# Knowledge Animation in Policy and Practice: Making Connections

**Louise Stoll**[1]
**Visiting Professor, London Centre for Leadership in Learning, Institute of Education, University of London**

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After completing my first research project, a longitudinal study of the effectiveness of junior schooling[2] (Mortimore et al, 1988), I remember that I wanted to find ways this could be 'fed back' into schools and policy to help make a difference. Perhaps this wasn't surprising given that the project's focus had been about how schools can make a difference (*School Matters*). My own history was of being seconded to the project as a teacher researcher. Whilst I switched to being a full-time researcher after three years, I maintained that connection with practice, nourished when working as a research director in Ontario at the Halton Board of Education where we were trying to 'implement' the findings of this and other research in an improvement project (Stoll and Fink, 1996). I quickly realised it wasn't that simple! This interest in the relationship between research, policy and practice and means by which these can be brought together to promote improvement and, especially, how research findings best find their way into policy and practice has continued to fascinate, absorb and challenge me.

Engagement in parallel research and development activity around school improvement and educational change has led to a focus on the issue of creating capacity for learning at all levels of the educational system to support educational change that enhances students' learning (Stoll, 1999; 2009 forthcoming). Capacity is a quality that allows people, individually and collectively, routinely to learn from the world around them and to apply this learning to new situations so that they can continue on a path toward their goals in an ever-changing context (Stoll and Earl, 2003). Professional learning communities' role in this has been significant (eg Louis, Kruse et al, 1995; Stoll and Louis, 2007) and so is knowledge animation. In this paper, I discuss knowledge animation and its theoretical underpinnings, before illustrating it with three case studies related to practice, policy and a university setting. Finally, I raise questions about what knowledge animation means for the traditional research process.

## Knowledge animation

The process I call *knowledge animation* (Stoll, 2007; 2008) is a social process by which practitioners and policy makers make learning connections when engaging with research findings. Knowledge animation is about helping people to learn and use ideas generated elsewhere, and

through this process create their own knowledge. It's concerned with finding ways of making knowledge accessible and mobile so that it stimulates dialogue that challenges people's thinking, promotes new understanding and helps them generate new knowledge that will enhance their practice and policy.

The purpose of knowledge animation in the field of educational change should be improved practice and policy that leads to enhanced student learning ('learning' is being used here in its widest sense, as in *learning to know*, *learning to do*, *learning to live together* and *learning to be* – Delors et al, 1996). The intermediate outcome is collaborative knowledge creation: new ideas generated that help solve specific learning and change implementation issues. To achieve this means developing a range of strategies with the aims of bringing research, practice and policy closer together, including helping practitioners and policy makers engage with research findings and generate new ideas and strategies to improve learning in their schools and systems.

The process of engagement is a process of learning for the adults involved. Two recent syntheses of evidence on professional learning that makes a difference to students emphasise the importance of external expertise (CUREE, 2003, 2005, 2007; Timperley et al, 2008). Timperley and colleagues' Best Evidence Synthesis of Professional Learning and Development, however, concludes that external expertise is necessary but insufficient. What appears to make the difference is surfacing tacit knowledge and challenging existing assumptions. Evidence-based dialogue carried out in a spirit of inquiry seems to promote powerful professional learning because as people engage in conversations about what evidence means, new knowledge can emerge as they come across new ideas or discover that ideas that they believe to be true don't hold up when under scrutiny and this recognition is used as an opportunity to rethink what they know and do (Earl and Timperley, 2008). So, dialogue or conversations that make presuppositions, ideas, beliefs and feelings explicit and available for exploration helps to promote knowledge creation.

At an organisational level, when people in groups draw on evidence and outside explicit knowledge and combine it with their own tacit knowledge as they respond to authentic problems, they tend to come up with innovative solutions (Nonaka and Takeuchi, 1995). Nonaka and Takeuchi argue that the interaction between people's tacit knowledge and explicit knowledge involves a social process of knowledge conversion. Taking an organisational learning perspective, Louis (1994) suggests that what is occurring is a socially constructed interpretation of facts and knowledge.

Knowledge animation aims to stimulate this social process in order to lead to deep learning and the production of innovative ideas that will help support development of people's practice. It's a mediated learning process involving community processing by policy makers and practitioners of research findings in the light of their own knowledge, experience and context.

Why choose the word 'animation'? 'Dissemination' has associations with one-way communication and spread of knowledge. Looking at 'transfer' of practice from one location to another, Fielding and colleagues (2005) caution that, for 'recipients' it often feels like someone else has decided that this will be good for them. Similarly, 'knowledge transfer', frequently used, also has a one-way orientation. 'Knowledge utilization' is another popular term in education (eg Cousins and Leithwood, 1993; Huberman, 1987), and in health sciences where it's used to describe the process of bringing a new idea, practice or technology into consistent and appropriate use in a clinical setting (eg Greenhalgh et al, 2004). Use is an extremely important part of the equation. However, it is the stage before use that is of interest here and that is much neglected, with the frequent assumption that getting the knowledge 'out there' is what matters. The word 'animation' has been chosen after much consideration. A word rarely associated with knowledge, the Latin word anima means breath, life or soul. It is intended to suggest focused and two-way energy that produces action, movement, dynamism and innovation. As Leadbeater (2008, p.230) says, "Ideas are animated when they are shared". In his book WE-THINK, he argues that in most fields "creativity emerges when people with different vantage points, skills and know-how combine their ideas to produce something new" (p.19). Educators in different contexts want ideas that will fit their particular situation. Combining their own experience and insights with those of research can help create appropriate solutions.

For the researcher, the idea of designing knowledge animation strategies and processes therefore is to help bring the research to life in ways such that others can engage with the ideas, locate them, make meaning and, through combining them with their own prior knowledge and experiences, together construct new knowledge to develop their practice. Knowledge animation materials and processes have to pay as much attention to learners and the social learning process as to the research itself. In terms of how people learn (Brandsford et al, 1999), environments created by knowledge animation processes are learner-centred (ie they "pay careful attention to the knowledge, skills, attitudes, and beliefs that learners bring to the educational setting", p 121). and they are community-centred, based on understandings coming both from social constructivist learning theories and socio-cultural theories.

Knowledge animation, therefore, fits well with the concept of professional learning communities, supportive, collegial groups of people who, inside and outside their immediate community, find ways to enquire on their practice and together learn new and better approaches that will enhance all students' learning (Stoll et al, 2006). Professional learning communities are an ideal stakeholder group within which knowledge animation processes can stimulate positive change.

Knowledge animation has several interconnected principles:

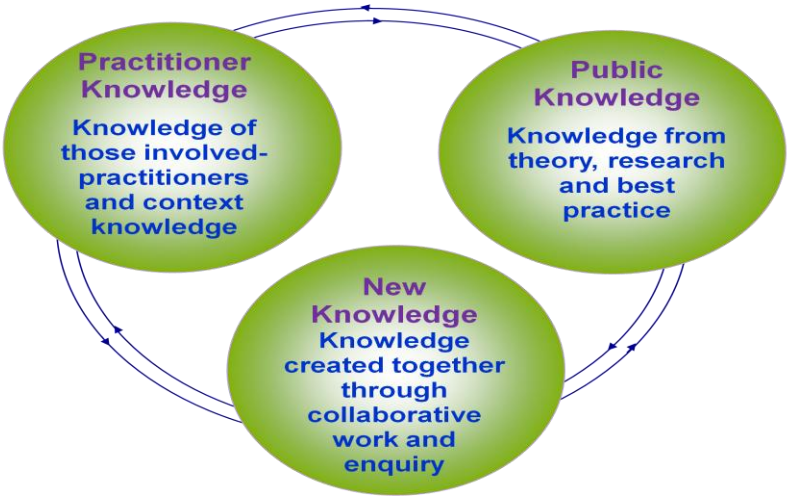
- *Learning is the focus* – the process involves co-construction of knowledge, respect for the perspective and context of learners; indeed, mutual learning.

- *Interdependence* – without a connected approach, less can be achieved, along with a genuine desire to collaborate.
- *External knowledge*, including high quality research presented in different ways to stimulate possible areas of development.
- *Diversity of perspectives* – based on mutual respect, leading to more powerful learning as well as bridging social capital between key partners.
- *Dialogue* – a process of connecting that involves suspension of judgement, openness and flexibility.
- *Joint enquiry* – a collaborative questioning process underpinned by a 'need to know' and to dig deeper for greater understanding, avoiding short-term shallow solutions.

Knowledge animation processes are diverse, including, for example, think pieces with questions, materials and tools, digital and other on-line resources, R+D and D+R projects etc.

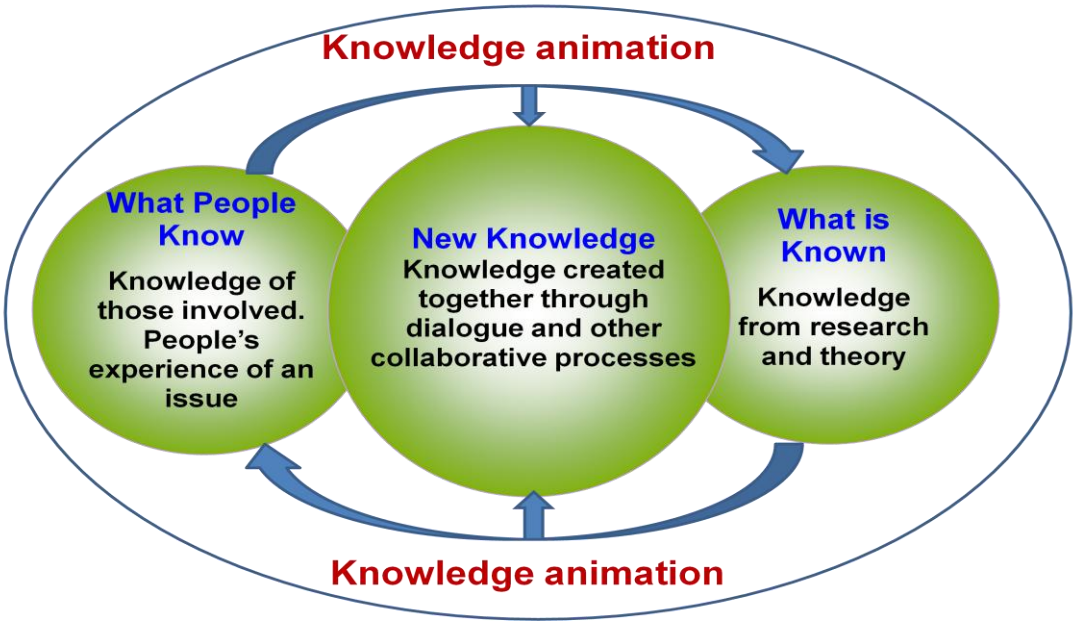
Looking for ways to represent the knowledge animation process, I drew on the National College for School Leadership's (2006) diagram of three fields of knowledge used in its Networked Learning Communities initiative (see Figure 1). Three interconnected fields of knowledge are identified: what individuals already know (frequently tacit knowledge), external knowledge (explicit knowledge) and the new knowledge created through dialogue and collaboration. I have shared this diagram with many practitioners and have been struck at how it resonates because it both validates their own knowledge and suggests that they can contribute towards creating new knowledge. Practitioners with a lower 'tolerance' for research findings also appear more open to engaging with them when the findings are prefaced with the ideas inherent in the three fields of knowledge model.

**Figure 1: Three Fields of Knowledge (NCSL, 2006)**



Locating the process of knowledge animation in relation to these three fields proved a challenge, and I adapted the diagram to develop a tentative model of what happens when knowledge animation occurs (see Figure 2).

**Figure 2: Creating new knowledge through knowledge animation: a tentative model**




The aim of knowledge animation is creation of new knowledge by learning communities that will help people enhance their practice and policy, and in Figure 2, this new knowledge takes centre stage, This new knowledge is the outcome of connecting what individuals know and what is known 'out there' (external research). Knowledge animation provides the collaborative processes for new knowledge creation by ensuring that what is known is connected to what people know through collaborative and dialogic processes.

**Knowledge animation processes**

Three case studies of the development, use and impact of knowledge animation processes are now provided. The first is a simulation, the second a toolkit, and the third a University Centre's evolving approach to knowledge animation.

*Example 1: Networking for Learning, a research-based CD-Rom simulation*

*Networking for Learning* is a simulation, an interactive tool created to help colleagues as they develop learning networks (Crandall and Stoll, 2005). Originally sponsored by the Innovation Unit of England's Department for Education and Skills and the National College for School Leadership for use by schools involved in England's Primary Strategy Learning Networks, it is anchored firmly

in research, and draws on ideas from an earlier simulation about educational change (Crandall and Associates, 1989), a popular professional development tool in North America.

The key purposes of *Networking for Learning* are to:

- raise and promote understanding of critical issues involved in developing sustainable learning networks and deriving benefit from them;
- facilitate colleagues' reflection on these issues in the context of developing their own learning networks;
- provoke dialogue and problem-solving among colleagues that informs network planning, initiation, development and sustainability;
- promote collaborative learning; and
- help colleagues consider the extent to which their networks are focused on learning and what approaches at different points in time are likely to have the best chance of success.

*Networking for Learning* asks colleagues (participants) to adopt the mindset of a team of consultants whose brief is to help a group of schools create a network focused on learning. Working as a team, colleagues have to try to help an imaginary group of schools create a learning network through decisions made that are intended to 'move' the characters on the simulation board through the stages of change associated with the development of a sustainable network – from 'exploring' to 'sustainable'. They have three simulated years to do this. Participants have access to initial information about the schools and characters. Each year there is a budget to spend on activities they believe will make progress toward their goals. Participant teams collaboratively have to choose from a list of activities to initiate a network that is focused on the improvement of learning and teaching and attempt to develop it to where the idea of a learning network is sustainable. Each time they choose an activity they receive feedback. Characters may move, signifying progress toward sustainability. Sometimes they also receive either benefits (evidence of pupil learning gains) or capacity enhancements (evidence of increased staff, school or network capacity to support learning).

Simulations are based on a constructivist perspective on learning (Jonassen, 1994; Duffy and Cunningham, 1996). Learners are meant to engage actively in the experience, which allows exploration and encourages reflection (Thomas and Milligan, 2004). In constructing this simulation, the intention is that two or three people sit at one computer or laptop, engaging collaboratively.

We have found that facilitation enables participants to come to more powerful understandings of the material and deepen their learning (Stoll et al, 2006). Facilitation's most important contribution appears to be an undeviating emphasis on the importance of colleagues taking a learning and enquiry orientation towards the simulation. The simulation is a learning tool designed to help

participants understand their own work, reflect on current challenges, and create effective future solutions. It deals with complexities involved in initiating and sustaining change with a diverse, cross organisational group, and enables users to explore frustrations and tensions of working across schools that may have different routines, priorities and professional cultures. This demands that facilitators create a space for learning and enquiry among participants – moving the group away from 'playing a game' into using the simulation to explore issues experienced in their own work. In effect facilitation aims to prompt colleagues into asking: "so what does this learning mean for the work that I'm involved in?" and: "what are the next moves we need to consider as a result of this new learning?" This occurs when colleagues have opportunities to reflect on their own experiences at critical junctures, using the simulation's reflective questions, as well as at other times. Facilitation also pays attention to ongoing review of the group's learning and actions arising from this.

Regular and frequent referral to practice and strong action orientation appears to enable participants to:

- engage with the external knowledge and new thinking;
- participate in dialogue and shared decision making;
- clarify behaviours that accelerate and impede networks' progress;
- create new knowledge; and
- make this learning useful in leveraging future action, including planning that's relevant to their network's development phase.

The simulation is currently being used in England to support development of aspiring school leaders and to aid facilitators of learning networks. It has been introduced into New Zealand for use with senior leadership teams and school clusters and is being contextualised before being introduced into the Netherlands. A principal in New Zealand describes how:

> As leader and facilitator I developed a programme to create ongoing opportunities for my Senior Leadership Team to engage with the content, embedded in activities and the simulation. To build the capacity of the senior leaders in my school a series of four workshops were planned . . . These sessions engaged the senior leaders with professional readings and activities linked to the simulation. At the end of each simulation session discussion was generated around participants' own theories of practice and the implication this had had when using the simulation. There was analysis of current beliefs, practices and prior knowledge. Discussion was generated around the implications this new knowledge and learning had for individual leaders, teachers in their teams and the school as a whole. Dissonance with current values and beliefs was created which deepened the

level of discussion and dialogue as the team looked to reposition, or reconstruct their thinking, individually and collectively (Taylor-Patel, 2009).

An evaluation strategy is currently being developed, focusing on the simulation as a form of leadership learning.

**Example 2: Toolkit related to the OECD's Improving School Leadership Activity[3]**

The outcome of most OECD educational activities is a report with accompanying summary. It is generally unclear how the findings of activities are used. Having been rapporteur for one of the case studies for the OECD's Improving School Leadership Activity (Pont et al, 2008a: Stoll et al, 2008), I suggested that a toolkit might be developed based on its findings.

As a means of knowledge animation, tool design is based on the principle that translating evidence into use leading to changed practice is an issue of learning. Tools are designed to help people make necessary learning connections with the particular content. Given that learners construct their learning based on their needs and experience, including their context, possible purposes of developing a toolkit linked to a report are to:

- provide windows into the report;
- help people reflect on the report's evidence as it relates to their experiences and contexts;
- help them audit their own situation;
- help them process interesting ideas;
- help them explore implications;
- help them prioritise decisions;
- help them consider possible strategies for moving forward.

The Improving School Leadership (ISL) toolkit was therefore designed as a learning resource, intended to facilitate policy makers and practitioners, separately and together, to:

- encounter the ISL report in manageable units of meaning and in accessible formats;
- explore their reactions and responses to its findings in ways that connect with their own experience, practice and context;
- debate the implications of the findings, self analyse and prioritise amongst them for their own policy formulation and/or practice development; and
- identify possible first or next steps.

To achieve this, the toolkit needed to support colleagues to be active in their engagement with *Improving School Leadership* by connecting and constructing ideas within the report's findings, and

beyond into their own practice and context through analysis, reflection and dialogue. The toolkit therefore included:

- frameworks and heuristics for analysing and contextualising the report's findings;
- questions for reflection and discussion;
- protocols and resources for activities to explore implications; and
- writing and thinking frames for planning future development.

The draft design of the toolkit was shared at a workshop at the Activity's final conference with ISL country coordinators who provided feedback and suggestions. The name 'toolkit' provoked discussion as to whether this would suggest a 'how to do this in easy steps' dissemination mechanism. While the expression was retained, its purpose to facilitate learning was emphasised, as was the orientation towards flexibility of use. A draft of the final materials was also circulated to country coordinators and other key stakeholders for feedback. The only feedback received was endorsement of the materials.

The toolkit was designed with four sections:

*Section 1- Understanding and analysis,* containing a think piece to stimulate thinking and aid understanding of report's findings. In line with the toolkit's aim to encourage collaborative learning and decision-making, questions are included to promote joint reflection and dialogue.

*Section 2 - Self diagnosing and auditing. A* gap analysis questionnaire invites people to consider the report's findings in relation to their own beliefs and context. Questions are also provided to promote reflection on results and implications for policy and/or practice.

*Section 3 - Prioritising and taking action.* These activities are designed to help people decide which parts of the report findings to engage with first, prioritising based on a set of choices. This is followed by a process promoting action linked to the chosen priorities.

*Section 4 - Communicating and connecting.* This activity focuses on bringing different stakeholders together as people respond to the recommendations in the report and what it means for policy and practice in their contexts.

Annexes to the report contain the summaries of the main report and case studies, and practical examples with questions to stimulate reflective dialogue. The sections have been ordered sequentially, but the introduction explains that the have been designed flexibly so that their use can be adapted to different contexts.

At the time of writing, the toolkit is still awaiting publication. Final drafts of different sections have, however, been used in a range of contexts. For example, the International Confederation of Principals have used the self diagnosis audit with members of their Executive Board to explore strengths and needs of member countries.

A process has been set up by the OECD to learn about country school leadership developments and the impact of ISL and then further to help disseminate more broadly the ISL recommendations and what the OECD is learning about their impact. Use of the toolkit will be incorporated into this process, also exploring such use as a measure of policy development and ISL impact and indicating areas of potential further policy change.

**Example 3: Applying knowledge animation to a university setting – case study of a university centre**

The Knowledge Animation Project was designed last year at the London Centre for Leadership in Learning (LCLL) to help the closer alignment of the Centre's research and practice elements. The project's vision was that research and practice in the Centre will become interconnected and interdependent. Individual knowledge audit interviews were carried out with all staff on academic (research) and professional contracts (34 colleagues) about their main areas of expertise. Based on the interviews, the Centre's Director, Jan Robertson, and I developed a model that was then shared, modified and validated by colleagues. It summarises four major areas of knowledge of colleagues working in the Centre Thus far, other project activities have included auditing the Centre's professional learning community, using a range of knowledge animation processes to design a conference collaboratively, and creating RIPPLE (Research into Practice and Policy for Leadership in Education).

The next phase as a Centre is to ensure that knowledge animation infuses everything as a habit of mind where "the behaviors require a discipline of the mind that is practiced so it becomes a habitual way of working toward more thoughtful, intelligent action" (Costa and Kallick, 2000, p.xii). For some people, this is already part of the way they already work, but as a Centre colleague commented in referring to the entire Centre: "Knowledge animation needs to be seen and valued as a crucial part of what we are here for". Currently, a knowledge animation strategy is being developed to maximise and take forward existing practice. Some suggested components within the strategy are:

- A knowledge animation component in research proposals submitted to funders, with a statement about the Centre's commitment about research into practice through knowledge animation.

- With completed research projects, in addition to the knowledge animation strategy for the client/funder, the research team shares and discusses their findings, implications and thoughts they have about knowledge animation with the Centre's *knowledge animation development team*, 'translators' who understand learning and learning communities and have knowledge animation process skills. The development team drafts ideas, eg for programmes, projects, consultancy, materials etc. These are discussed and validated with the research team and with practitioners and/or policy makers.
- To design R+D projects, drawing on the Centre's knowledge areas and involving colleagues in jointly developed proposals that bring together researchers and knowledge animators.
- Writing workshops that explore and support professional and policy writing.
- Each time an academic article is written and submitted for publication, a parallel professional article is also written.
- To design D+R projects that "create the space for new knowledge creators" and use and develop the Centre's practitioner research knowledge (eg drawing on colleagues' research expertise in the areas of action research, research-engaged schools, networking, collaboration etc). Also evaluate these projects and find ways to animate the knowledge, including supporting practitioners in this process.
- Connect with other universities, organisations and agencies exploring similar territory eg OISE/University of Toronto's work on knowledge mobilization, CUREE etc, as in the symposium of which this paper forms one part
- Identify a *knowledge animation co-ordinator* (overall champion) who will keep the energy going and wheels turning.
- Further develop existing practice by establishing a *reading panel*, consisting of colleagues from all parts of the Centre willing to read other colleagues' writing before it is sent for publishing with an eye on knowledge animation issues. A set of learner-centred and knowledge creation oriented questions that any reader would ask can be developed to support this.

**Whose knowledge? A challenge for researchers**

The ultimate accolade for a researcher in many university systems is publication of a sole authored text – proof, supposedly, that the ideas are of that person alone. But, of course, we are all influenced by others' ideas and knowledge; whether it's what we have read, heard or discovered through our research. The authorship of WE-THINK is attributed to 'Charles Leadbeater (and 257 other people)'. He explains how he wrote a book in a more open way to engage people in developing and debating ideas. He put the first draft online, and drew on the responses and ideas of those who sent feedback. Each time I interview someone, I am engaging with their knowledge,

perceptions and experience that then shape my own knowledge. The other day I was interviewing a teacher. At one point I must have looked at her differently because she asked "Am I going off on a tangent?" to which I replied: "No, you were really making me think". Some might question whether my facial expression was a sign of poor interviewing technique (I usually try to maintain the neutral expression I learnt as a new researcher), but I remember a powerful feeling of having my prior knowledge and beliefs challenged.

So, who is the expert? Who can take credit for the ideas? In my experience, knowledge animation enriches the original knowledge as practitioners engage with the ideas and shape them to fit their circumstances. If we take the process of sharing, modifying and validating LCLL's model of the Centre's knowledge areas, this involved knowledge animation as colleagues engaged with and enriched the original model. Of course, many people argue that policy makers usually 'cherry pick' the research findings they want, but they, too, have to make sense of research and find ways to bring it to life. Isn't it better that researchers support them with this, working on maintaining the integrity of the original ideas whilst understanding that the process of implementation is going to involve further knowledge?

**Conclusion**

Research use is much more than having a published version of high quality, relevant research. It's also an issue of stakeholders making learning connections through dialogue and social processing in a learning community that leads to further knowledge that can be implemented in specific contexts. Knowledge animation strategies focus on findings ways that will enhance these learning connections for policy and practice. There's still a long way to go to understand exactly how the process of knowledge animation works and in what way it makes a difference to people's understanding and use of research findings, but acknowledging the major role of social learning in this process is critical.

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