HOW CAN CAPACITY DEVELOPMENT PROMOTE EVIDENCE-INFORMED POLICY MAKING?

Literature Review for the Building Capacity to Use Research Evidence (BCURE) Programme

Section 1. What is 'building capacity for evidence-informed policy making'?

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Results in development

Contents

Acronyms

BCURE	Building Capacity To Use Research Evidence Programme
DFID	UK Department For International Development
EIPM	Evidence-Informed Policy Making
FAO	Food And Agricultural Organisation
GRADE	Grading of Recommendations Assessment, Development and Evaluation
HIV	Human Immunodeficiency Virus
OECD-DAC	The Organisation For Economic Co-Operation And Development's Development Assistance Committee
UK	United Kingdom
USAID	United States Agency For International Development
WHO	World Health Organisation

Introduction

How can capacity development promote evidence-informed decision making? The Building Capacity to Use Research Evidence (BCURE) programme works with policy makers in low and middle-income countries, developing skills, knowledge, and systems to improve the use of evidence in decision making. Funded by the UK Department for International Development (DFID) and launched in 2013, BCURE will invest £13 million over three years in a number of linked capacity development projects across Africa and Asia. This literature review was written as part of the evaluation of BCURE, which runs alongside the programme and aims to strengthen the evidence base on capacity development for evidence-informed policy making (EIPM). Further information on the BCURE programme is available here.

This document contains **Section 1** of the literature review, which discusses the question: **what is 'building capacity for evidence-informed policy making'?** It examines the theories and assumptions underpinning the BCURE programme and the concept of 'EIPM', providing an overview of the diverse and rich theoretical literature on this topic. We believe it is important for policy makers and practitioners to get to grips with this theory, especially given criticism that EIPM research and interventions fail to account of the messy reality of policy processes. Building theoretical insights into interventions can help practitioners avoid common traps and design programmes that are more likely to lead to change. Section 1 asks three questions:

- What is 'research evidence', and what makes it 'good quality'?
- What is 'policy', and how can evidence benefit policy making?
- What is 'capacity' for EIPM and how do we 'build' it?

Section 2 of the literature review is available here, and discusses the question: **what factors promote and constrain evidence-informed policy making?** It outlines the most significant and well-evidenced barriers to and enablers of evidence use by decision makers, and then goes on to examine some of the individual, interpersonal, organisational and institutional factors that promote or constrain evidence use in policy making.

Section 3 of the literature review is available here, and asks: **what is the evidence on how to build capacity for evidence-informed policy making?** It examines primary evidence from studies of interventions aiming to build capacity for EIPM, adopting a realist synthesis approach to examine what works, for whom, in what circumstances, and why.

The full literature review can be downloaded here. It includes background information about the BCURE project and the evaluation, and describes the literature review approach and methodology.

What is 'building capacity for evidence-informed policy making'?

Overview

The literature on EIPM is growing and interdisciplinary. It contains a wide range of overlapping theories and models concerning the ways in which evidence is used in policy making. This theory is important to policy and practice, especially given that several writers criticise EIPM research and interventions for a failure to make use of theoretical insights or to acknowledge non-rational theories of policy processes.

The BCURE programme is underpinned by a number of assumptions about the nature of evidence, policy making and capacity development. These are examined through a study of the evidence in relation to three questions:

1. What is 'research evidence', and what makes it 'good quality'? Several theoretical and empirical studies suggest that research evidence is just one type of evidence required in policy making, and cannot be easily isolated from other forms of knowledge in policy debates. There is growing agreement that *appropriateness* of evidence may be more important than its position on a generic evidence quality hierarchy, and several writers argue that contestation over evidence interpretation is inevitable given that evidence is never 'neutral'.

2. What is 'policy', and how can evidence benefit policy making? Many frameworks for understanding the role of evidence in policy link to rational and linear models of policy processes such as the 'policy cycle.' These have been widely criticised in both theoretical and empirical studies for ignoring the messy realities of policy making. More recent models emphasise the non-linear nature of policy change, the importance of interactions between various networks of actors, and the role of power and politics in shaping evidence use. Psychological theories also stress the cognitive limits of rationality and the importance of mental models in shaping how we interpret evidence. However, definitions of policy quality considered in this review – such as those used by the UK Civil Service – retain close links to linear and rational models; or at least retain assumptions about the objectivity of knowledge and evidence interpretation which several theories discussed in this section challenge. The BCURE evaluation will need to navigate this tension, given its remit to measure improvements in policy quality as a result of BCURE interventions.

3. What is 'capacity to access, appraise and apply evidence', and how do we 'build' it? Recent empirically based definitions of capacity suggest that it is complex and multi-dimensional. Theories of complexity suggest the importance of considering whole systems and expecting non-linear change and feedback loops within EIPM capacity development interventions. Recent models of capacity suggest that building capacity for EIPM should involve much more than individual skill development, as it requires change at individual, interpersonal, organisational and institutional levels in relation to evidence access, appraisal, interpretation and use. Theories of adult learning provide insights into how individuals learn, which is important given the strong emphasis on training within the BCURE programme. For example, theories of andragogy and self-directed learning suggest several 'key principles' that may help inform EIPM training courses, and different schools of learning provide a diverse set of models for understanding the mechanisms that link training to individual behaviour change – including theories of self-efficacy and social learning.

This section examines the theoretical and conceptual literature around EIPM, drawing links between diverse ideas, models and frameworks in order to illuminate the underlying theory behind the BCURE programme.

Why consider theoretical and conceptual literature?

Readers wishing to dip straight into the primary evidence on EIPM should skip to Section 2 or Section 3. However, we believe that there is a strong argument for understanding and learning from the diverse theories around EIPM, in order to strengthen current practice.

First, **recent literature is increasingly critical of evidence on EIPM for its failure to take account of theory**. For example, the authors of a recent systematic review on enablers of and barriers to EIPM criticise researchers for failing to make use of rich theoretical insights from policy studies, or make explicit the models of research and policy change assumed in research (Oliver, Lorenc, et al. 2014). Similarly, EIPM has been criticised for viewing policy as purely rational and instrumental, failing to consider 'the universe of policy discourse and practice' or to acknowledge the role of normative beliefs about how evidence *should* be used in policy making (du Toit 2012; Wesselink et al. 2014). Failing to attend to the theoretical literature is likely to have an impact on programme effectiveness. For example, many EIPM interventions (including those discussed in Section 3) implicitly invoke linear models of policy change, which the evidence discussed below suggests do not always reflect the reality of policy processes. Building theoretical insights into interventions can help practitioners avoid common traps and design programmes that are more likely to lead to change.

> "Failing to attend to the theoretical literature is likely to have an impact on programme effectiveness."

Second, **recognising the theoretical and conceptual underpinnings to EIPM is particularly important for a realist evaluation**. The BCURE realist evaluation aims to open up the 'black box' between interventions and outcomes, in order to understand what it is about the intervention that leads to (or does not lead to) change in different contexts (Pawson & Tilley 1997). Theoretical models help to signpost and predict outcomes that may be expected from EIPM capacity development interventions, as well as the mechanisms through which they lead to change. Therefore, drawing on the rich conceptual literature around EIPM will allow the BCURE evaluation team to develop and test theories about how BCURE projects contribute to (or fail to result in) the outcomes in the Theory of Change.

Finally, EIPM is full of abstract theoretical concepts – including 'evidence', 'policy' and 'capacity'. These terms can be, and are, interpreted in very different ways, which **hinders attempts to synthesise knowledge and distil evidence about what works** (McCormack et al. 2013). This section is used to help the BCURE evaluation team develop transparent definitions of these concepts, which are grounded in existing thinking and will help make sense of the primary data collected through the evaluation.

The theory behind the BCURE programme

The overarching theory of the BCURE programme is depicted in the programme Theory of Change described in the Background section above. It can be summarised as follows:

Developing the capacity of decision makers to use research evidence (through building knowledge, skills, commitment, relationships and systems at individual, interpersonal, organisational and institutional levels) will

allow them to access, appraise and apply good quality evidence more effectively when forming policy. This will improve the quality of policies, ultimately benefitting more poor people.

Many of the EIPM capacity development interventions considered in Section 3 implicitly share this theory, or something similar. Underpinning it are a number of assumptions about the nature of evidence, policy making and capacity development, summarised in the following three questions:

1. What is 'research evidence', and what makes it 'good quality'?
2. What is 'policy', and how can evidence improve its 'quality'?
3. What is 'capacity to access, appraise and apply evidence', and how do we 'build' it?

This section attempts to shed light on these questions through drawing on a range of theories from a variety of thematic fields – including international development, health, political science, and psychology.

A brief background to 'evidence-informed policy' and the nature of the evidence base

Calls for 'evidence-based policy' go back at least 50 years (Wesselink et al. 2014). Demands for policy to be 'informed by evidence' are often driven by a growing focus on the need for robust decision making, accountability to funders, and pressures to ensure taxpayers' money is spent on policies that 'work'. The rise of EIPM in UK government discourse is associated by several writers with the modernising agenda of the New Labour government when it came to power in 1997 (Smith & Joyce 2012; du Toit 2012; Broadbent 2012). Some writers argue that this helped spread the concept of EIPM to the international development field and, consequently, the agendas of several low and middle-income countries through the influence of DFID (du Toit 2012; Broadbent 2012). There is also an established movement for evidence-based medicine in public health, including calls by the World Health Organization (WHO) for an 'evidence-based approach to health promotion and practice' (Smith & Joyce 2012).

These influences among others have inspired a growing and interdisciplinary literature on EIPM, spanning a number of fields including international development, health, public administration, education and management. A systematic review from the health field recently concluded that 'evidence-based policy and practice, knowledge translation, and related concepts have become touchstones across a vast range of disciplines – almost sub-disciplines in their own right, with canons and conceptual toolkits of their own' (Oliver, Lorenc, et al. 2014).

There are a number of variants of the term 'evidence-informed policy', in the literature, including 'evidence-based policy' (Oliver et al. 2014), 'evidence-based medicine' (Yost et al. 2014), and 'evidence-based decision making' (Tang et al. 2005). Although these terms are not entirely synonymous, for the sake of simplicity this section groups them under the common label 'EIPM'.

Limitations of this section

Given the large and interdisciplinary nature of the theoretical literature on EIPM, this section cannot claim to provide a full and systematic summary of all relevant evidence. Choices about literature to include were guided by the BCURE Theory of Change (see the Methodology section above). The Theory of Change was developed based on the experience and knowledge of the BCURE evaluation team and therefore (explicitly and implicitly) drew on a number of the EIPM frameworks and models discussed below. As such, this section does not claim to provide a neutral overview of the theoretical literature. Rather, it aims to further articulate the assumptions underpinning the programme Theory of Change, and highlight some of the theories that can potentially add value to the BCURE evaluation – as well as providing an accessible overview of some of the main ideas and debates in the field.

1.1. What is 'research evidence', and what makes it 'good quality'?

The BCURE programme understands research evidence in a broad sense, to include published academic research papers, statistical databases, 'established' (i.e. widely debated and accepted) policy papers and positions, and evaluation findings (of sufficient quality and rigour) (DFID 2013a). Implicit in this definition is the idea that research evidence is based on particular *methods*, which are 'scientific, independent, academic, rigorous, subject to validation and open to critique' (Broadbent 2012).

'Research evidence' is just one type of evidence required for policy making. There is widespread agreement in EIPM literature that there are many types of non-research evidence important to policy making processes (see e.g. Broadbent 2012; Jones 2009; Sutcliffe and Court 2005), including:

- Process and practice knowledge concerning how to implement programmes or policies, for example based on organisational and systems data.
- 'Tacit' knowledge – the unwritten, unspoken knowledge held by individuals based on their experiences.
- Critical and reflective knowledge, relating to values and ethical commitments within a society.
- Communal knowledge, for example about what counts as 'common sense' or 'tradition' in a community or culture.
- Public opinion and other types of citizen knowledge.

Several sources suggest that policy makers view 'evidence' for decision making as incorporating some or all of these categories, as well as research evidence. For example, the UK's Department for Environment and Rural Affairs (Defra) has adopted a wide definition of evidence, incorporating research, statistical data and evidence from citizen knowledge (Shaxson 2014). Similarly, a study of the use of research evidence in four African policy debates found that 'narrow "Western" understandings of research-based evidence fail to account for much of the evidence actually used in the policy debates studied, with practical and communal evidence often taking centre stage' (Broadbent 2012).

There is some agreement over what counts as 'good quality' evidence, but 'evidence hierarchies' are controversial. Evidence hierarchies explicitly rank different research approaches and methods according to their relative authority (Evans 2003). They often place randomised experiments (and systematic reviews of them) at the top, with observational studies accorded much lower credibility (Nutley et al. 2002). Evidence quality frameworks or criteria often do not explicitly rank research methods in this way, but instead provide criteria to assess the methodology and design of primary studies – through examining factors such as transparency, reliability, validity, appropriateness and cogency. Quality criteria also often refer to the 'size of the evidence base', underpinned by the assumption that studies can be 'added up' to generate more reliable findings. This implies the importance of systematic reviews and other types of evidence synthesis (Davies 2013).

Hierarchies and quality frameworks are particularly well developed and widely used in the health field; for example the GRADE approach used by the UK National Institute for Health and Care Excellence (NICE 2014). Several sets of evidence quality criteria also exist within the international development sector (e.g. DFID 2014a; IMF 2003; USAID 2012).

However, several commentators in the EIPM literature express concern that evidence hierarchies and quality criteria unfairly downgrade qualitative data, particularly data collected through methods such as ethnography. This tends to affect social science evidence, as well as privilege research evidence over the other types of knowledge discussed above (Sutcliffe & Court 2005; Nutley et al. 2002; Boswell 2014). The role of evidence hierarchies is also beginning to be questioned in the health field – the UK's National Institute of Health and Care Excellence (NICE) holds a 'sceptical view of the untargeted use of formal hierarchies', arguing that 'the appropriateness of the evidence to the question is more important, not its place in any such hierarchy' (Ruiz & Breckon 2014).

Research evidence is not neutral. Several writers from the public administration and international development fields suggest that 'evidence' (including 'research evidence') is not a neutral category. First, Broadbent (2012) points out that research does not take place in a vacuum – it is commissioned, designed, framed, conducted and communicated by people with their own ideas about what is important and what is not, and their own beliefs and assumptions about the world and the topic they are researching. The evidence that is available on an issue will therefore always at least partly reflect the existing views and beliefs of researchers and research commissioners.

"Research does not take place in a vacuum…"

Second, several sources suggest that evidence rarely (if ever) points clearly to an optimal decision, implying that debate and contestation over what evidence means and how it should be used is inevitable. Evidence on a given topic often exists in huge quantities, spanning multiple academic fields, and providing a huge array of (often contradictory) insights (du Toit 2012). This is particularly true in many areas of international development, where issues are complex and contested and the evidence base is often very small – for example, evidence on conflict and fragile states (Waldman 2014). Even 'gold standard' randomised control trials only provide an insight into whether a particular intervention worked in a specific context, requiring careful assessment in order to decide whether findings can be applied elsewhere (Pritchett & Sandefur 2013). Systematic reviews synthesise findings from primary sources in a rigorous way, but often gloss over important features of context – a crucial consideration in international development decision making (Mallett et al. 2012). Evidence therefore cannot 'speak for itself' – all evidence requires interpretation in order to assess its relevance to a particular policy process or decision (Parkhurst 2014; Davies 2013; Wesselink et al. 2014).

Summary and implications: It is widely agreed that research evidence is **just one type of evidence** required for policy. 'Evidence hierarchies' can be helpful guides to commonly agreed standards of 'evidence quality' (such as validity and reliability); but they should be **used with caution**, as *appropriateness* of evidence may be more important than position on a generic evidence hierarchy. Finally, several sources suggest that **evidence is not neutral** – firstly because it reflects pre-existing views and beliefs of researchers and commissioners, and secondly because it rarely points to an obviously optimal solution, implying that contestation over its meaning is inevitable.

Based on this evidence, we recommend that: the BCURE evaluation should be conscious of the interplay between research evidence and other forms of knowledge, the appropriateness of evidence used by decision makers as well as its quality, the question of how far available evidence reflects the existing views and beliefs of researchers and commissioners, and finally the ways in which evidence is interpreted, debated and contested in decision making processes.

1.2. What is 'policy', and how can evidence benefit policy making?

This section examines a diverse range of theories and models within EIPM literature, which help to articulate the ways in which evidence is used in (and can benefit) policy making. These theories are largely not mutually exclusive – Jones et al. (2009) argue that 'the knowledge-policy interface is too complex to encapsulate in any single framework'. However, this section demonstrates that recent thinking on EIPM has moved away from some theories (such as rational and linear models of how evidence is used in policy) and towards others (such as theories acknowledging the central role of power and politics in policy making).

This review focusses on 'public policy,' understood as as 'a deliberate plan of action to guide decisions and achieve desired outcomes…adopted and implemented by government actors, which affects or is visible to the public' (Jones 2009). The review adopts a broad definition of public policy:

- Incorporating a wide range of **activities**; including the *processes* of decision making, the *decisions and actions* (written, spoken and implied) taken during and as a result of these processes, and the *implementation* of decisions and what happens as a result (Hallsworth et al. 2011; Jones 2009; Cloete & De Coning 2011; Dunn 2012).
- Involving a broad range of **actors**, including local and national bodies (e.g. government ministries, local government departments); parastatal and semi-autonomous bodies; the legislature; and non-state actors including the media, civil society, the general public, the private sector and international donors (Newman et al. 2012).

1.2.1. Theories of policy processes and the role of evidence in decision making

Historically, EIPM has been associated with rational models of policy processes and knowledge transfer. There are many different ways of conceptualising the role of evidence in policy processes. Several writers within the development, public administration and health fields argue that EIPM has historically been associated with 'rational' models of policy change such as the **policy cycle** (Jones 2009; Hallsworth et al. 2011; du Toit 2012). The policy cycle model was first articulated by Lasswell (1977), and portrays a policy process as moving from defining a problem (agenda setting) through to policy formulation, selecting a preferred solution, designing the policy, implementing and monitoring it, and finally evaluating it, with the results fed back into the next round of the policy cycle.

Models of EIPM that are based on the policy cycle depict evidence as providing neutral inputs at each point in the cycle, which improve policy incrementally and according to logic and reason (Jones 2009). An example includes Greenhalgh's (2003) model of the six-stage evidence-based approach to healthcare. There are close links between these models and **instrumental frameworks** of evidence use in policy processes; which depict research findings as being consciously and directly applied by actors to shape policies, processes, or further research (Weiss 1982) (see Box 1).

Guidelines from the UK Civil Service on the role evidence should play in UK policy processes are clearly aligned with these rational and instrumental theories. Given the potential influence of these frameworks on DFID policy processes (and subsequently the thinking behind the BCURE programme), they are worth considering here. The Modernising Government White Paper of 1999 and the 2010 Policy Skills Framework articulate the ways in which evidence is expected to influence UK policy processes, resonating clearly with the policy cycle:

- Evidence helps **define and frame issues**, ensuring 'the problem' is accurately articulated.
- Evidence helps **articulate options and develop solutions to problems**, enabling questioning of established ways of doing things, and learning about what has worked and not worked elsewhere.

- Evidence allows **different policy options to be assessed** for issues such as cost-effectiveness, risk and benefits, and potential impacts – helping work out which option is the most appropriate in a particular situation.
- Evidence helps **demonstrate whether a policy has been effective or not**, and understand how a policy has affected different groups of people – helping to inform decisions about what to do differently in future. (Cabinet Office 1999; Hallsworth & Rutter 2011; UK Civil Service 2010).

Shaxson (2014) provides an example of how these guidelines play out in practice within the UK Civil Service. The UK's Department for Environment, Food and Rural Affairs used the policy cycle model to frame five 'big questions' for policy teams to consider as part of the department's Evidence Investment Strategy – including 'Where are we now?' (how evidence is used to understand the context); 'Where are we going?' and 'How do we get there?' (how evidence is used to understand drivers and trends, and identify solutions to problems), and 'How well did we do?' (how evidence is used to monitor and evaluate progress and impact).

Box 1. ***Models depicting the role of evidence in policy processes*** *(see Weiss 1979, 1982)*

'Instrumental' model: specific research findings are consciously applied to influence something concrete, such as a policy, programme, or other piece of research.

'Enlightenment' model: concepts and theories from research gradually 'percolate' through society, 'coming to shape the way in which people think about social issues'.

'Interactive' model: policy processes involve 'a disorderly set of interconnections and back-and-forthness' between different groups.

'Political' model: research is used to lobby for particular interests.

'Tactical' model: research is used to delay decisions, deflect criticism, or enhance prestige.

However, the utility of rational and policy cycle models has been widely questioned. The policy cycle is widely criticised in recent literature on EIPM for its assumptions regarding the rational and problem-solving nature of policy processes, and for ignoring the messy reality of policy making (Jones 2009; Morton 2012; Hallsworth et al. 2011). For example, Hallsworth et al. (2011) examined the perceptions of UK civil servants and ministers, finding that 'virtually every interviewee dismissed policy cycles…as being divorced from reality.' Evidence from lower-income contexts similarly questions the utility of the policy cycle; with several empirical studies (discussed further below and in Section 2) demonstrating that the role of evidence in policy processes bears limited resemblance to the stages in linear and rational models (e.g. Broadbent 2012; du Toit 2012; Hunsmann 2012). Weiss also presented empirical evidence to suggest that instrumental use of evidence (see Box 1) is 'rare, particularly when the issues are complex, the consequences are uncertain, and a multitude of actors are engaged in the decision-making process' (Weiss 1980).

The majority of theoretical papers on EIPM reviewed for this paper accept the premise that evidence is just one part of a patchwork of factors influencing policy decisions; alongside political and strategic considerations, expert opinion, stakeholder and public pressure, and resource constraints (e.g. Davies et al. 2012; Newman et al. 2012; Sutcliffe and Court 2005; Jones et al. 2013; Crewe & Young 2002). In recent years, the literature on EIPM has moved away from linear and rational models, and towards models which emphasise the role of politics and power (as opposed to deliberative reason and logic) in determining how evidence influences policy processes.

"Evidence is just one part of a patchwork of factors influencing policy decisions..."

The 'pluralism and opportunism' model of evidence-use challenges the rationality of the policy making process, emphasising that policy making is often messy and opportunistic and requires pragmatic decisions by a range of actors in the face of uncertainty (Jones 2009). The pluralism and opportunism model relates to a number of political science theories that emphasise the non-linear nature of policy processes. For example, **incrementalism** – or the 'science of muddling through' – suggests that policy making evolves over time, through small, incremental steps in which values and empirical analysis are closely intertwined. Analysis of evidence is 'drastically limited' by time, resources and the limits of human rationality, meaning that possible outcomes and alternatives to decisions are inevitably neglected (Lindblom 1959). **'Streams'** frameworks focus on the policy windows of opportunity that can open up around major events, providing opportunities for evidence to feed into the 'problem stream' (which specifies which issues are significant) or the 'policy stream' (the ideas on the table that are being considered to solve identified problems). **'Spaces'** models emphasise particular places or moments where policies can be influenced – including 'closed spaces' (where policy is made by a small set of actors behind closed doors), 'invited spaces' (where civil society or other actors are given a platform to introduce new ideas) or 'claimed spaces' (where less powerful groups create spaces, or claim them for themselves) (Jones 2009).

More radical models suggest that power is infused throughout the process of evidence production and use. Jones argues that the pluralism and opportunism model of EIPM has recently begun to give way to a **'politics and legitimisation'** model, in which power and politics are held to be 'infused through the knowledge process, from generation to uptake.' In this model, evidence is understood to 'reflect and sustain existing power structures', actively used by policy actors 'in processes of contest, negotiation, legitimisation and marginalisation' (Jones 2009). Theories on the role of power in evidence use can be summarised in terms of three 'interlocking types of relations' (Jones 2009; Sumner et al. 2011):

1. Power can be understood in terms of **actors and networks** – competing interest groups working together or against one another to advance their interests. Knowledge and evidence is used consciously by these groups to win political battles; as ammunition, or tactically to support decisions or stall action. This links to Weiss's **political model** of evidence use (see Box 1 above), in which research is used to lobby for particular interests; while in a **tactical model** research is used to delay decisions, deflect criticism, or enhance prestige (Weiss 1979). Both of these fall under the umbrella of **'symbolic' use of evidence**, in which evidence is used to legitimise a decision that has already been made; for example a politician using research to justify a policy they would have created anyway (Weiss 1982).
2. Power can also be understood in terms of formal and informal **'institutions'** – which include organisations, socioeconomic environments, and patterns of behaviour, which shape the 'rules of the game'. They define who is able to participate in decision making, and they shape the strategies, beliefs and actions of individuals within it. Issues such as the extent of democracy and media freedom and the level of government centralisation all generate opportunities and constraints, and affect future decisions. Knowledge is 'translated' in ways that fit with prevailing institutions, which may keep particular ideas off the agenda or embed others in law.
3. Finally, theories of **discourse** hold that power and knowledge are inextricably intertwined. 'Knowledge' in the form of concepts, metaphors, rules of logic and ideas which may be taken for granted or seen as 'common sense' in a particular society determine what policy makers can understand and articulate, and therefore the policy ideas they are likely to adopt. Theories of discourse can be linked to Weiss's **enlightenment model** of research use (see Box 1 above): in which concepts and theories from research gradually 'percolate' through society, 'coming to shape the way

in which people think about social issues'. Policy makers may not be able to point to a specific study that influenced a decision, but research can sensitise them on new issues, turn non-problems into problems (and vice-versa), and redefine the policy agenda (Weiss 1979).

Although the theoretical and conceptual literature on EIPM considered for this review generally discounts rational models of policy processes in favour of theories recognising the centrality of power and politics, this is not always reflected in EIPM programmes and practice. As discussed above, UK Civil Service guidelines and frameworks of evidence use still link strongly to the policy cycle model. Authors of one recent systematic view similarly found that policy cycle models are still 'common currency' within health policy and other fields (Oliver, Lorenc, et al. 2014). The primary empirical evidence base discussed in Section 3 also makes limited reference to the political models and theories discussed above, and much of it appears implicitly based on the assumption that evidence use is to some extent rational and linear.

Some authors see the policy cycle as a useful starting point or heuristic device, while acknowledging that it does not reflect the realities of policy making (Sabatier & Jenkins-Smith 1993). Others point out that there are specific situations in which research *can* contribute to change in rational and linear ways. For example, Nutley et al. (2007) conceptualise research impact on a spectrum, ranging from more instrumental applications (in which research is used directly to inform practice and policy change) to more conceptual uses (in which research shifts knowledge, understanding and awareness of an issue). However, Hallsworth et al. (2011) question whether it is really acceptable to continue using the policy cycle as a model for understanding political processes, claiming it represents an 'unrealistic ideal' and a 'policy myth'. Overall, the literature discussed in this section suggests the need for the BCURE evaluation to look beyond rational and linear models of policy processes and evidence use, while recognising their continued application within EIPM practices and processes.

Summary: Many frameworks for understanding the role of evidence in policy and in improving policy quality link to the 'policy cycle' model. This portrays policy making as a rational and linear process, in which knowledge provides instrumental and neutral inputs at defined stages. The utility of this model has been **widely criticised for ignoring the messy realities of policy making**, but is still an important influence on EIPM thinking.

More recent models relating to evidence use in policy processes place **a greater emphasis on the role of power and politics in shaping the ways in which evidence is used in policy making**; for example the theories of incrementalism, policy 'spaces' and policy 'streams'. More radical models suggest that **power is infused throughout the process of evidence production and use.** In these theories, power – in terms of actors and networks, institutions, and discourse – is understood to not only influence how evidence is used but how it is understood and articulated in different contexts.

Based on this evidence, we recommend that: the BCURE evaluation team make limited use of rational and linear models of policy change and knowledge translation, and look beyond instrumental theories of evidence use. The evaluation should explicitly consider the role of power and politics (in terms of actors and networks, institutions and discourse) when studying how evidence is used in BCURE contexts.

1.2.2. Theories relating to researcher-policy relationships and networks

Linked to but distinct from the models discussed above are a further set of theories regarding the relationships between researchers and policy makers, and the impact of these relationships on evidence use in policy processes.

In the 'two communities' model, policy actors are viewed as having different priorities, languages and practices from those of researchers (Brown 2012). This assumes that there is a 'gap' between researchers and policy makers that needs to be 'bridged' in order to get policy makers to use evidence in decision making (Innvaer et al. 2002). The authors of a recent systematic review argue that this assumption underpins a large amount of literature, particularly from international development and health, on research dissemination, uptake and knowledge 'translation' (Oliver, Lorenc, et al. 2014).

The 'supply-demand' paradigm similarly emphasises the factors that should be considered by those 'supplying' research, in order to get it used by decision makers on the 'demand side' – for example, the role of research dissemination and communication strategies. This model underpins the BCURE programme, which is designed to address 'demand-side' constraints in the form of capacity gaps among decision makers to use evidence effectively (Newman et al. 2012). Similarly, models of 'push and pull' emphasise the links and exchanges between research producers and research users, and suggest that researchers need to make active efforts to 'push' their findings into the policy maker sphere (Brown 2012).

These models all implicitly or explicitly conceptualise research producers and research users as two separate groups. In contrast, other models view the boundaries between these groups as blurred and indistinct. A secondary review found that the 'two communities' model is being replaced in the EIPM literature by a more 'dynamic and complex' view of the links between research and policy (de Vibe et al. 2002). Smith and Joyce argue that the 'two communities' paradigm is wrong to imply that research and policy communities are either distinct from one another or relatively homogeneous – as 'a variety of boundaries (epistemological, disciplinary and political) cut across professional differences' and affect how knowledge is understood and used (Smith & Joyce 2012).

In opposition to the 'two communities' framework, a number of models portray evidence production and use as an interactive process. These are categorised by Best & Holmes (2010) as 'second generation' frameworks. Theories of 'policy networks' emphasise that researchers, policy makers and other groups (such as members of civil society and the media) often work together across professional divides, bound by shared value systems, political interests or specific problems – and drawing on evidence in various ways to do so (Smith & Joyce 2012; Morton 2012). These emphasise that – rather than existing in separate communities or on opposite sides of a supply-demand divide – civil society, the media, researchers and decision makers may all play a role in commissioning, producing and using research to influence policy (Best & Holmes 2010). These network models relate to Weiss's interactive model of research use (see Box 1 above), which emphasises that policy development processes involve 'a disorderly set of interconnections and back-and-forthness' between different groups (Weiss 1979).

'Issue networks' are one type of policy network, in which different actors with diverse interests and values come together around particular problems. For example, an issue network consisting of civil society, the media, the general public and government actors formed around the issue of sex-offender policy in the UK in 2000 - suggesting that key actors in the government, civil society and the media were all both generators and users of various forms of evidence in a national debate about sex-offender community notification in 2000. The authors argue that this contradicts the 'two communities' theory, as actors formed a 'kaleidoscopic picture … [which] defies description as two separate groups' (Jung & Nutley 2008). 'Policy communities' represent another type of policy network, consisting of groups of specialists both inside and outside government who play a role in developing, testing and refining policy ideas. For example, Gabbay et al. (2003) present a case study of 'communities of practice' (CoPs) in the UK National Health Service, designed to bring together different people from various walks of life and professional backgrounds to achieve a policy task.

Policy network models are reflected in a range of ideas within recent EIPM theoretical literature – including ideas of **knowledge 'co-production'** and collaboration, which depict actors from the policy and research worlds as working together to interpret and 'construct' evidence to inform decision making (see e.g. Jones 2009; Oliver 2012). Empirical evidence of these processes is discussed in a systematic review by Orton et al. (2011) examining the use of evidence in public health decision making. This review found evidence from several studies that 'rather than being a neutral tool with which to inform decision making, evidence was in fact *constructed* through professional practice, and contributed to the construction of professional identity'. Gabbay et al. (2003) also find empirical evidence of knowledge co-construction within policy networks, discussed further in Section 3.2.

Summary: The **'two communities'** model views policy actors and researchers as two distinct groups, with different priorities, language and practices. However, 'second generation' models of knowledge transfer depict **evidence production and use as an interactive process**. Rather than viewing researchers and policy makers as existing across a distinct supply-demand divide, theories of **'policy networks'** suggest that government and non-government actors often work together and draw on evidence to shape policy in a variety of ways. Some empirical evidence also suggests that policy networks play a role in 'co-producing' and 'constructing' knowledge to inform decision making. This has clear links to the evidence presented in Section 1.1 suggesting that research evidence is not neutral, but inevitably involves debate and contestation over what findings mean and how they should be used.

Based on this evidence, we recommend that: the BCURE evaluation draw on interactive and network theories to consider how different actors across and beyond traditional research/policy boundaries affect the access, appraisal and use of evidence. It would also be interesting to consider whether and how networks within the BCURE programme interpret and *construct* knowledge, and the impacts this has on decision making.

1.2.3. Theories relating to cognitive processes

This section presents a final set of theories from the psychological literature, where evidence relating to cognitive processes and mental models provide insights into the interpretation and use of evidence in policy processes. A detailed summary of this large evidence base is beyond the scope of this review, but this section provides a very brief introduction to some of the evidence particularly relevant to EIPM thinking.

Cognitive theories and models from psychological research emphasise the importance of mental models, contextual cues and social norms, which affect how people interpret evidence. Psychological theories are not widely referenced in the literature on EIPM; although they have long been acknowledged in business and management literature (for example see the website changingminds.org). However, theories from the psychology field are highly relevant to understanding how policy makers use and understand evidence in decision making. The 2015 World Development Report (WDR) synthesised some of this evidence, challenging the assumption inherent in classical economics (and in the EIPM literature based on the rational model discussed in Section 1.2.1 above) that people are 'rational actors' who weigh up costs and benefits and use this to take a reasoned view about what to do. Instead, 'people are malleable and emotional actors whose decision making is influenced by contextual cues, local social networks and social norms, and shared mental models' (World Bank 2015b). The WDR points out several principles of human cognition that are relevant to EIPM, including:

- **People 'think automatically'**. They process the huge amounts of information they have to assimilate by simplifying problems, filling in missing information based on assumptions about the world, and assessing situations 'based on associations that automatically come to mind and belief systems that

we take for granted'. Thinking automatically contrasts with the assumption implicit in rational models of EIPM, that people make policy decisions 'deliberatively' by carefully weighing up alternative options and making a balanced, reasoned choice.

- **People 'think with mental models'** which help them make sense of the world around them. Mental models include social meanings, norms, concepts, categories, identities, stereotypes and worldviews drawn from individuals' cultures and communities. A survey of World Bank officials conducted for the 2015 WDR provides a clear example of how thinking with mental models can affect the appraisal of evidence. World Bank staff were presented with identical data in two different contexts and asked to identify the conclusions that best explained the data. The first context related to the effectiveness of skin cream, and the second to the question of whether minimum wage laws reduce poverty. Officials were *less* likely to get the answer right in the second context, in spite of their presumably greater knowledge of labour laws than of skin cream. The authors conclude that 'faced with a demanding calculation, they interpreted new data in a manner consistent with their prior views, about which they felt confident' (World Bank 2015b).

The World Bank case can also be understood as an example of **'confirmation bias'**, the well-observed psychological tendency for people to disregard or disbelieve evidence that does not correspond with existing beliefs (Nickerson 1998). Another cognitive bias observed in the UK Civil Service is that of **'anchoring effects'**, in which 'the first piece of information we receive irrationally governs our subsequent decisions' (Hallsworth et al. 2011). Finally, the UK Cabinet Office has official guidance on how to avoid **'over-optimism' bias** – the 'demonstrated, systematic, tendency for project appraisers to be overly optimistic' in their estimations of costs, benefits, values and time profiles (Cabinet Office 2002). These biases are all well-established in the psychological literature, and are likely to affect the ways individuals understand, interpret and appraise evidence in policy processes.

Summary: Cognitive theories and models from psychological research are highly relevant to EIPM debates, as they emphasise the importance of mental models, contextual cues and cognitive biases on shaping the ways people think. These reinforce theories and empirical evidence from political science, suggesting **the powerful influence of non-rational cognitive processes and pre-existing beliefs on shaping individuals' understanding and interpretation of evidence**.

Based on this evidence, we recommend that: The BCURE evaluation should explicitly recognise the role of cognitive processes and mental models in shaping individuals' understanding and interpretation of evidence – for example in relation to training and individual behaviour change.

1.2.4. How does evidence use contribute to policy quality?

Central to the overarching BCURE theory is the assumption that research evidence makes policy 'better quality' than it would have been otherwise. Broadbent argues that 'evidence-based policy has become a byword for policies considered scientifically sound, objective, long term in focus and – implicitly – "better" than policies not based on research-based evidence' (Broadbent 2012). Wesselink et al. (2014) similarly argue that EIPM 'as prescription' has filtered into policy making in certain high-income countries including the UK; where 'using evidence' is now one of the core principles in the UK Civil Service model of 'professional policy making' (Hallsworth et al. 2011). However, as discussed in Section 1.2.1, the standards and guidelines to evidence use adopted by the UK Civil Service (which imply that good quality policy uses evidence to frame issues; articulate and develop solutions; weigh up policy options; and demonstrate policy effectiveness) are largely based on rational and linear conceptions of policy processes, which the majority of EIPM sources

examined for this review reject. How can the idea of policy quality be reconciled with the theories discussed above, which suggest the fundamental importance of power, politics, networks and cognitive influences on evidence use?

Newman et al. (2012) offer a more nuanced understanding of the role of evidence in promoting policy quality; implying that good quality policy is that which draws on *'a broad range of research evidence; evidence from citizens and other stakeholders; and evidence from practice and policy implementation as part of a process that considers other factors such as political realities and current public debates.'* The authors explicitly align this definition with the 'pluralism and opportunism' model outlined in Section 1.2.1; which challenges the rationality of the policy making process and emphasises that policy making is often messy and opportunistic, but still 'retains assumptions about the potential for research to contribute to better policy formulation.' This definition also retains an assumption that evidence is – at least to some extent – an expression of objective fact, which policy actors can consider alongside other factors in order to make optimum decisions.

Several of the theories discussed in this section pose a challenge to this latter assumption. Section 1.1 articulated arguments that evidence does not 'speak for itself' – frequently large in its scope and contradictory in its findings, all evidence requires interpretation. For evidence to express (even to some extent) objective fact, different actors must therefore be expected to come to the same conclusions when they interpret the same evidence; but the 'politics and legitimisation' model discussed in Section 1.2.1 holds that power influences not only how evidence is used but also how different actors are able to understand it. Psychological theories similarly suggest that the people naturally interpret evidence in line with existing beliefs and values, rather than through logical processes of deliberative decision making. Finally, theories of policy networks suggest that networks of different actors play the role of *co-constructing* knowledge as well as analysing and utilising it.

This review does not aim to demonstrate the 'truth' of these theories. However, they provide useful insights and lenses to help the evaluation examine the role of evidence in policy processes, and there is some empirical evidence to support them. As part of the remit of the BCURE evaluation is to examine and measure the impact of BCURE interventions on policy quality, this suggests that the evaluation must navigate a tension between the theoretical literature on EIPM, and existing understandings of policy quality. This may require the evaluation to adopt an iterative approach to the measurement of 'policy quality;' beginning with existing standards based on the policy cycle model and Newman et al's (2012) 'pluralism and opportunism' definition above; but looking to further develop these standards in light of the primary evidence collected, and taking the conceptual literature discussed in this section into account.

Summary: Existing definitions of policy quality often link to rational and linear conceptions of policy processes, which the majority of EIPM sources examined for this review reject. Newman et al (2012) present a less rational and linear interpretation of (quality) evidence-informed policy; understood as that which considers 'a broad range of research evidence; evidence from citizens and other stakeholders; and evidence from practice and policy implementation as part of a process that considers other factors such as political realities and current public debates.' However, this definition retains implicit assumptions about the objectivity of evidence, which several theories discussed in this section challenge. There is therefore a tension between more recent thinking within the EIPM theoretical literature, and existing definitions of policy quality. The BCURE evaluation will need to navigate this, given its remit to measure improvements in policy quality as a result of BCURE interventions.

Based on this evidence, we recommend that: The BCURE evaluation should adopt an iterative approach to measuring policy quality; beginning with existing standards discussed in this section but aiming to further develop these standards in light of emerging primary evidence and the conceptual literature.

1.3. What is 'capacity' for EIPM and how do we 'build' it?

The OECD-DAC define capacity as 'the ability of people, organisations and society as a whole to manage their affairs successfully' (OECD-DAC 2006). This and other similar definitions understand **capacity as a multi-layered set of processes, incorporating the idea of *resilience* or *sustainability*** – the ability of a society or sector to *continue* to develop important skills, behaviours, networks and institutions into the future (Kaplan 1999; Ubels et al. 2010).

1.3.1. Theories of capacity development

Support for capacity 'building' or 'capacity development' can be viewed as 'what outside partners – domestic or foreign – can do to support, facilitate or catalyse capacity development and related change processes' (OECD-DAC 2006). A recent review conducted by Itad for the Global Environment Facility distinguished between 'traditional' approaches to capacity development, which tended to focus rather narrowly on building the skills needed to conduct a specific task, and more recent interventions that hold the more nebulous aim of improving the ability of a society or sector to continue to develop necessary skills, behaviours, networks and institutions that enable communities to adapt and self-renew into the future.[1]

Capacity development is about more than 'skills'. Several leading behaviour change researchers argue that behaviour change requires a combination of positive intention, skills and absence of environmental constraints (Fishbein & Middlestadt 1994). The Kirkpatrick training evaluation model considers all these elements in its 'four levels of training evaluation' (Kirkpatrick Partners n.d.).

- *Level 1 – Reaction*: the satisfaction of participants with a training activity; their degree of active involvement in and contribution to the training process; the relevance of the learning to participants' day-to-day jobs.
- *Level 2 – Learning*: participants' knowledge, skills, attitude, confidence and commitment – before and after the training.
- *Level 3 – Behaviour*: participants' application of the training when back on the job: the extent to which learning has been applied in the policy makers' native environment where factors beyond their control may constrain or support implementation.
- *Level 4 – Results*: the effect of the training within the participants' organisation or wider environment.

Capacity development can be understood as 'complex.' Recent definitions of capacity also increasingly incorporate the concept of *complexity* (e.g. Baser & Morgan 2008). Complexity theories hold that that change in 'complex' settings does not happen in a rational, linear way that can be predicted in advance. Instead, individual behaviours and interactions between people combine and amplify one another in diverse and sometimes surprising ways, with consequences that no one could have predicted (Smith & Joyce 2012; Ramalingam 2013). Various elements of the complexity literature have implications for studying capacity development in the context of EIPM (Smith & Joyce 2012; Morton 2012; Ramalingam 2013):

[1] The review is unpublished, but findings are discussed in a series of blog posts here: http://www.itad.com/knowledge-and-resources/capacity-development-2/

- **Complex systems consist of many components which interact in dynamic ways**. The behaviour of a complex system (e.g. a government ministry or executive) results from interaction between its 'parts' (the individuals working for that organisation or institution). These interactions give rise to *emergent* properties of the system, which are more than the sum of the individual behaviours.

- **This emphasises the need to analyse whole systems, rather than breaking them into constituent parts.** In the context of studying capacity for EIPM, a system cannot be understood by reducing it to the individuals within it and examining their individual decisions and behaviours around accessing, appraising and applying evidence. Instead, complexity theories suggest that EIPM can only be understood by studying whole systems, consisting of multiple, interacting relationships and the variety of actors involved in policy processes. This suggests the need for 'holistic approaches to understanding change, such as case study approaches, action research or embedded researcher models' (Morton 2012). Complexity approaches also link to the 'policy network' models discussed in Section 1.2.2 above. For example, Morton (2012) argues that complexity theories encourage 'a focus on networks of researchers and research-users utilising, reinterpreting and integrating knowledge with other knowledge within systems.'

"Complexity theories suggest that EIPM can only be understood by studying whole systems, consisting of multiple, interacting relationships and the variety of actors involved in policy processes."

- **Context is crucially important.** Complex systems are sensitive to initial conditions, which have long-term consequences. This suggests the importance of *context* and historic factors that enable and block change (Morton 2012). 'Path dependency' is therefore a feature of complex systems, in which historical decisions shape subsequent choices and present barriers to change (Abeysinghe 2012).

- **Non-linearity and feedback loops in complex systems make it difficult to predict behaviour, and small actions can have big effects**. The non-linear nature of complex systems and the importance of 'feedback loops' (in which a specific change feeds back to either amplify or dampen further change) is likely to result in periods of significant, sudden change and periods of inertia ('punctuated equilibriums'). Rather than policy change always happening 'incrementally' (Lindblom 1959), we therefore shouldn't be surprised when research influences policy in 'often unpredictable ways over various timeframes' (Morton 2012) – for example where vast bodies of research have little impact, or when minor events suddenly lead to much higher research use.

Thinking of capacity development for EIPM as a complex issue suggests the need to focus on the many influences on individual behaviour, the need to expect capacity change to be unpredictable and incorporate feedback loops, and the need to understand how networks and relationships affect capacity change.[2]

Capacity development for EIPM can be understood as 'multi-dimensional,' requiring change on four 'levels'. The above insights from behavioural change research and complexity theories imply that multiple initiatives are needed to work together holistically over time to support and catalyse capacity development (FAO 2010; Capacity.org n.d.). The BCURE Theory of Change categorises capacity development interventions for EIPM into four 'levels' (drawing on Ubels et al. 2010; Baser & Morgan 2008):

[2] Ibid.

1. **Individual change** includes individuals' development of skills and knowledge, but also includes the motivation, attitudes, commitment, values and personal incentives that affect individual behaviour. 'Skills' for EIPM as understood in the BCURE programme include the ability to search for and appraise evidence, as well as the ability to weigh evidence with other factors and use it to inform decision making. Individual change also includes the motivation, commitment, values and incentives that affect individual behaviour.

2. **Interpersonal and network change** refers to the relationships between individuals and groups, and how these influence evidence interpretation and use. For example, 'evidence champions' within an organisation might encourage colleagues to change their attitudes or behaviours around evidence use. This also incorporates change within formal and informal communities (or networks) of individuals or organisations – such as professional communities providing access to or syntheses of evidence, and informal groups within organisations united by particular knowledge interests or personal relationships.

3. **Organisational change** refers to change in the systems, policies and procedures, practices, culture or norms within an organisation, which support (or inhibit) evidence access, appraisal and application in decision making.

4. **Institutional change** refers to change in the wider operating environment of individuals or organisations. This includes change within civil society and the media, as well as broader social change (e.g. in culture, norms, collective beliefs, attitudes, values) and change in external influencing factors (e.g. global events, political and economic factors, donor influence), which affect the use of evidence.

1.3.2. Theories on the characteristics of adult learners, and principles of adult learning

The final set of theories considered below relate to *individual capacity change*, examining theories of individual learning. This level of change is singled out for consideration given its strong emphasis within the BCURE programme – all BCURE projects involve some type of teaching or training. Training activities are always, implicitly or explicitly, underpinned by theories and ideas about how people learn and put their learning into use, and will be important to help the evaluation team understand how training activities lead to (or do not lead to) change in different BCURE contexts. Some of the main concepts and ideas within this literature are explored below.

Unsurprisingly, **there is no single accepted model of adult learning**. Instead there are a 'mosaic of theories, models, sets of principles, and explanations' which attempt to explain how people learn. Two of the 'pillars' of adult learning theory are andragogy and self-directed learning (Merriam 2001), which both examine the characteristics of adult learners.

Andragogy is one of the most widely-known frameworks, contrasting adult learning (andragogy) with educating children (pedagogy). Andragogy holds that **adults are active and reflective learners, who learn best when engaged in the learning process and when they can put their learning into action**. They need to know why they are learning, what the goal is and whether they can achieve it, and they expect immediate relevance to what they can learn. Adults also bring their previous experiences and competencies with them when they are learning. When this is dismissed, the likelihood of learning decreases (Knowles et al. 2005).

Self-directed learning focuses on **the role of learning as part of adults' everyday life** – 'a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing

appropriate learning strategies, and evaluating learning outcomes' (Knowles 1975). Self-directed learning is held to be widespread; occurring as an ordinary part of adults' everyday lives; and systematic – not dependent on an instructor or a classroom (Tough 1967; 1971).

Key principles of adult learning based on these two theories: Some authors have drawn on ideas from andragogy and self-directed learning to distil 'key principles' of adult learning for those designing training courses (Bryan et al. 2009; Lyon et al. 2011):

1. Adults need to know why they are learning.
2. Adults are motivated to learn by the need to solve problems.
3. Adults' previous experience must be respected and built upon.
4. Adults need learning approaches that match their background and diversity.
5. Adults need to be actively involved in the learning process.
6. Adults need extended contact (rather than one-off training sessions) in order to assimilate learning.

Issues of power and autonomy: The theories of andragogy and self-directed learning have been criticised from some angles for being overly technical, context-free, and focusing largely on the *characteristics* of adult learners, ignoring issues of power and the possibility that self-directed learning may steer people towards simply conforming to predominant interests (Collins 1988). Freire's concept of 'conscientisation' is relevant here – emphasising the role of learning in developing the ability to *transform* the learner's reality (Freire 1972). Similarly, Brookfield emphasises the role of adult learning in helping adults understand the world and their own experiences *in their own terms,* as opposed to imposing ideas from the outside (Brookfield 1985).

Theories about how and why people learn

Smith (2003) categorises learning theories into four groups:

1. **Behaviourist theories: the learning process is about changes in behaviour, stimulated by the external environment.**

Behaviourist theories suggest that the purpose of education is to produce a desired behavioural change, and can be achieved through arranging the environment in such a way as to elicit the desired response. Learning is therefore something that can be measured and seen – the end-product of a process. The theory of **reinforcement** falls into this school, suggesting that a learner will repeat a desired behaviour if positive reinforcement is given in the form of material or non-material rewards (Dunn 2002). Many approaches to increasing EIPM through capacity development appear to be implicitly or explicitly based on behaviourist approaches, attempting to measure learning through observed behavioural change (see Section 3).

However, behaviourist approaches have been criticised as a 'blunt instrument'. For example they imply that learning must be observed through *change*. However, learning can also include less visible processes such as abstracting meaning and relating new knowledge to one's own experience or the wider world, or interpreting and understanding reality in a different way (Dunn 2002).

2. **Cognitivist theories: whereas behaviourists focus on the environment, cognitivist theorists focus on learning as *internal mental processes* – such as insight, information processing, memory and perception.**

Cognitive theorists emphasise the role of education in developing individual capacity and skills to *learn better,* for example by structuring the content of learning activities in particular ways.

Self-efficacy is an example of a cognitive theory that has implications for adult learning. Self-efficacy concerns people's beliefs about their capability to perform a particular task or handle a particular situation. This theory is based on the principle that individuals are more likely to behave in a particular way if they possess high self-efficacy; that is, performance and motivation are partly determined by how effective people believe they can be (Bandura 1977). This can result in 'self-fulfilling prophecies' – if a person is confident they will do well in something, they are more likely to try harder at it and therefore gain good results. Bandura argued that the most important source of self-efficacy is a person's *performance outcomes* – judgements of how they have performed at a given task previously. Self-efficacy can also be developed vicariously – if someone similar to a person succeeds, this can increase a person's self-efficacy (and vice-versa). Verbal persuasion, in the form of encouragement or discouragement, can also influence a person's self-efficacy. Empirical evidence suggests a link between self-efficacy, motivation and outcomes such as work attendance, productivity and future employment (Bandura 1988; Eden & Avirma 1993).

3. Humanist theories: the learning process is a 'personal act to fulfil potential', stimulated by a person's affective and cognitive needs.

Humanist theories hold that the purpose of education is to help people become self-actualised and autonomous. Andragogy and self-directed learning (discussed above) fall into this group, along with facilitation theory. This holds that learning occurs when the educator acts as a 'facilitator', establishing an atmosphere in which learners feel comfortable with new ideas and are encouraged to take responsibility for their own learning (Dunn 2002).

4. Social and situational theories: the learning process is one of interaction and observation in social contexts and relationships between people.

These theories hold that education is about promoting participation in communities of practice, in which conversation can occur.

Social learning theories are a sub-set of social and situational theories. There are many definitions, one emphasising that social learning works through 'people learning from observing other people', through *attending* to a behaviour, *remembering* it as a possibility, and then *rehearsing it* in practice (Smith 1999). Another definition suggests that social learning is a change of 'understanding' which *goes beyond* individuals, resulting in collective change at a network or societal level. This occurs 'through social interactions and processes between actors within a social network' (Reed et al. 2010). A more radical model is that of 'situated learning' – in which learning is not seen in terms of the acquisition of knowledge by individuals but rather as a *process of social participation.* People join communities at the periphery, but as they become more competent they move to the centre of the community (Lave & Wenger 1991). This portrays learning as something that exists in the relationships between people, rather than as a 'possession of individuals that can be found inside their heads' (Murphy 1999).

Summary and implications: Recent theories and definitions of capacity emphasise that it consists of a multi-layered set of processes, which are about more than 'skills'. Capacity development can be understood as complex (requiring an understanding of whole systems, and interventions at different levels of these systems), and multi-dimensional, involving change at individual, interpersonal, organisational and institutional levels.

Theories of adult learning provide insights into how individual-level capacity is developed, which is important given the strong emphasis on training within the BCURE programme. There is no single accepted model of adult learning, but theories of andragogy and self-directed learning suggest several 'key principles' that may

help inform EIPM training courses – for example, adults need to know why they are learning, and be actively involved in the learning process. Other learning theories emphasise issues of power and the role of learning in transforming the learners' reality. Finally, behaviourist, cognitivist, humanist and social theories of learning provide a **diverse set of models for understanding the mechanisms that link training to learning** – including theories of self-efficacy and social learning which are further explored in Section 3.

Based on this evidence, we recommend that: the BCURE evaluation should examine and measure capacity change at multiple different levels; viewing capacity for EIPM as a complex issue and recognising the importance of studying whole systems, considering context, and expecting capacity development and evidence used to be potentially unpredictable and involve feedback loops. It should also draw on the rich literature on learning theories to help understand what is happening within BCURE training activities to result in individual behaviour change.

1.4. Conclusions and implications for the BCURE evaluation

This section has provided an overview of some of the main theories and concepts within the EIPM and capacity development literature. The discussion was structured around three questions, which help to unpack the assumptions underlying the BCURE programme theory.

1. What is 'research evidence', and what makes it 'good quality'? The literature emphasises the importance of other types of knowledge as well as research evidence, cautions against over-reliance on generic evidence hierarchies, and stresses that evidence is never neutral.

2. What is 'policy' and how can evidence benefit policy making? This review understands policy as a *deliberate plan of action to guide decisions and achieve desired outcomes*, encompassing policy processes, policy decisions and actions, and policy implementation. The rational 'policy cycle' model has largely been superseded in the theoretical literature by models emphasising the non-linear nature of policy change, the importance of interactions between various networks of actors, and the role of power and politics in shaping evidence use. Insights from psychological literature also emphasise the importance of mental models, contextual cues and social norms, which affect how people understand and interpret evidence. However, definitions of policy quality considered in this review – such as those used by the UK Civil Service – retain close links to linear and rational models; or at least assumptions about the objectivity of knowledge and evidence interpretation, which several theories discussed in this section challenge. There is therefore a tension between several significant EIPM concepts, and existing definitions of policy quality. The BCURE evaluation will need to navigate this, given its remit to measure improvements in policy quality as a result of BCURE interventions.

3. What is 'capacity to access, appraise and apply evidence', and how do we 'develop' it? Recent empirically based definitions of capacity development suggest that it is complex and multi-dimensional, incorporating change at individual, interpersonal, organisational and institutional levels. Theories of adult learning provide insights into how learning takes place at an individual level, which is important given the strong emphasis on training within the BCURE programme – for example, several 'key principles' are suggested that may help inform and assess EIPM training courses and provide insights into the mechanisms that link training to individual behaviour change.

Implications for the BCURE evaluation

The theories discussed in Section 1.1 imply that the BCURE evaluation should consider the interplay between research evidence and other forms of knowledge in the context of the BCURE programmes, as well as the *appropriateness* of evidence used by decision makers (as well as its quality). The evaluation should also consider how far available evidence in BCURE programme contexts reflects the existing views and beliefs of researchers, and how debates on evidence play out within particular policy processes.

The findings from Section 1.2 suggest the limitations of rational and linear models of policy change and evidence use in policy processes, and suggest that the BCURE evaluation should look beyond these to explicitly consider power and politics (in terms of actors and networks, institutions and discourse) when studying how evidence is used. There may also be value in drawing on theories of policy networks, to consider how different actors across and beyond traditional research/policy boundaries affect the access, appraisal and use of evidence. Theories and empirical evidence from the psychological literature suggest the importance of the evaluation explicitly recognising the role of cognitive processes and mental models in shaping individuals' understanding and interpretation of evidence – for example, in relation to training and individual behaviour change. In addition, the tensions between the EIPM conceptual literature and existing understandings of 'policy quality' suggest the value of the evaluation adopting an iterative approach to the study of 'policy quality,' beginning with existing standards (while recognising the tension between these and more recent theories of EIPM), but looking to further develop the concept of 'policy quality' in light of the primary evidence collected and the theories of power, politics, networks and complexity discussed in this section.

Finally, the findings from Section 1.3 suggest that the evaluation should examine and measure capacity change at multiple different levels (individual, interpersonal, organisational and institutional). The evaluation can also potentially benefit from applying core concepts of complex systems thinking to the study of capacity change (such as expecting it to be unpredictable and to incorporate feedback loops, and focusing explicitly on the role of relationships and networks). The evaluation should also draw on the rich literature on learning theories to help understand how BCURE training activities help lead to individual behavioural change.

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