Learning about Theories of Change for the Monitoring and Evaluation of Research Uptake

This paper captures lessons from recent experiences on using ‘theories of change’ amongst organisations involved in the research–policy interface. The literature in this area highlights much of the complexity inherent in the policymaking process, as well as the challenges around finding meaningful ways to measure research uptake. As a tool, ‘theories of change’ offers much, but the paper argues that the very complexity and dynamism of the research-to-policy process means that any theory of change will be inadequate in this context. Therefore, rather than overcomplicating a static depiction of change at the start (to be evaluated at the end), incentives need to be in place to regularly collect evidence around the theory, test it periodically, and then reflect and reconsider its relevance and assumptions.

Introduction

This paper was prompted by recent experience of developing ‘theories of change’ amongst organisations involved in research uptake. Over the years a great deal has been written about the research-policy interface, with much of it highlighting the inherent complexity of the processes by which research informs and influences policy (or otherwise). Many practitioners are familiar with the literature, but finding meaningful ways to measure results in this area often proves to be a challenge. This paper captures a collection of lessons from recent experience in facilitating and developing theories of change for programmes that seek to promote the use of research in policymaking processes.

The paper considers why it is often a challenge to measure results in this area, sets out the benefits of theory-based approaches, and then reviews recent lessons that emanate from attempts to develop theories of change for research uptake programmes. The paper concludes that theories of change are difficult to do well, and they provide no simple solution. For this type of programme, their true value seems to lie less in trying to capture the entire change process from the outset (for which they are often inadequate), and instead more in terms of providing an ‘organising framework’ against which to explore and better understand complexity during implementation. All too often theories of change are regarded as a one-off exercise (as part of programme planning, and initial stakeholder engagement), and yet this produces a rather static basis against which to evaluate achievements. In reality, many of the objectives for research uptake programmes will be refined over time, and staff will gradually gain greater understanding about policy change (with all its unpredictability) in any given context. Therefore, rather than view theories of change as the first step in developing a logical framework or a set of indicators, perhaps it at best
provides a series of ‘hooks’ against which to test hypotheses and incrementally build up the evidence base towards a more solid narrative. For this to occur in practice, there needs to be a greater focus on the incentives for staff and stakeholders to regularly review the theory of change, collect evidence, and reflect upon their understanding of the policy change process. Whereas more often than not it is seen as a requirement for funding or for gaining approval after an inception period.

Challenges in measuring the research-policy interface

There is a wide-ranging literature which attempts to grapple with the challenges of measuring research uptake, and particularly its effect within the policy field. While there is work that directly considers the linkages between research and policy (e.g. Start and Howland 2004), there are also useful insights to be gained from the related literature that looks at policymaking processes and achieving policy influence: whether in diplomatic circles (Steven 2007), advocacy projects undertaken by civil society organisations (O’Flynn 2009), or in terms of impact evaluations (CIPPEC 2010).

From this broader literature it is possible to draw out a number of characteristics that also resonate closely with the challenge of assessing research uptake. Drawing on earlier work by Jones (2011), the key challenges include:

1. It is often difficult to determine the links between research and influencing activities and subsequent changes in policy (particularly ex ante). Policy change is highly complex, and is often ill-suited to ‘linear’ or ‘rational’ models. More commonly, policy processes are shaped by a multitude of interacting forces and actors – each with their own dynamic and interests. This means that the causal links can be particularly complex to understand and measure.

2. It is difficult to establish causality, especially as identifying a plausible counterfactual is problematic. Indeed many research uptake or influencing interventions actively seek ‘contamination’ (between treatment and potential control groups), such as by encouraging the diffusion of ideas and by giving support to networks, alliances and coalitions. Whilst there are ways around this (such as by using encouragement designs), experimental and quasi-experimental methodologies are often seen as unsuitable for evaluating policy influence and research uptake.

3. ‘Outright success’ in terms of achieving a specific, pre-planned change is mostly rare, with objectives modified or abandoned along the way. Plus, there is often an element of subjectivity around whether the policy gains are significant (or not), and the extent to which they have been co-opted.

4. Policy change tends to occur over longer timeframes, which may be less suitable to the project-orientated timescales of most aid agencies – particularly with the increasing pressure to demonstrate results over short time periods.

5. It is difficult to judge the specific contribution of one organisation to a change, particularly as influencing and advocacy tends to be more effective when carried out in coalitions, alliances and networks.

6. It is sometimes difficult to determine how best to interpret the accounts of different actors, especially because research uptake and policy influencing involves political and sometimes highly contested processes. Equally, policymakers may not accept claims that their decisions can be attributed to the influence of another actor.

The rise of theory-based approaches

While it is far from impossible to use experimental or quasi-experimental approaches to assess the impact of research uptake (e.g. Beynon et al. 2012), there is an emerging view that theory-based approaches to evaluation can often be more appropriate. Often this may be because the policy impact pathways only become apparent towards the end of the research uptake process (making it difficult to do an ex ante identification of the variables), but also due to the multitude of complex causal factors required for policy change to occur. For instance, a particular research finding or report may be important in a policy shift but it may be less significant than say a change in personnel, a particular convergence of events, or a shift in public opinion.

The cornerstone of theory-based approaches to evaluation is the ‘theory of change’. While this concept has achieved a meteoric rise in recent years, it clearly draws on much earlier work on the use of programme theory in evaluations (UWeiss 1972). A programme theory can be defined as an explicit theory or model about how a programme is intended to produce the intended outputs, outcomes and impacts, and the factors affecting or determining its success (Bamberger et al. 2006). The use of theories of change has been variously applied – with some people viewing it more as a tool for mapping out the logical sequence of an initiative from inputs to outcomes, while others see it more as a process by which to reflect and discuss amongst colleagues and stakeholders around world views and philosophies of change (Vogel 2012: 9). Similarly, for some it is little more than a reinterpretation of the logical framework approach (or intervention logic), while for others it goes much further by providing a non-linear way to consider not only what will change, but the underlying dynamics and assumptions around how and why change will happen.
In many ways, this has been part of its attraction; that it can mean different things to different people, with consensus yet to be established in the literature (Stein and Valters 2012). One key advantage of the theories of change approach is that it can accommodate different views of the change process, and provide a mechanism for dialogue between different stakeholder groups: with implementers often using it in a reflective matter to support programme planning and design; evaluators as a way to establish the basis for logical frameworks or intervention models; and, for researchers to introduce elements of sociopolitical theory.

Clearly, establishing a theory of change can provide a solid basis for measurement: by setting out what will change, how this change is expected to occur (the causal linkages), and the assumptions and other contextual factors that will influence the eventual result. But, how well does this work in practice, and what lessons can we draw out?

**Lessons from practice**

This section draws from a number of recent examples. It is by no means an exhaustive review, but rather it provides a number of insights that may be of more general use to others. The programmes are diverse (the IDS Strengthening Evidence-based Policy programme, Panos Relay, and the Ecosystems Services for Poverty Alleviation (ESPA) research programme), but there is a common theme in their aim to increase the contribution of research to (evidence-informed) policy decisions.

**Lesson 1: Locate the theory of change within a broader understanding of policy**

Part of the challenge of measuring research uptake is that the policy process itself is difficult to predict and understand. Indeed over the years the research-policy nexus has been greatly researched and debated, with much of this work informed by a social and public policy focus on ‘evidence-based policy’ – a movement that argues for decisions to be based on evidence rather than ideology or special interests (Davies et al. 2000). The literature is diverse; from the concerns of policy researchers aimed at improving public health (Hanney et al. 2003; Sumner et al. 2011), to work by international development researchers on improving the uptake of evidence (e.g. Crewe and Young 2002).

While the breadth of the literature offers fertile territory for the cross-fertilisation of concepts, it can be bewildering for the practitioner attempting to measure results. A useful starting place for a theory of change is to first consider how one’s own views (or those of key stakeholders) fit within a broader understanding about how research relates to power and social change. This is an important first step as it helps avoid a narrow interpretation of the research-policy interface, and particularly one that focuses on disseminating (‘pushing’) research into the policy sphere: i.e. A view that effectively means, ‘getting your research in front of the decision-maker, with the more places it is available, the more likely it is to make a difference’ (Sumner et al. 2009: 13). While much of the literature (and practice) has moved beyond such simplistic causal models, it is easy to revert back to such views when having to fit a ‘theory of change’ into the linearity of a logical framework template or a particular funding requirement. The work of Sumner et al. (2009) is useful in this regard, as it highlights more dynamic views about the use of evidence and knowledge in the policymaking process. See Table 1.

**Table 1. Different approaches of understanding how research relates to power and social change**

<table>
<thead>
<tr>
<th>Type of approach</th>
<th>Approach to knowledge</th>
<th>Approach to influence</th>
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<tbody>
<tr>
<td>Information</td>
<td>Quantity matters</td>
<td>Influence is access to the decision-maker.</td>
</tr>
<tr>
<td>Evidence</td>
<td>Quality matters</td>
<td>Influence is about producing high quality research.</td>
</tr>
<tr>
<td>Value-added</td>
<td>Credibility matters</td>
<td>Influence is about making your research credible or ‘brand’ building.</td>
</tr>
<tr>
<td>Relational</td>
<td>Dialogue matters</td>
<td>Influence is mutual, and means being open to changing your own mind in the process.</td>
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Source: Sumner et al. (2009: 13–14).

The central point behind this typology is perhaps more important than the typology itself; i.e., the need to move from simplistic cause-effect models to ones that are based on a deeper theory about how research relates to power and social change. Stachowiak (2007) gives useful guidance on six theories of policy change (with each based on different strands of social and policy theory), and these are useful to consider in the context of the research/intervention being developed. These can be summarised as:
1. ‘Large Leaps’ or Punctuated Equilibrium Theory (from Political Science), like seismic evolutionary shifts, significant changes in policy and institutions can occur when the right conditions are in place.

2. ‘Coalition’ Theory or Advocacy Coalition Framework (from Political Science), where policy change happens through coordinated activity among a range of individuals with the same core policy beliefs.

3. ‘Policy Windows’ or Agenda Setting (from Political Science), where policy can be changed during a window of opportunity when advocates successfully connect two or more components of the policy process: the way a problem is defined, the policy solution to the problem or the political climate surrounding their issue.

4. ‘Messaging and Frameworks’ or Prospect Theory (from Psychology), where individuals’ policy preferences or willingness to accept them will vary, depending on how options are framed or presented.

5. ‘Power Politics’ or Power Elites Theory (from Sociology), where policy change is made by working directly with those with power to make decisions or influence decision-making.

6. ‘Grassroots’ or Community Organising Theory (from Social Psychology), where policy change is made through collective action by members of the community who work to change the problems affecting their lives.

In summary, it is important to pay attention to better understanding how policy processes are likely to work in a particular context, and importantly, how research findings are likely to influence and change policy and the policymaking process. This requires an understanding about how research relates to power and social change, and the works of Sumner et al (2009), Stachowiak (2007) and others are helpful in this regard as they make the link between the theoretical literature and different typologies about how policy occurs. Understanding these processes for a particular context is a critical first step in developing a theory of change.

Lesson 2: Do not overly focus on higher-end processes

While locating the theory of change within a broader understanding of the research-policy interface is helpful, the second key lesson is not to spend too long on the higher-end processes. In producing theories of change, it is certainly useful to use theory to help shift staff (and stakeholders) from a narrow understanding of policy processes – and can be used to challenge staff and stakeholders to better understand how policy works in their particular context or institutional setting. From recent experience of developing theories of change, it seems that there can be a tendency to focus on the higher-end processes, even though the intervention may have little direct bearing on such processes. Such discussions can be very interesting and informative but may not ultimately provide much help in measuring the results of the research project or programme. Furthermore, such higher-end processes may be little understood by programme staff and stakeholders in a typical research or knowledge brokering programme. In particular, specific terms like ‘influence’ or ‘inform’ can end up becoming a distraction. This is particularly so in a ‘theory of change’ workshop setting where much time and effort can be spent debating the meaning of such terms, and even when some consensus is achieved, these terms will often remain rather loose and nebulous – and so difficult to measure with any degree of precision.

It is often more helpful to concentrate on breaking down the ‘middle linkages’ in the complex pathway between the production of research and knowledge (outputs) and the ultimate impact (whether a policy impact, or a consequential impact of policy on poverty). A frequent challenge for research uptake interventions is that the logical framework terminology around ‘outputs-outcomes-impacts’ is not particularly useful. Some agencies (like the Canadian International Development Agency (CIDA)) go further in acknowledging this issue by splitting the outcome level into three parts: (i) immediate outcomes (short-term, such as increased awareness and improved access to research); (ii) intermediate outcomes (medium-term, such as the increased usage, adoption or behavioural change that results from the research being made available and accessible); (iii) ultimate outcomes (long-term, such as changes in policy). Sometimes ‘ultimate outcomes’ are seen as synonymous with ‘impacts’, although for research uptake interventions it is often helpful to differentiate between ultimate outcomes (in terms of policy change) from the impact in terms of an improved situation (poverty reduction, improved equality, etc). See Figure 1.
By breaking down the research-policy pathway in this way – or even further – it then becomes possible to focus on those aspects where change is likely to be more tangible, where there is most influence, and by implication is more likely to be attributable to the intervention. This is likely to include the lower end results around the outputs, immediate and intermediate outcomes, where the research and the intervention are more likely to make a difference.

To achieve this level of disaggregation, it is often necessary to have a better definition of policy change. This is particularly helpful in identifying those elements and processes that might be influenced by research outputs as intermediate changes before a major shift in policy. There are indeed many ways in which to define policy, and while many make sense as a single sentence definition, these can become less useful when it comes creating a theory of change. For instance, Pollard and Court (2005, based on Anderson 1975) suggest policy as being, ‘purposive course of action followed by an actor or set of actors’. This is helpful in as far as it goes beyond documents or legislation to include other activities; and it also shows that policies are not necessarily restricted to government, but can include those of other international or non-governmental organisations. Taking this further, a typology of policy change can sometimes be more instructive. There are many ways of doing this, as shown in Table 2.

Table 2. Comparison of different typologies of policy change

<table>
<thead>
<tr>
<th>Types of policy impact</th>
<th>Types of policy influence</th>
<th>Elements of the policy process</th>
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<td>(Sumner et al. 2009)</td>
<td>(Steven 2007)</td>
<td>(Pollard and Court 2005)</td>
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| Shifts in policy framing – changes in the way that policymakers understand a problem or the possible responses to it. |
| Agenda setting – changes in policymakers’ priorities, with attention to previously underemphasised policy issues. |
| Changes in policy content – substantive changes in the content of policy and/or resources allocated. |
| Changes in the way policy is delivered – substantive change in the way policy is implemented and/or the way policy is delivered to intended recipients. |

| Changing perceptions – increasing awareness and shaping public opinion. |
| Setting an agenda – by reframing the way an issue is debated, and creating pressure for change. |
| Building networks and partnerships that support the delivery of change. |
| Developing capacity – improving high-level understanding of an issue, and improving how policymakers respond. |
| Changing institutions – influencing policy, strategy and resource allocations, including developing legal, regulatory and social frameworks. |

| Agenda setting – the awareness of and priority given to an issue or problem. |
| Policy formulation – how (analytical and political) options and strategies are constructed. |
| Decision-making – the ways decisions are made about alternatives. |
| Policy implementation – the forms and nature of policy administration and activities on the ground. |
| Policy evaluation – the nature of monitoring and evaluation of policy need, design, implementation and impact. |
In summary, policy change can be disaggregated into a number of different elements, and this does not always manifest itself into a formal policy document. Based on the work of Sumner et al. (2009), Steven (2007) and Pollard and Court (2005), it is useful to think in terms of policy change as a number of different elements:

- Changes in perceptions (such as public opinion)
- Reframing the issue or discourse
- Setting the agenda
- Formulating policy (such as by providing substantive content)
- Changing resources allocated
- Changing policy implementation (capacity, networks, institutions)

**Lesson 3: Move beyond diagrams and simple intervention logics**

Of course, theories of change are not diagrams per se, although there has been a recent fad in trying to capture them within a single diagram. Certainly this provides a neat visual tool around which to agree key concepts and linkages, but it also tends to undervalue the complexity of the change process. The accompanying narrative is equally (if not more) important, and particularly the identification of key assumptions that can be subsequently tested.

For example, in the Panos theory of change it became difficult to fully capture (in one diagram) the complexity of the higher-end processes. The ‘washing machine’ (as it became affectionately known) became a catch-all phrase for a whole set of processes around informed and inclusive debate and dialogue – all of which were dependent on context, timing and not completely understood from the outset. See Figure 2. Similarly, in the IDS Strengthening Evidence-based Policy programme, the ‘mixer’ became a way in which to capture the complexity around the policymaking process, and one that did not undervalue this complexity by using a simplistic set of arrows and boxes. Each theme within this programme would then have to develop more specific theories of change based on their particular policy context.
What seems essential here is to differentiate between 'higher order' change (which is beyond the direct sphere of influence of the project/programme, and is dependent on others), and change which is under the direct responsibility of the intervention. As the theory of change diagram moves into areas that are increasingly beyond the control of the intervention, the narrative becomes increasingly important, as does identifying the key players and means by which to test, evaluate and better understand what works and what does not.
Lesson 4: Accept imperfection, but revisit the theory of change often

Finally, a key lesson is that the ideal can be the enemy of the best. Too much time can often be spent on perfecting a theory of change at the start, and yet it should not ideally be viewed as a one-off event. In research uptake programmes particularly, the inherent nature of the research-policy interface means that theories of change will be complex – and this complexity may not always be fully understood, at least from the start. Instead the value of theories of change lies in the process of getting different programme staff members, or ideally a broader set of stakeholders, to properly debate and agree their understanding of what an intervention will do, and how they understand change will occur in any given context. It will be imperfect, but it is in the testing of the evidence and the checking of people’s understanding that the theory of change comes into its own. By providing a framework about how a research intervention might change policy (even if ultimately proved incorrect), then it is possible to locate evidence along different parts of the theory, and to choose to delve deeper into particular parts of the theory of change. Key questions to consider on an ongoing basis should ideally include (CIPPEC 2010):

| Questions about impact/outcomes | What evidence is there to show progress against the desired outcomes?  
(There may not be a complete picture but ‘weak signals’ from a number of sources can provide a ‘best estimate’ of progress in the right or wrong direction.) |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Questions about activities      | Is it possible to account for the resources spent on various elements of influencing?  
Is there a complete record of the direct results from each activity that these resources paid for?  
(Again, this may not be a complete picture, but it is vital to plan to address any gaps.) |
| Questions about attribution     | Is it possible to establish plausible links between activities and outcomes/impact?  
Has the programme made a contribution to achieving change? What other factors have been in play? |

There are a range of methods and supporting tools that can assist with gathering data around these questions. A good theory of change can provide the organising framework against which to use such methods. For example, contribution analysis (Mayne 2012) allows the evaluator to assess the cause-effect relationships and populate the theory of change with a credible contribution story that is evidence-based. Any number of methods and tools can be used for this purpose, from focus groups and surveys, to citation analysis, media tracking, and social network analysis (Batchelor 2011).

Concluding remarks

This paper provides a summary of recent lessons from developing theories of change for research uptake programmes. The research-policy interface is inherently complex and political, and this provides its own set of challenges for monitoring and evaluation. This is particularly because it is often difficult to pre-plan policy change, and outright success may be hard to establish (or may remain contested). Plus, causality is generally multifaceted and likely to occur over a long period of time. Given this, theory-based approaches provide a way forwards to understanding and measuring change and impact.

Based on recent experience, some key lessons from practice include:

- Locate the theory of change within a broader understanding of policy;
- Do not overly focus on the higher-end processes;
- Move beyond diagrams and simple intervention logics;
- Accept imperfection, but revisit the theory of change often.
In short, while a theory of change provides a means by which the complexity of the intervention and change process can be better articulated, this very complexity means that it cannot be done in one easy step. In other words, a theory of change does not provide a single set of objectives and indicators against which all the monitoring and evaluation can then be developed and rolled-out, but rather it establishes an initial understanding against which questions, hypotheses and evidence can be used to test and revisit the initial understanding of complexity – and for the programme to adapt accordingly. For this to occur, a theory of change needs to be accompanied by a commitment to continually revisit and review the theory of change – and this requires addressing the incentives for staff (and stakeholders) to regularly collect evidence and reflect upon the research-policy interface in their particular context. Too often, the theory of change has become a requirement for funding or at the inception stage of a programme, rather than an organising framework against which the evidence-base and narrative of change can be developed over time.

References


CIPPEC (2010) Sound Expectations: From Impact Evaluations to Policy Change, a conceptual framework for 3ie’s case studies series on policy influence of impact studies, CIPPEC and 3ie


**Endnotes**

1 This includes recent work with IDS on the IDS Strengthening Evidence-based Policy programme, and for ITAD with Panos Relay and the Ecosystems Services for Poverty Alleviation (ESPA) research programme (funded by Economic and Social Research Council (ESRC), Natural Environment Research Council (NERC) and Department for International Development (DFID).

2 Instead of randomising the treatment (and comparing participants to non-participants), it is sometimes possible to randomise encouragement to receive the treatment (i.e. something that is more likely to make someone use the programme than others). For example, while radio broadcasts are difficult to isolate from control groups, the setting up of listener groups can be used to provide greater intensity – thereby creating de facto treatment and control groups for assessing impact.

3 This is sometimes referred to as a ‘causal chain’ approach to theories of change, and are perhaps the best known type. They describe a succession or ‘chain’ of elements and the logical or causal connections that exist between each of them (from inputs to activities, to outputs, outcomes and impact). See Jones (2011).

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