

Making evidence-based decisions: The illusory quest for rigour and certainty

Scope

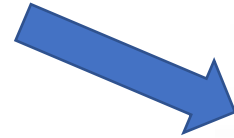
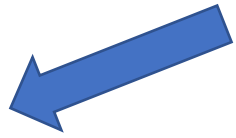
- All kinds of evidence-based decision-making.
- A normative framework

The Problem



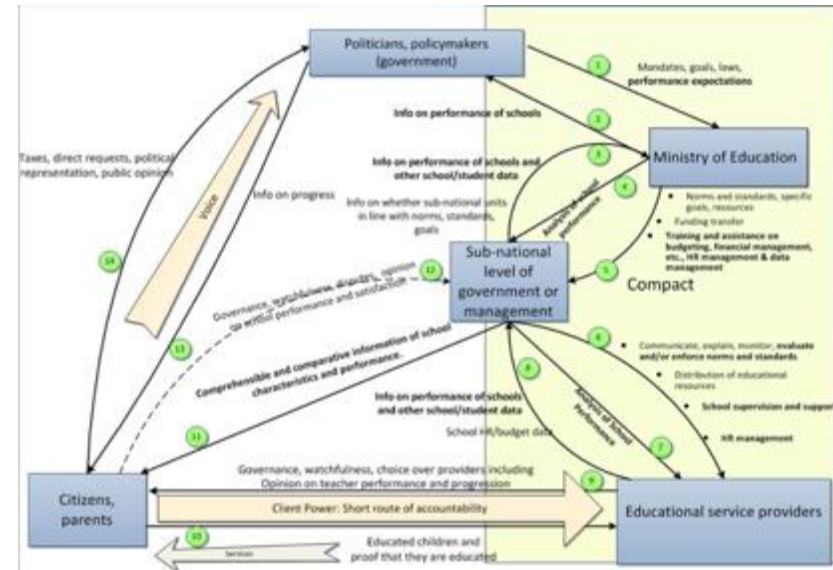
The Problem





The Problem

- “Interventions” need to function sustainably, at scale in a system



The Problem

- Certainty costs time and money
- Agile, responsive M&E systems result in less certainty

What levels of certainty do we need for which kinds of decisions?

The framework – two elements

- 1) Identify source of uncertainty (aka lack of rigour) and reduce it
- 2) Think about consequences – for the outcome, the policy decision

1. Uncertainty

- Statistical uncertainty
- Methodological uncertainty & assumptions
- Transporting findings from one place/time to another

Approaches to Rigour

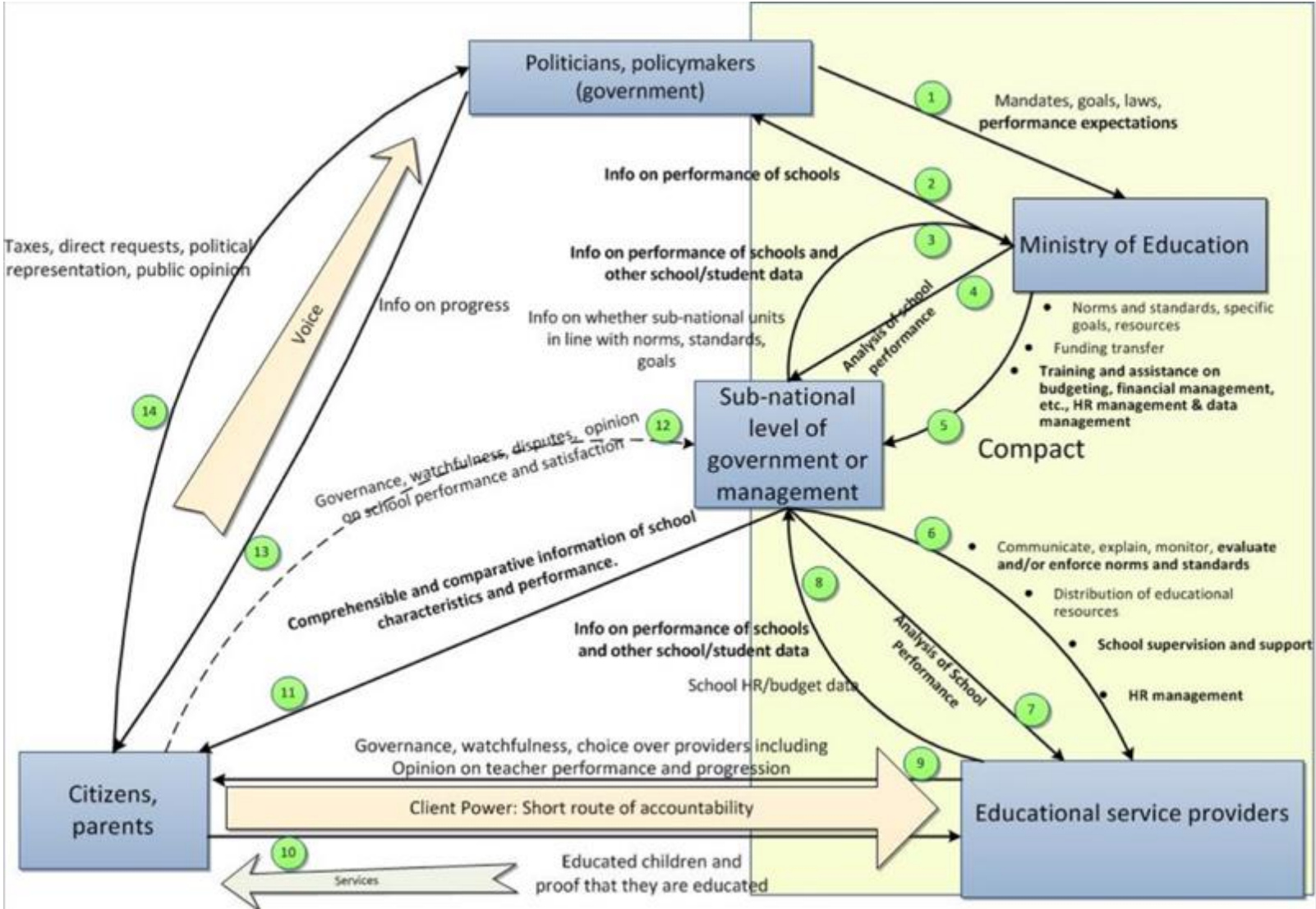


RCTs

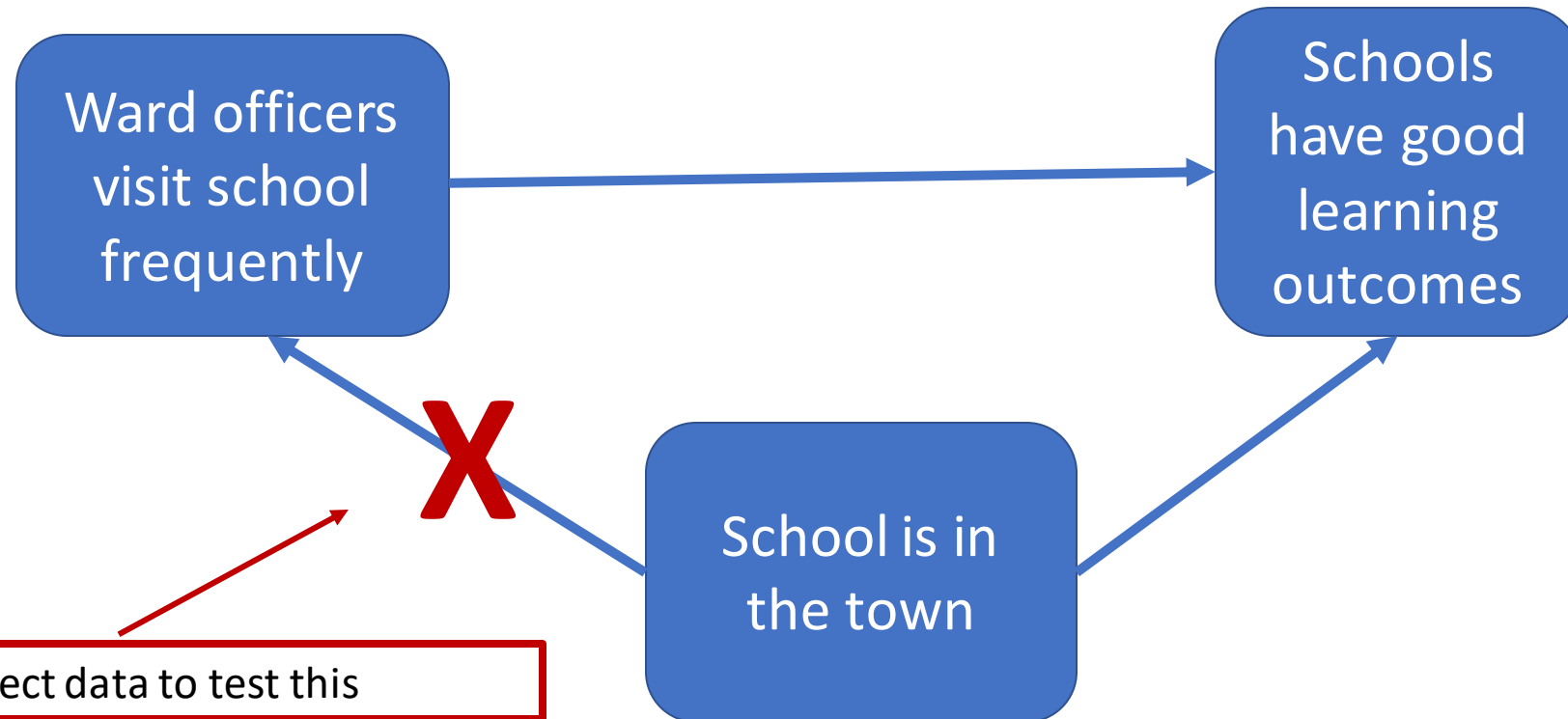


Theory-based methods;
assumption testing

Building a case for rigour – systems research

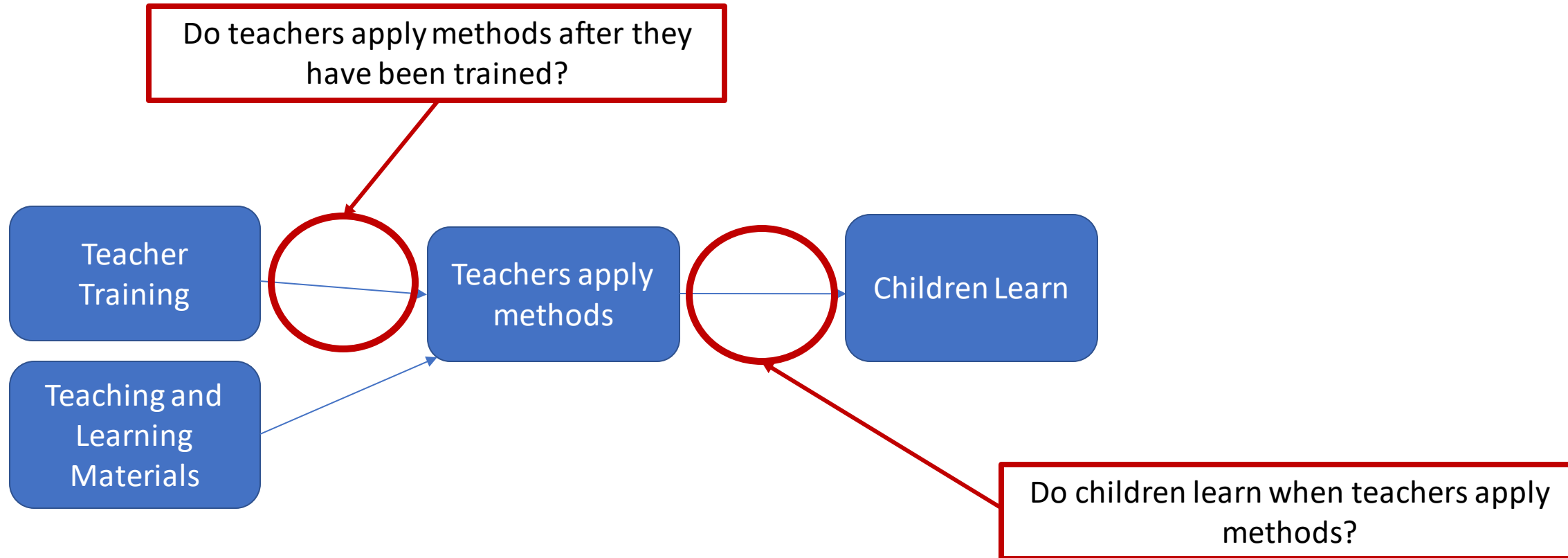


1. Uncertainty from methods/assumptions

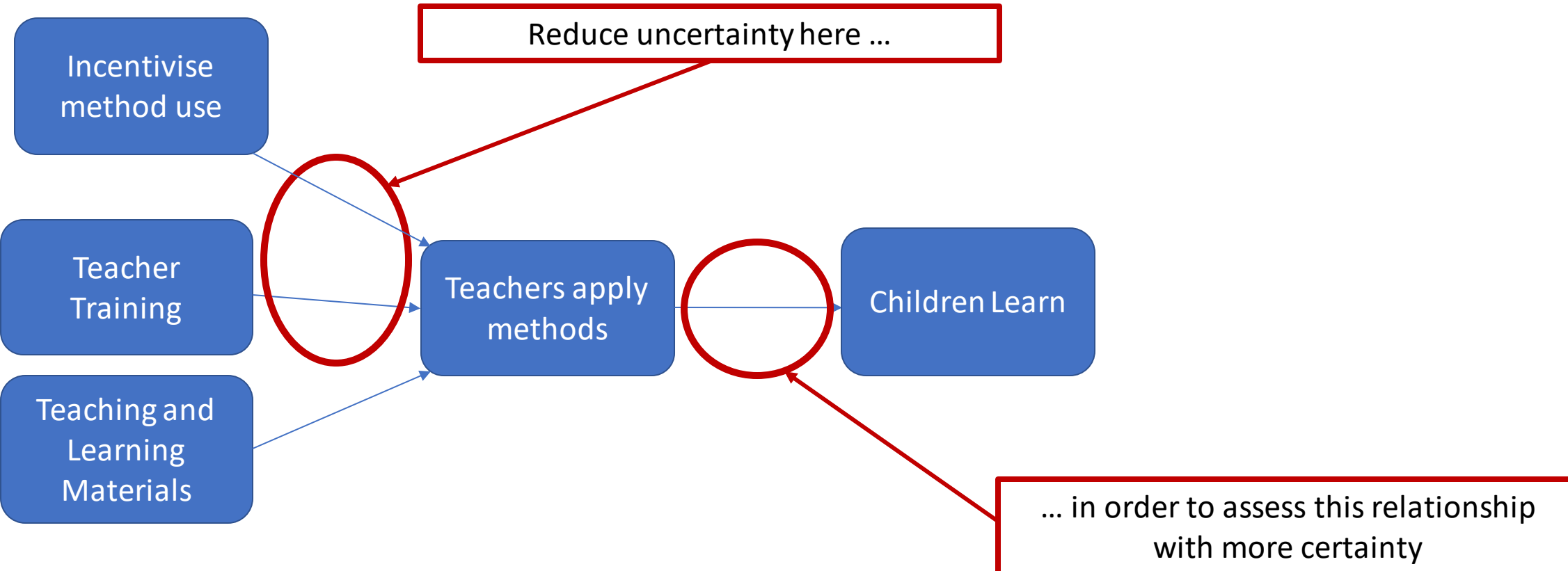


See, e. g. process tracing; also Cook, T. D., and Campbell, D. T. Quasi-Experimentation. Boston: Houghton Mifflin, 1979.

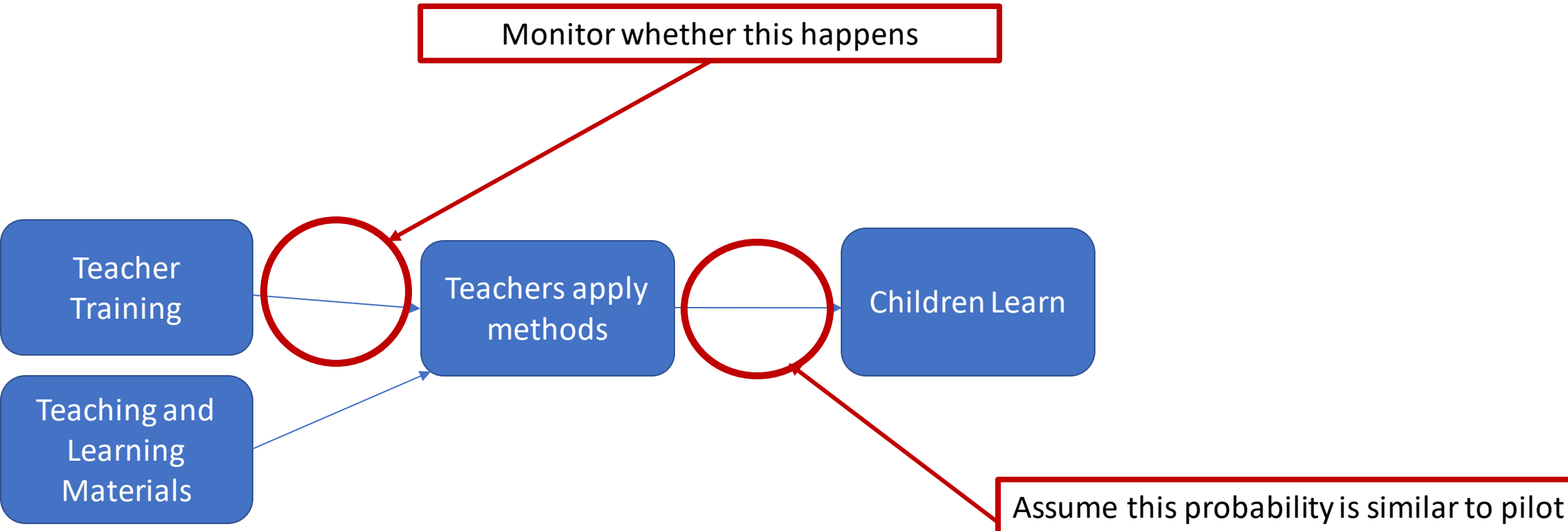
Theory-driven approach to uncertainty



Theory driven approach – pilot study



Theory driven approach – scaling up



2. The consequence of uncertainty

Drug	Cure Rate	Death Rate
Notsuridox	0-70%	0%
Uncertanophil	80-90%	0-5%



We might kill someone



We might waste money



2. Consequences

of:

- Getting it wrong
- Inaction

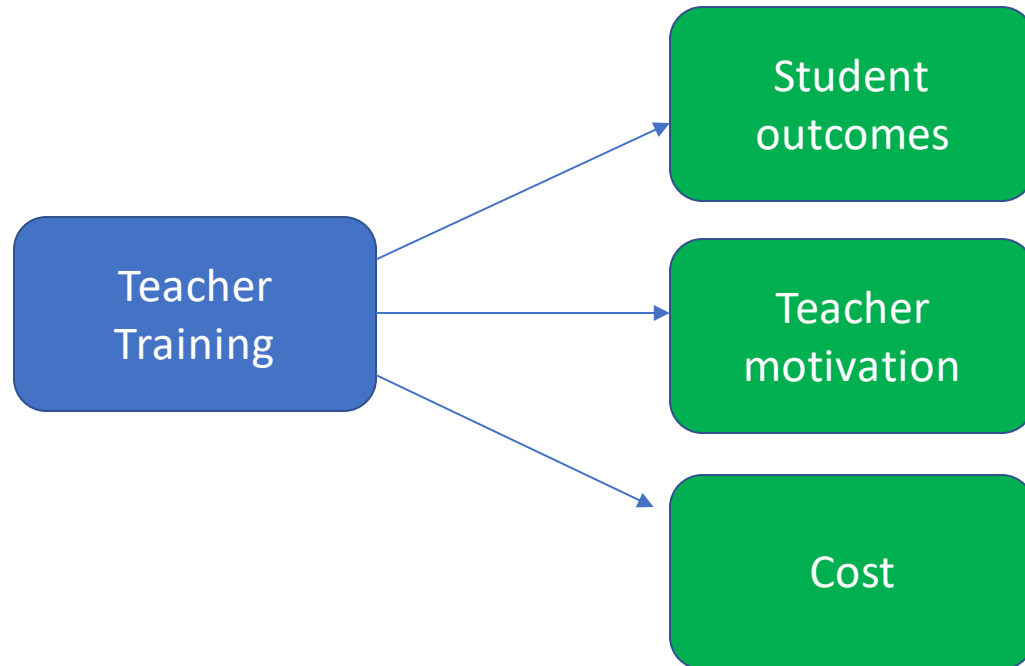
Unequivocal
evidence

Assess imperfect
evidence, consider
context, act &
measure

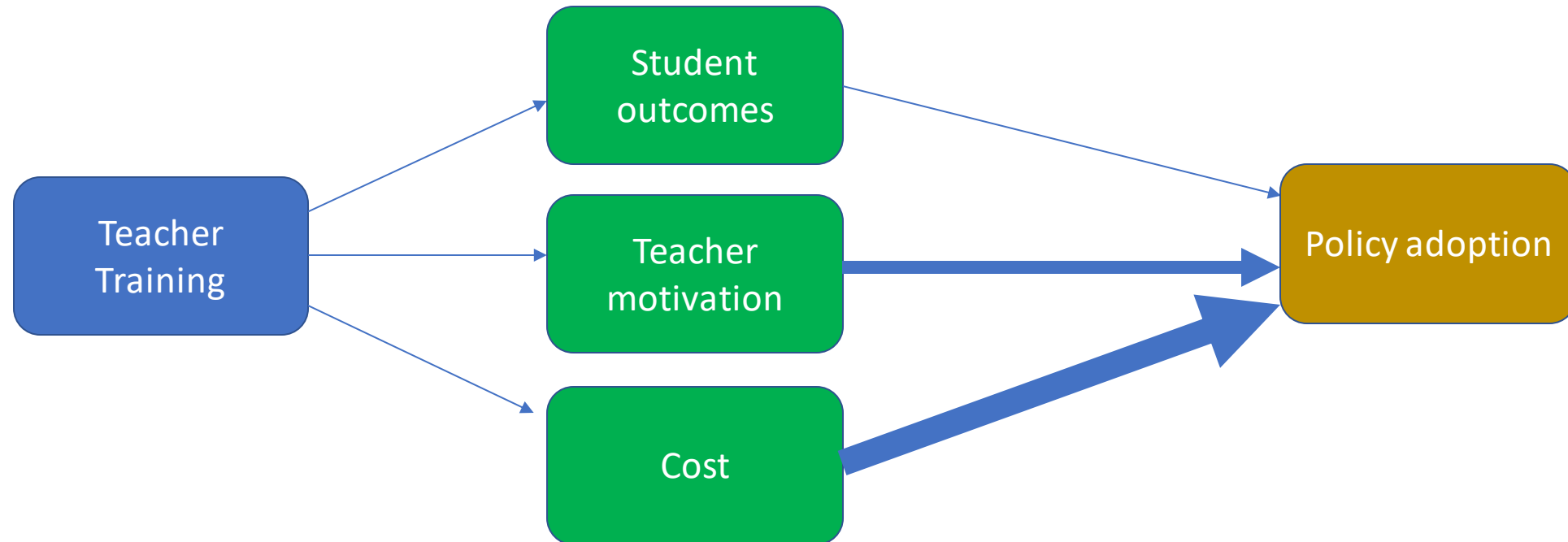
Implications

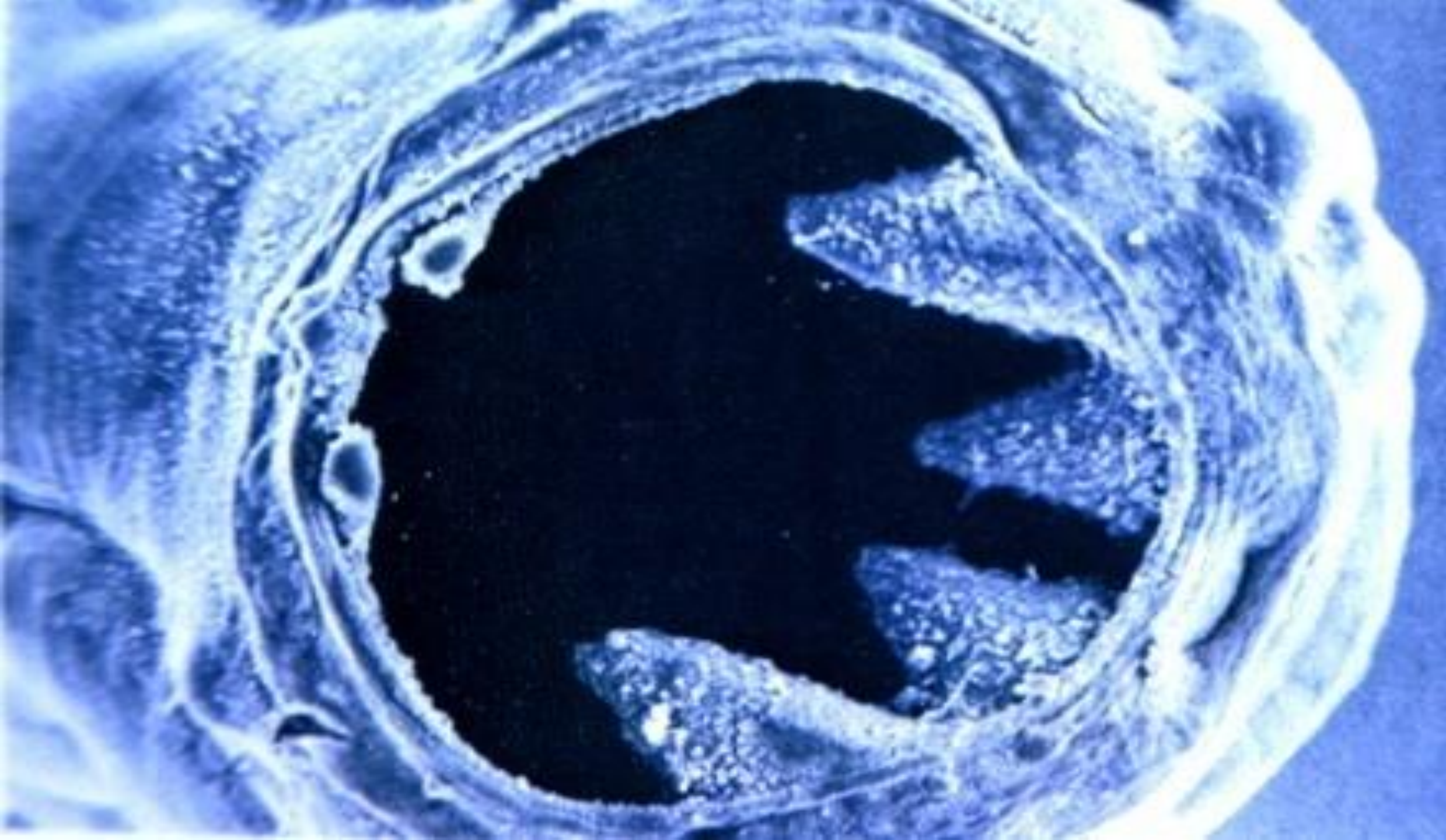
1. The silver bullet drug-trial RCT isn't applicable in education systems research because (a) the issue is more complicated and (b) lives are not at stake
2. We should pursue greater rigour when there are bigger consequences

2. The consequences of uncertainty

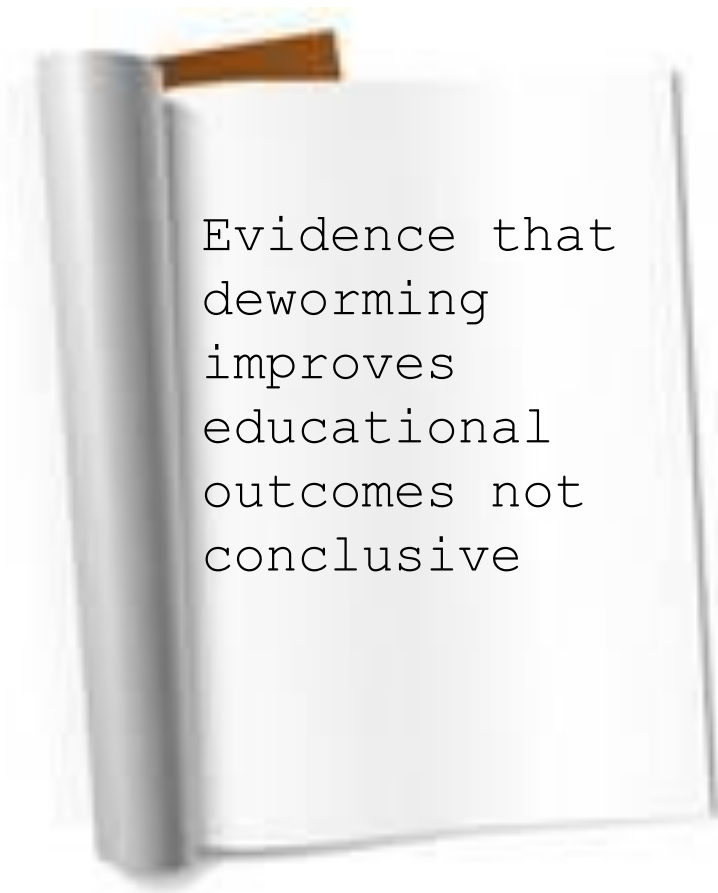


Consequences for Policy Decision Makers





The Impact of Deworming on Education



Evidence that
deworming
improves
educational
outcomes not
conclusive

Cochrane Review



Deworming: A
Best Buy for
Development

J-PAL

Consequences of school-based deworming

- Deworming - > No serious side effects **Certain**
- Deworming - > Improved Health **More certain**
- Deworming - > Low cost **More certain**
- Deworming - > Improved Education **Less certain**

Conclusions

Uncertainty ..

1a) The case for a rigorous conclusion has many components. Identify and reduce sources of uncertainty

1b) Build a theory and identify which elements are identified with less certainty

.. and its consequences

2a) If consequences are not severe, more uncertainty is tolerable. It is possible to justify building a case for rigour from several lines of evidence (especially if decision is urgent and more evidence is hard to come by)

2b) We need more rigour for elements of a program / outcomes of a program that have greater costs and consequences

Thanks!

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shared.rti.org – blog on evaluation methods