

## Chapter 5 Reflective Questions – The Pipeline

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### *Traversing the gap*

1. What kind of evidence is needed for something to be described as 'evidence-informed' and/or 'evidence-based'? What is the role of 'research' and 'practical' evidence?

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2. To what extent is it possible to describe, define and codify classroom practices? What are the principles for doing this well and what technologies (e.g., videos, guides, in-person support, resources) might be helpful to achieve this?

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3. When specifying evidence-informed practices and interventions, to what extent is it desirable to leave contextualisation and 'intelligent' adaptation to teachers? How can researchers and/or teachers tell the difference between variation in practice and context that impacts the effectiveness of practice, and variation which doesn't?

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4. How much do teachers need to know about why a strategy works to be able to successfully use it? To what extent can research provide (and test) this understanding?

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5. What makes a good theory of change/logic model? What role do these have in professional practice beyond their use in evaluation research?

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*Complexity, science and RCTs*

6. The book accuses RCTs of sidestepping rather than addressing the problem of complexity. How might RCTs better grapple with complexity and/or provide robust focus tests of key claims about effectiveness? What is amenable to testing by RCT? What is not? How are RCTs targeted and employed most fruitfully?

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7. The 'external complex system' of the classroom and school is described in the book. Often the relevant factors in the external complex system (which influence effectiveness) are lumped together as 'context'. How can we better differentiate influential teacher and school factors which influence the success or not of a defined intervention?

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8. What are the most important things to know about the 'internal complex system' (i.e., a defined intervention or strategy). Who needs to know what to make it work? Are there different knowledge needs for evaluation and implementation purposes?

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9. A trade-off between internal and external complexity is described. How would you strike the balance? What does the optimal position or variation depend on?

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10. How serious is the issue of limited understanding of the 'business as usual' condition?

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11. How might we produce robust evidence for more complex and multi-factorial causal systems (i.e., 'generative' causal systems and causal 'cakes'/'webs')?

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12. What practical and research steps are needed before an intervention is ready for scale up? What else needs to be developed or better understood?

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*Summarising and communicating*

13. Numerous issues with effect sizes are listed. Which of these are the most serious? To what extent do the issues with effect sizes undermine the current evidence base? How might systematic review and meta-analytical methods better account for biases in effect sizes?

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14. How can rates of replication in education research be improved?

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15. How can we tell the difference between informative 'reduction' and being 'reductive' in a way that oversimplifies or misleads?

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16. Is it possible to produce more conditional ('it this, then') effectiveness findings? What are the implications of doing this for a) evaluation and b) implementation?

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