THEORY OF CHANGE: A PRECURSOR TO IMPACT EVALUATION

Theory of change is not a small n impact evaluation, rather it is a precursor to undertaking most small *n* impact evaluations.

OVERVIEW

Theory of change method was fully articulated in the 1990s at the Aspen Institute Roundtable on Community Change. It emerged out of discussion about the evaluation of complex programmes. Weiss (2000) hypothesised that a key reason that complex community initiatives and other complex programmes are difficult to evaluate is that theories of change that underpin them are poorly articulated. According to Rogers et al. (2000): 7-8:

> [A]t its simplest, a program theory shows a single intermediate outcome by which the program achieves its ultimate outcome. [...] More complex program theories show a series of intermediate outcomes, sometimes in multiple strands that combine to cause the ultimate outcomes.

In turn, Wholey (1987: 78) states that programme theory identifies "program resources, program activities, and intended program outcomes, and specifies a chain of causal assumptions linking program resources, activities, intermediate outcomes, and ultimate goals." Programme theory therefore emerged from the need to better understand programmes' rationale and, more importantly, the chain of causality that lead to its outcome(s).

A useful theory of change must set out clearly the causal mechanisms by which the intervention is expected to achieve its outcomes (HM Treasury 2020). The Magenta Book (HM Treasury 2020) details how more sophisticated theory of change exercises produce a detailed and rigorous assessment of the intervention and its underlying assumptions including: the precise causal mechanisms that lead from one step to the next; alternative mechanisms to the same outcomes; the assumptions behind each causal step; the evidence that supports these assumptions; and how different contextual, behavioural and organisational factors may affect how, or if, outcomes come about.

Developing a theory of change often starts with articulating the desired (long-term) change a programme intends to achieve, based on a number of assumptions that hypothesise, project or calculate how change can be enabled. Assumptions are crucial:

> The central idea in theory of change thinking is making assumptions explicit. Assumptions act as 'rules of thumb' that influence our choices, as individuals and organisations. Assumptions reflect deeply held values, norms and ideological perspectives. These inform the design and implementation of programmes.
>
> **(Vogel 2012: 4)**

The theory of change is fundamentally participatory in its process of development, including a variety of stakeholders and therefore perceptions. The process of developing a theory of change should be based on a variety of forms of rigorous evidence, including local knowledge and experience, past programming material and social science theory, all of which are brought together in an iterative process (Stein and Valters 2012).

First articulated as an evaluation tool, the theory of change developed into an approach to programme planning as well as a tool for evaluation (Fox et al. 2017). For an evaluator this makes it increasingly common that they will be presented with an existing Theory of Change at the start of the evaluation process. The challenge is to then decide whether to accept this Theory of Change at face value or whether to start the evaluation with a fresh theory of change exercise. Many evaluators will wish to develop their own theory of change, particularly where the theory is a precursor to the use of a small n methodology because it is through the theory of change that the evaluator starts to develop a deep understanding of the case(s) that is so important to most small n methodologies.

Clearer distinction from logic models

While the theories of change are sometimes referred to as though they are interchangeable with logic models, it is important to note that they are different and recent guides to evaluation and academic discussion have clarified the distinction. Asmussen et al. (2019) argue that while logic models are primarily concerned with *how* an intervention will achieve its outcomes, theories of change identify *why* these outcomes are important in the first place. The key elements of a logic model are inputs, outputs and short-to-long-term outcomes, whereas a theory of change by starting with questions about *why* an outcome is important raises questions about why an intervention is important, what it will achieve and this in turn leads to important questions about what the intervention does (ibid.). Thus, to the distinction between theories of change and logic models outlined by Asmussen et al. we can add that theories of change, with their interest in causal explanation, the articulation of programme theory and what an intervention does, will tend towards a deeper understanding of mechanisms of change than is found in a logic model.

KEY ELEMENTS OF METHODOLOGY

Theories of changes may be developed at different points in the life-cycle of a programme. They can be prospective and developed at the initial phase – conceptualisation, planning and design. They can also be retrospective and be 'reconstructed' or pieced together after the programme is fully underway (Fox et al. 2017).

There is not one single process to develop a theory of change. Fox et al. (2017) note that, over the years, many different processes that arrive at a programmatic TOC have been conceptualised and broadly these can be grouped in one of the two, or a mix of both processes:

- **Researcher-led:** Developing TOCs follows a rigorous research-like process because a few elements that are relevant for the development of a TOC are researched and investigated, e.g. the context. Assumptions may also be formulated more like research hypotheses that can therefore in the future be tested in a more in-depth way.

- **Stakeholder-led:** Researchers/ programme managers facilitate a process in which stakeholders are central. Stakeholders are provided with the basic information, e.g. of the context but their own perceptions are taken into account. This configures a collective induction exercise whose objective is to generate the collective vision underlying the programme.

There are various influential guides on undertaking a theory of change. The steps below draw in particular on Connell et al. (1995), Fulbright-Anderson et al. (1998), Blamey and Mackenzie (2007) and Asmussen et al. (2019). They are expressed as a series of questions, which should generally be addressed in the order set out below:

What is the intervention's primary intended outcome? The focus here is on the long-term vision of an initiative and is likely to relate to a timescale that lies beyond the timeframe of the initiative (Blamey and Mackenzie 2007). It should be closely linked to the existence of a local or national problem. Asmussen et al. (2019) recommend focussing on one or two primary outcomes.

Why is the primary outcome important and what short and long-term outcomes map to it? Blamey and Mackenzie (2007) suggest that, having agreed the ultimate aim of the programme, stakeholders should consider the necessary outcomes that will be required by the end of the programme if such an aim is to be met in the longer term. These might be broken down into shorter and longer-term outcomes (Asmussen et al. 2019).

Who is the intervention for? Asmussen et al. (2019) make the point that while programme developers often assume their intervention will be of benefit for everyone, in reality this is rarely the case. Understanding who might benefit is a useful precursor to understanding why the intervention is necessary, what value it will add and what it will do.

Why is the intervention necessary? Asmussen et al. (2019) note that most interventions are developed to fulfil a need. A theory of change should therefore be able to justify the need for an intervention. This might draw both on specific analysis of the need and the wider scientific literature.

Why will the intervention add value? In order for an intervention to have an impact, it needs to provide measurable value over what is currently available. In other words, the intervention needs to fill a gap. Again identification of needs might draw on analysis of a particular population or place as well as findings from the wider scientific literature that help to explain why gaps exist.

What outputs are needed to deliver the short-term outcomes? A detailed consideration of outputs belongs in a logic model, but identifying key outputs provides an important sense-check between the intended outcomes and the intervention.

What will the intervention do? Asmussen et al. (2019) are clear that no theory of change is complete without specifying what the intervention will do, but that this does not need to be done in detail because detail is set out in a logic model. However, while lots of detail is not required, a useful theory of change must set out clearly the causal mechanisms by which the intervention is expected to achieve its outcomes (HM Treasury 2020). This rich description of mechanisms is comparable to understandings of mechanisms in realist evaluation where mechanisms are not variables but accounts that cover agency and structure. They thus should 'reach down' to individual reasoning and 'reach up' to the collective resources embodied within a social programme that is being evaluated (Pawson and Tilley 1997). An understanding of causal mechanisms will come from engagement with key informants, but also an understanding of the scientific evidence base (Asmussen et al. 2019).

What inputs are required? What are the resources committed and the activities undertaken to deliver the programme?

According to Connell and Kubisch (1998) the theory of change should be:

- **Plausible.** There must be available evidence that sustain the assumptions, and hence that support the change potential of the activities to be implemented.

- **Doable.** The necessary resources – from financial to intuitional – must in in place to ensure that the TOC informed initiative can be operationalised.

- **Testable.** It must be specific and complete enough for the evaluator to assess progress and evaluate contribution to change.

Participatory approach

Reconstructing a programme's TOC should be participatory or 'co-produced' (Asmussen et al. 2019, Fox et al. 2017, Blamey and Mackenzie 2007). The evaluator may start with programme documentation such as funding bids, project plans or steering group minutes. Often the evaluator needs to conduct a series of structured and semi-structured interviews with key informants and stakeholders to piece together reasoning that was never consciously or at least structurally articulated (Fox et al. 2017). Other techniques such as workshops can also be used. The last step is to validate the theory of change.

There is not, and there should not be, anything problematic with different stakeholders bringing different perspectives to bear in the process of developing a theory of change. If anything, theories of change are strengthened by this diversity of perceptions that ground projects in its complexity, and work with it. Additionally, consensus is not always the reality and power relations permeate all social relations. Instead, the challenge often comes from the different assumptions, and from the difficulty in assessing which ones are critical to the overall success of the initiative. Valters (2014: 10) argues that:

Appreciating the difficulties inherent in this task is important, as ignoring them may encourage discussion of arbitrary assumptions or allow people to uncover only those assumptions that they are comfortable defending.

MULTI-METHOD APPROACHES

While some commentators do see theories of change as a methodology, it is probably better understood as a method that can be used in combination with other small *n* methodologies. In most cases it will precede those methodologies, helping to clarify research questions and hypotheses that can be addressed in the methodology.

Nevertheless, theories of change does share some important similarities with realist evaluation, namely an emphasis on understanding causality and recognition that an understanding of context is key to attributing cause (Blamey and Mackenzie 2007).

RESOURCES REQUIRED

Skill set for evaluators

When developing a theory of change the evaluator is a researcher and theorist, with a detailed understanding of the programme being evaluated and a good understanding of wider evidence and theory relevant to the programme.

Although theories of change can incorporate both quantitative and qualitative data collection, qualitative data collection, and in particular facilitating workshops and the use of the semi-structured interviews tend to be most common.

Resource implications

Reconstructing a programme's TOC does involve a lot of work. The process is likely to be iterative and participatory meaning that the evaluator moves from analysing programme documentation such as funding bids, project plans or steering group minutes to semi-structured interviews and workshops with a wide range of participants. The iterative process means that multiple engagements with informants are typically required. Developing a theory of change is thus a number of days work for the evaluator involving engagement with multiple stakeholders: it is not an exercise that can be completed with a single workshop.

CASE STUDY

Barkat (2019) describes the application of a theory of change (ToC) approach as a framework to plan and design the evaluation of the Academic Enrichment Programme (AEP) at the University of Birmingham. The programme aimed to support under-represented students secure places at selective universities. The process of developing the ToC for the AEP was based on interviews with staff at the University of Birmingham who deliver the programme, including the programme lead; reviewing programme documents; and a general literature review.

As described by Barkat (2019), the ToC suggests that supporting students in three key areas - (a) targeting aspirations, attitudes and motivation; (b) developing knowledge, understanding and confidence; (c) supporting attainment through study skills - would positively influence students and lead to change by increasing their aspirations and confidence to apply to selective universities. In turn this would raise individuals' attainment by motivating them to achieve the required grades, leading to students progressing to selective universities. The ToC also suggests that these intermediate outcomes may ultimately lead to longer-term impact by supporting fairer access at selective institutions. The five strands of activity within the programme are included: five-day summer residential; Facebook group; study skills sessions; e-Mentoring by undergraduate students; and a celebration event. The ToC also includes the wider political, local and national contextual factors that may support or hinder change and articulates the key assumptions that underpin the ToC: that less advantaged students lack knowledge, understanding and confidence in applying to selective universities and that a lack of motivation is preventing them from achieving their full academic potential. The ToC is represented diagrammatically by Barkat as reproduced here in Figure 6.

Figure 6: Theory of Change of an Academic Enrichment Programme (reproduced from Barkat 2019: Figure 1).
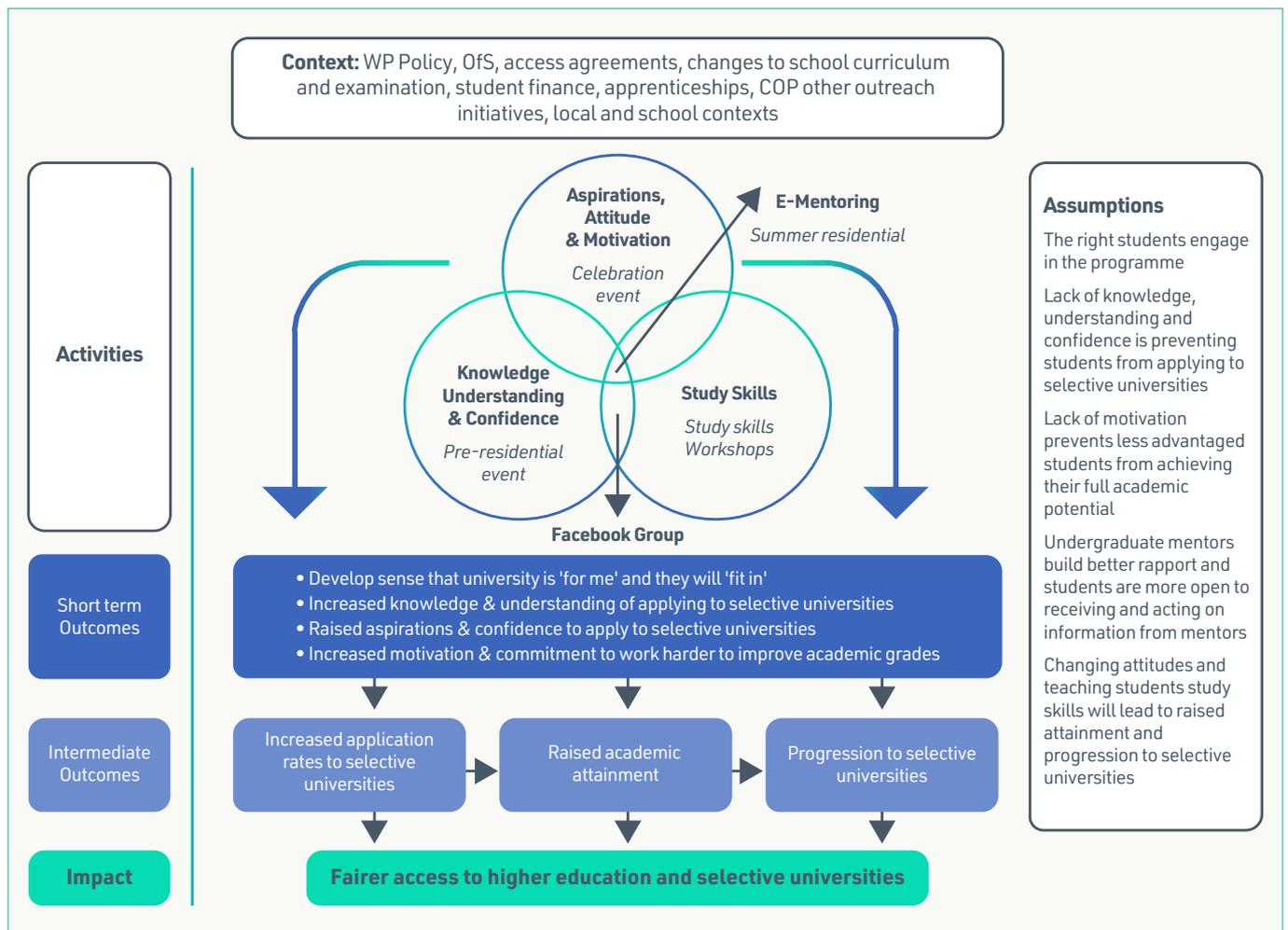
The paper also goes on to describe how the resulting evaluation was undertaken and how the Theory of Change was refined during the evaluation.

Reference

Barkat, S. (2019) 'Evaluating the impact of the Academic Enrichment Programme on widening access to selective universities: Application of the theory of change framework', *British Educational Research Journal* Vol. 45(6) pp. 1160–1185

RESOURCES

Key reading

Carol Weiss was instrumental in developing the theory of change approach as we now understand it. A good introductory article is:

Weiss C (1995) 'Nothing as practical as good theory: exploring theory-based evaluation for comprehensive community initiatives for children and families' in Connell JP, Kubisch AC, Schorr LB and Weiss CH (eds) New Approaches to Evaluating Community Initiatives: Concepts, Methods and Contexts. Washington, DC: Aspen Institute.

Many organisations have produced guidance on theory of change. A few of these include:

TASO Theory of Change guidance.

Asmussen, K., Brims, L. and McBride, T. (2019) 10 steps for evaluation success, London: Early Intervention Foundation. See pp. 15-26.

Noble, J. (2019) Theory of change in ten steps, London: New Philanthropy Capital.

Rogers, P. (2014). Theory of Change, Methodological Briefs: Impact Evaluation 2, UNICEF Office of Research, Florence.

A helpful worked example of how to build a theory of change produced by ActKowledge and the Aspen Institute Roundtable on Community Change is available here.

Further references

Asmussen, K., Brims, L. and McBride, T. (2019) 10 steps for evaluation success, London: Early Intervention Foundation.

Blamey A and Mackenzie M (2007) 'Theories of Change and Realistic Evaluation: Peas in a Pod or Apples and Oranges?' *Evaluation* 13 pp. 439-455.

Connell JP and Kubisch AC (1998). Applying a theory of change approach to the evaluation of comprehensive community initiatives: progress, prospects, and problems. In: Fulbright-Anderson K, Kubisch, AC and Connell JP (eds.) *New Approaches to Evaluating Community Initiatives: Theory, Measurement, and Analysis*. Washington, DC: The Aspen Institute.

Fox, C., Grimm, R. and Caldeira, R. (2016) *An Introduction to Evaluation*, London: Sage

HM Treasury (2020) *The Magenta Book: Central Government Guidance on Evaluation*, London: HM Treasury

Pawson, R., & Tilley, N. (1997). *Realistic evaluation*. London: Sage Publications.

Stein, D., & Valters, C. (2012). *Understanding Theory of Change in International Development*. London: The Justice and Security Research Programme, LSE.

Valters, C. (2014) Theories of Change in International Development: Communication, Learning or Accountability, London: The Justice and Security Research Programme, LSE.

Vogel I (2012) *Review of the use of 'Theory of Change' in International development*. DFID Research Paper, Department for International Development.

Weiss, C. (2000) Which links in which theories shall we evaluate? In: Rogers PJ, Hacsi T, Petrosino A and Huebner TA (eds.) *Program Theory in Evaluation: Challenges and Opportunities, New Directions for Evaluation*, San Francisco: Jossey-Bass.

Rogers, P. (2014). Theory of Change, Methodological Briefs: Impact Evaluation 2, UNICEF Office of Research, Florence. https://www.unicef-irc.org/publications/pdf/brief_2_theoryofchange_eng.pdf