘if … then’ phrases to describe your programme: eg ‘If health workers can correctly identify priority children, then..’ *and also ask what if they can’t?*
* Look for three different types of assumption:
  + **about causality within the programme** eg assumptions on whether the outputs significantly contribute/cause the changes sought
  + **about implementation of the programme** eg assumptions which transform inputs into outputs
  + **about context** eg assumptions about the operating environment which affect what happens
* Being aware of how your own experience and professional background influences your views about how change happens.

Once assumptions are defined, it is important to make conscious choices about whether an assumption means:

* you need to add or change activities;
* there is something to follow during implementation;
* there is a hypothesis to test through evaluation

**2.1.3 Assessment of the evidence**

The assessment of evidence is an important part of intervention logic. You need to look at any evidence relating to the various assumptions and hypotheses for options which you are considering, particularly about the specifics of what you plan to do (activities and outputs) not simply generic evidence that ‘this sector/issue matters’. Availability of evidence will vary for different parts of any intervention logic; source and strength of evidence is important.

Be explicit when there is no, or limited evidence. The intervention may still be credible and worth trying – there is limited evidence for many of the complex transformational change processes with which we try to engage.

* **Articulate key hypotheses for testing through evaluation**

A hypothesis is ‘a supposition or proposed explanation made on the basis of limited evidence as a starting point for further investigation.’[[1]](#footnote-1) You may have several hypotheses you want to test through an evaluation – hypotheses about **causality, implementation** or **context**. Prioritise hypotheses which are crucial for the intervention’s success but which have a weak evidence base.

2.2 A plausible causal link with a limited evidence base is an obvious focus for an evaluation question.

2.3 Some key ingredients for a productive intervention logic thinking process include: time to think creatively and reflect; interaction with others; openness to challenges and change; a safe space to be open in; awareness of your own views and preferences.

**A3. How does ‘intervention logic’ relate to a ‘logical framework?’**

Intervention logic or theory of change, and the log frame can both be used to design interventions, summarise and communicate programmes to others, and capture key information which is useful for monitoring and evaluation. They are closely related, but are not the same.

The logical framework[[2]](#footnote-2) has a long history in international development. At its inception, many argued that it should be used in the way an intervention logic is now described. However, common usage over the years has shown that the log frame has tended to be used in a less dynamic, indeed some would say, a relatively reductionist, static way.

Both intervention logic and log frame are simply tools; their value depends on how well we use them. They can be used in a participatory or non-participatory way, either in a way that supports creative reflection or in a way that deadens it.

However, while the tools have similarities there are some key differences between the common use of intervention logic and common use of the log frame.

In particular, intervention logic :

* Has no standardised format (perhaps for this reason it generally stimulates more creative thinking about options);
* Provides more detail on the change process – there is no limit on the number of steps and intermediate results that are mapped out;
* Strongly emphasises exploration of assumptions, especially about how change takes place;
* Focuses on evidence (or lack of it) relating to causal links;
* Supports generation of different options and reflection on them;
* Identifies hypotheses for testing in evaluation.

The intervention logic and the logical framework approach are mutually re-inforcing – after all, they concern the same intervention. However, the logical framework tends to be used primarily as a basis for monitoring.

Just as the intervention logic is revisited and revised to reflect shifted thinking throughout the period of implementation, so is the logical framework. They need to be coherent with each other – both at design stage, and through subsequent stages of the intervention cycle.

**B. Intervention logic as a tool for evaluation**

Evaluation is an inherently, theory based approach, whether this is made explicit or not.

Evaluation seeks to make a judgement on whether what was intended was actually realized, to what effect and why and whether there were unintended consequences and why.

Evaluators work with the intervention logic produced by those who planned, or who manage the intervention in question. This provides the baseline for the evaluation. However, if this does not exist, evaluators have to reconstruct an intervention logic from available documentation and other evidence.

**B1. How do you recognise a robust intervention logic product when you see one?**

1.1 Although there is no standardized format for an intervention logic, a combination of narrative text and diagram(s) works well to communicate and do justice to the intervention, to highlight the key hypotheses and to identify the evidence for them. The narrative is the main element; the diagram should highlight the main aspects of the logic.

1.2 An intervention logic narrative should demonstrate the following :

*Analysis of context and the issue to be addressed within this*

* the intervention logic makes sense as a response to analysis of the context and the issue to be addressed ie *the rationale for choices made is clear*

*Exploration of assumptions about change*

* assumptions are made explicit
* causal pathways are well mapped in the diagram (intermediate steps are shown without leaps of faith, things are not lumped together leaving the causality unclear)
* the narrative describes the key hypotheses

*Assessment of the evidence*

* there is an assessment of the evidence for the key assumptions and hypotheses

1.3 A robust intervention logic **diagram** is easy to read. It must be meaningful to the reader. Remember, it is showing logic, so it should not be cluttered with detail. In essence, it should :

* provide a comprehensible explanation of causal processes
* provide a logic (eg subsequent outcomes are plausibly consequential)
* communicate clearly

1.4 Common weaknesses in logic diagrams

* the **logic** does not stand out ! The diagram represents a flow chart of activities, rather than a causal model of what produces impact
* the diagram fails to communicate as the diagram is –
  + pointlessly messy, eg it contains information too detailed for the logic to be revealed, boxes are misaligned, arrows askew and not meaningful…distracting from communicating the main messages
* unreadable – small type size is not the solution. Show the overview of the main elements on one page and provide further explanation/greater detail on another page, as necessary
  + only understandable to those who created it – not to a wider readership

How can these weaknesses be mitigated ?

* Keep the diagram simple
* Focus the diagram on the logic; make the key assumptions explicit
* Ensure the diagram *complements* the narrative – the diagram *cannot* *substitute* the narrative; it serves to highlight and show key aspects at a glance

**Sources**

DFID Notes on Theory of Change, (DFID, 2012)

World Bank, The Road to Results, (World Bank 2009)

Funnell and Rogers, Purposeful Program Theory (Wiley, 2011)

1. Oxford English Dictionary [↑](#footnote-ref-1)
2. Log Frame is part of the Logical Framework Approach designed for USAID. (1969) [↑](#footnote-ref-2)