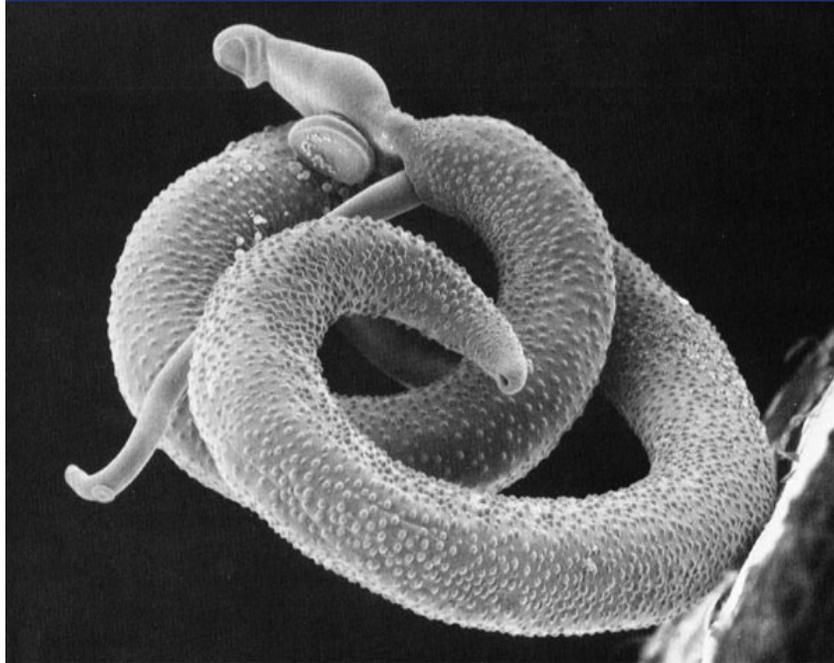


Quality education for all children? What works in education in developing countries

Howard White, 3ie

Deworming



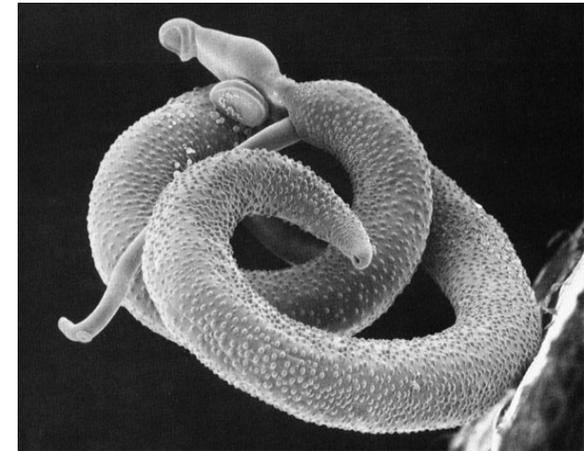
School-based deworming is one of the most cost-effective methods of improving school participation. The evidence ... has contributed to the scale up of school-based deworming to over 59 million children (J-PAL website)

More on worms



A 2008 systematic review reports impact on schooling from seven trials:

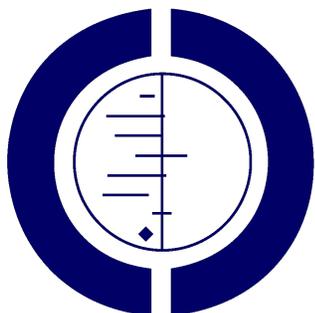
- India: no impact
- Vietnam: no impact
- South Africa: no impact
- Jamaica: 1 study impact in 3/10 tests, 1 study: no impact
- Zanzibar: no impact
- Guatemala: no impact



Lessons



- Perhaps shouldn't base global policy on single studies
- Systematic reviews sound rather important, let's talk about them



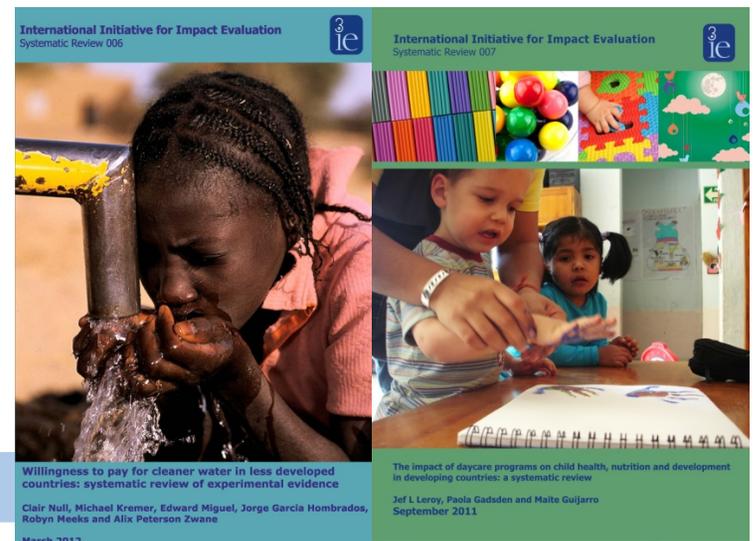
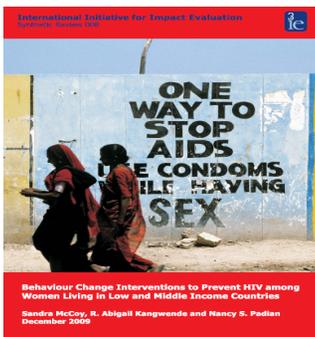
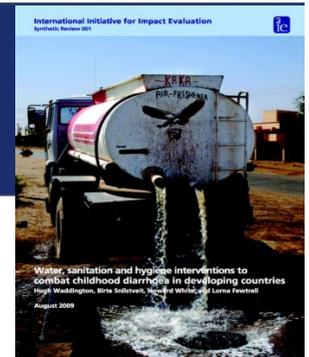
THE COCHRANE
COLLABORATION®



THE CAMPBELL
COLLABORATION

A systematic review

- Systematic search
- Systematic inclusion / exclusion against explicit criteria
- Systematic synthesis of findings (including meta-analysis)
- Systematic presentation of methods, analysis and findings



Howard White

www.3ieimpact.org

Search: education review



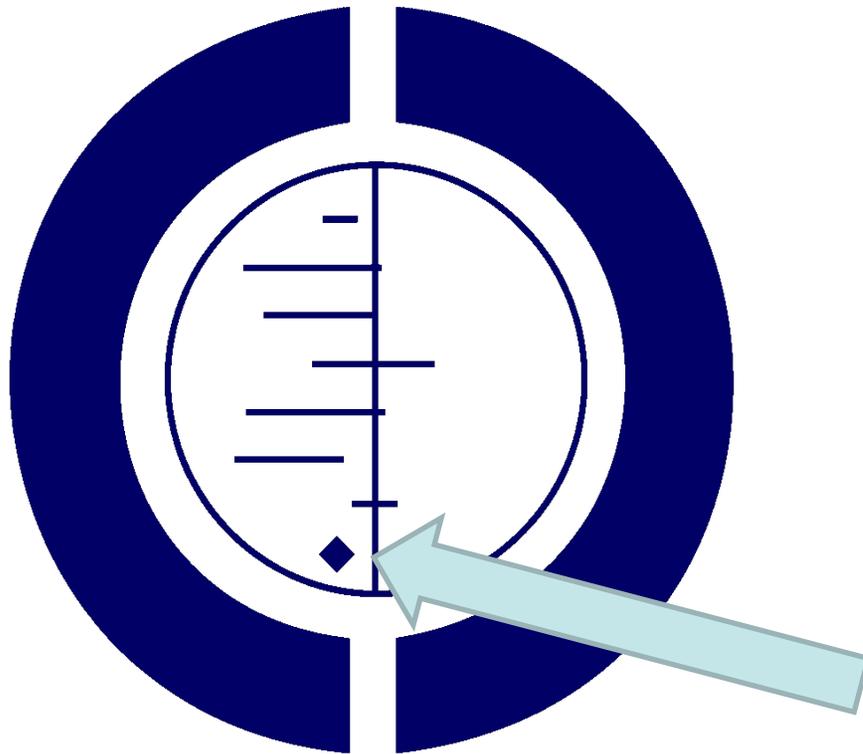
Database searches (n=10,648)

Screening of database results
(n=469)

Full-text reports retrieved
(n=585)

Studies included in
review (n=73)

Meta-analysis



**THE COCHRANE
COLLABORATION®**

Corticosteroid for
women about to
deliver prematurely

30-50%
reduction in
mortality

Why meta-analysis matters



Errors in hypothesis testing

	H₀ correct	H₀ false
Don't reject H ₀	No error	Type II error 'false negative'
Reject H ₀	Type I error 'false positive'	No error

Errors in hypothesis testing



Type II error is often higher than we think

Because we

- Underestimate attrition
- Over-estimate compliance
- Over-estimate minimum effect size (i.e. we think the programme will make a bigger difference than it actually does)

se

error
% but
60%

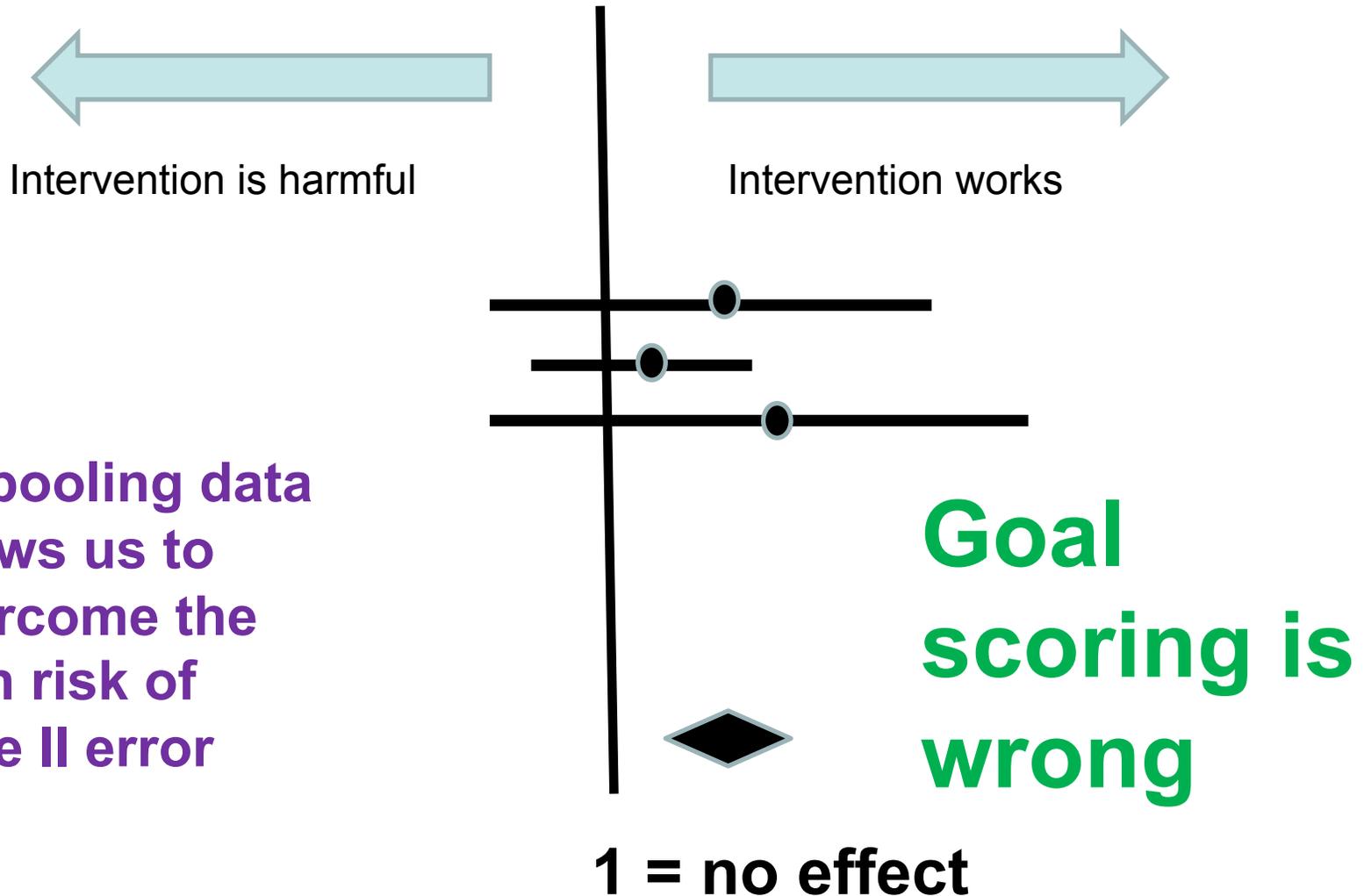
or

Implications



- An RCT is no better than tossing a coin at determining if a successful programme is working so:
 - Power, power, power
 - A theory-based approach can lead us to think correct or false negative
 - We also need replicate ‘unsuccessful’ programmes
 - And we really REALLY need to do SRs (we will see why shortly)

Pooling evidence



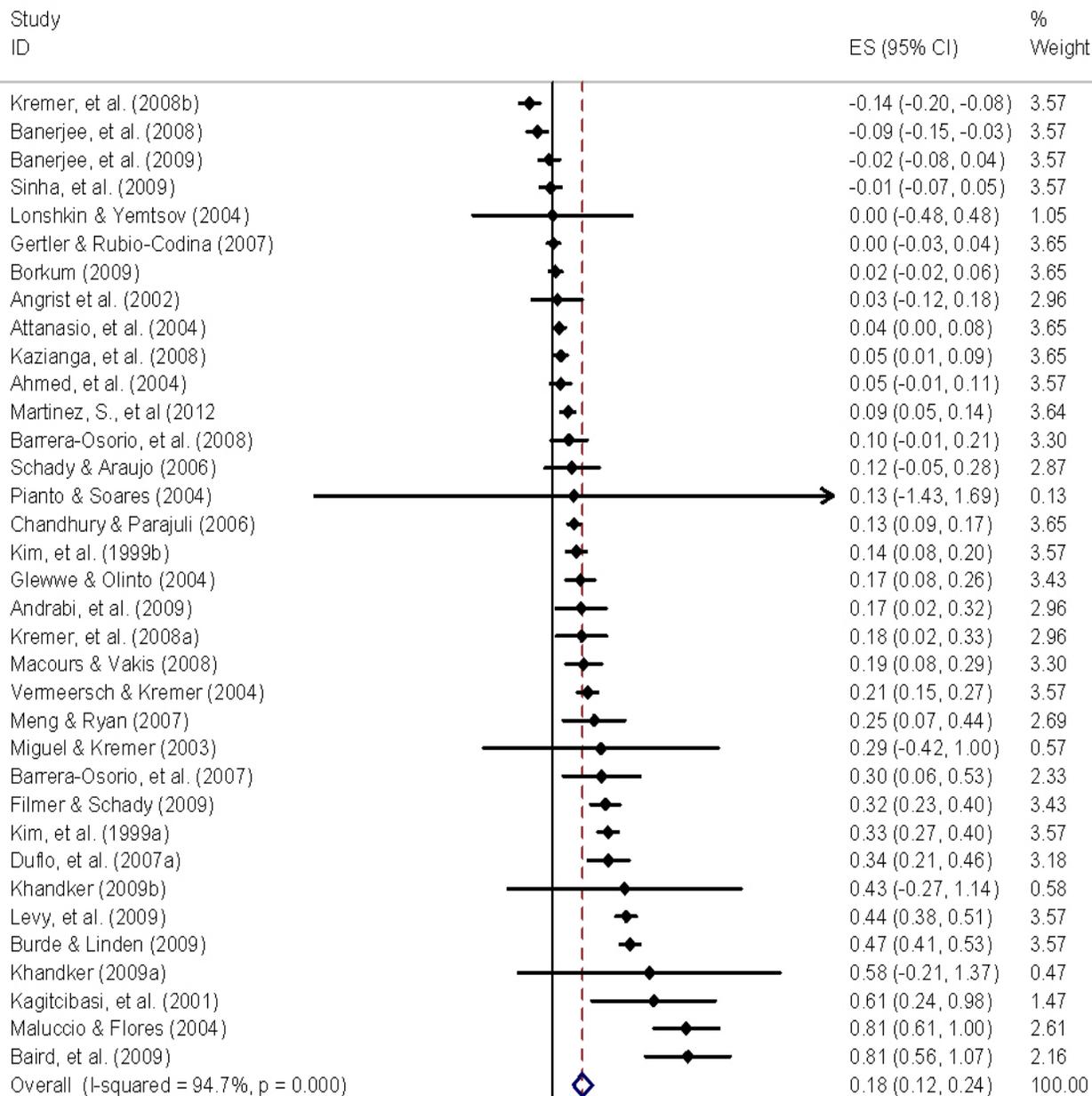


So, finally.....



What works in
education:
where and why?



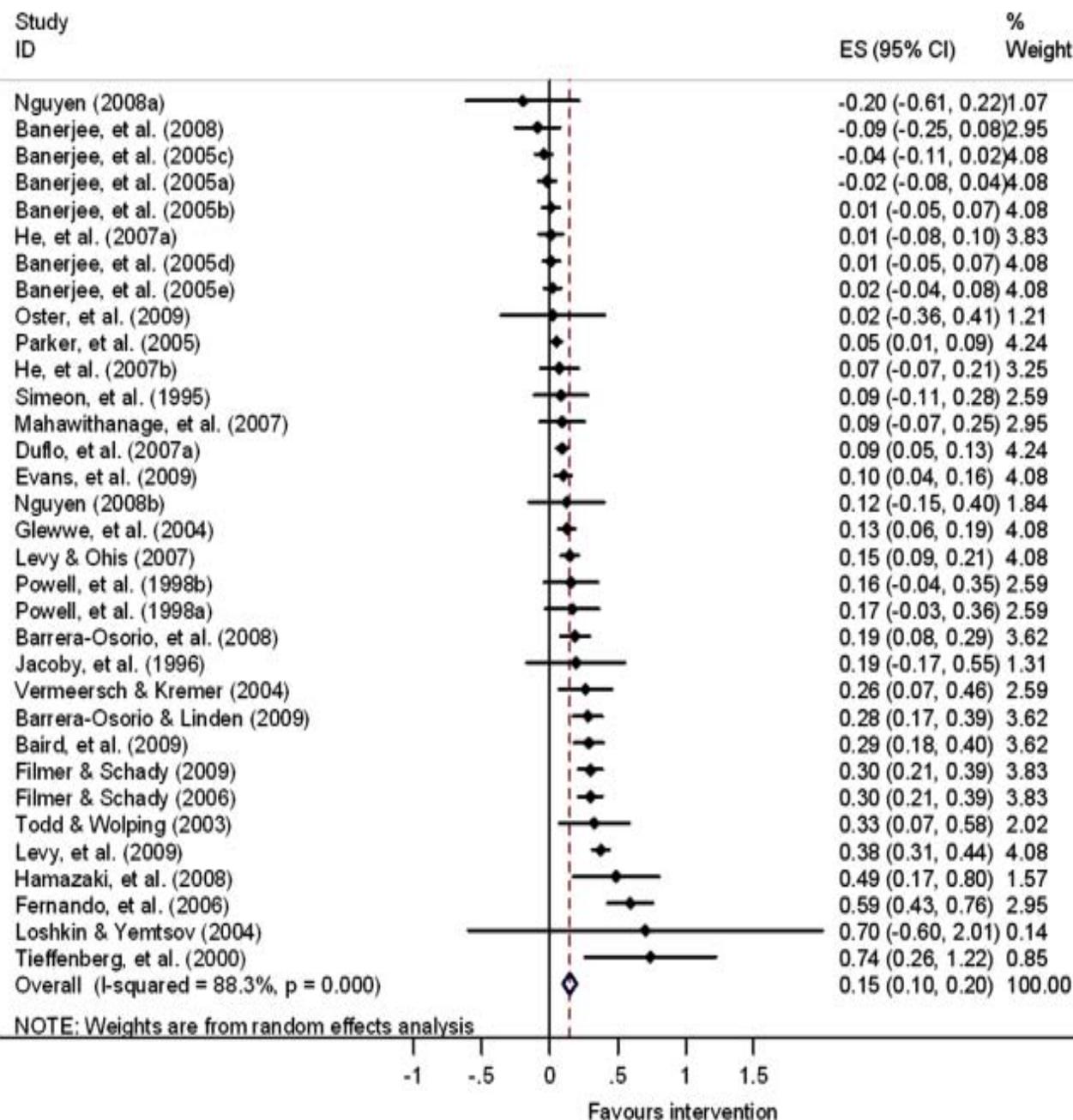


NOTE: Weights are from random effects analysis

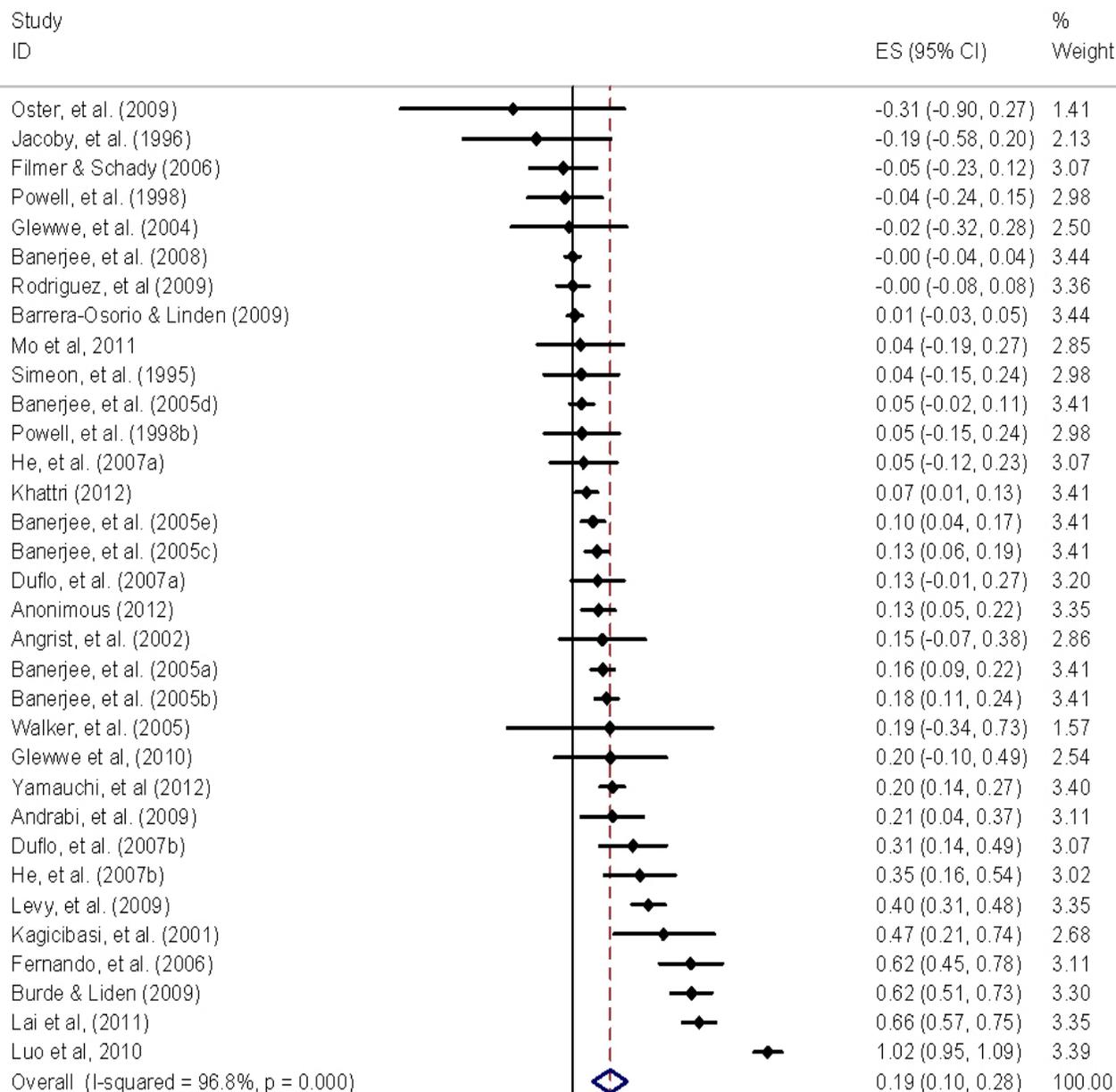
-1 -0.5 0 0.5 1 1.5
Favours intervention



Everything works: enrolments



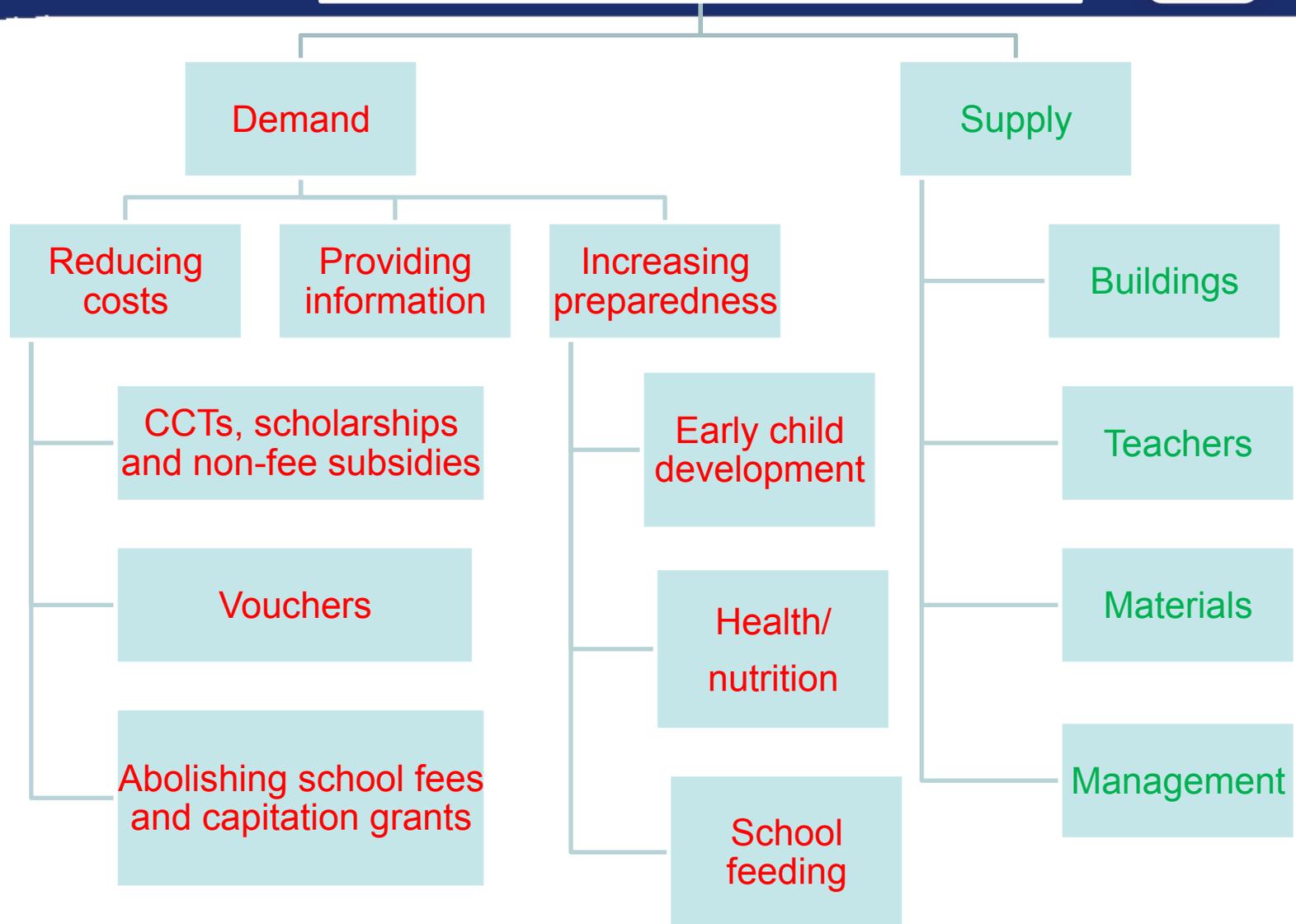
Everything works:
attendance



NOTE: Weights are from random effects analysis

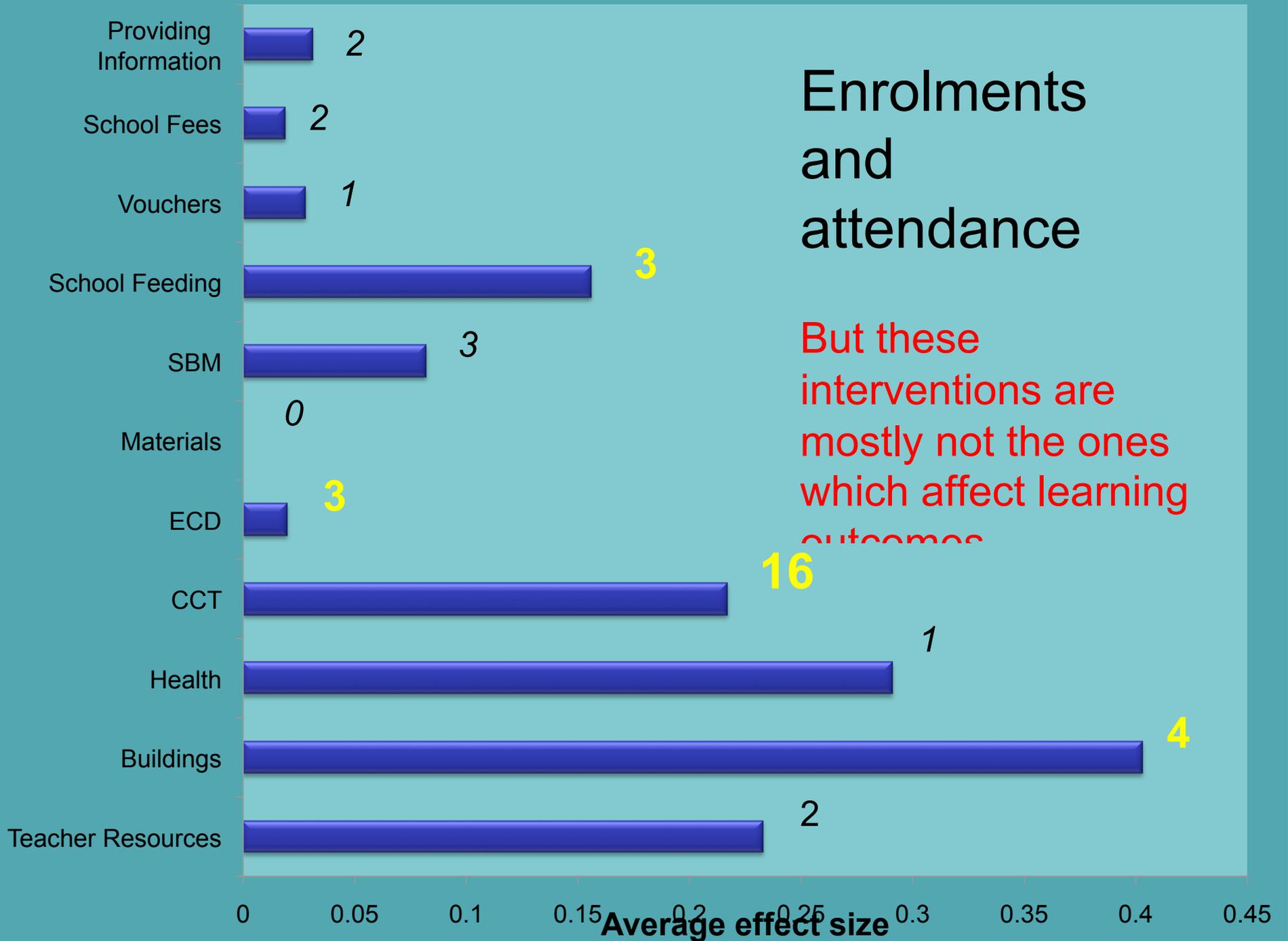
It looks pretty good for learning outcomes too. This is an important finding. But with such heterogeneity in interventions we should be wary of a single average treatment effect

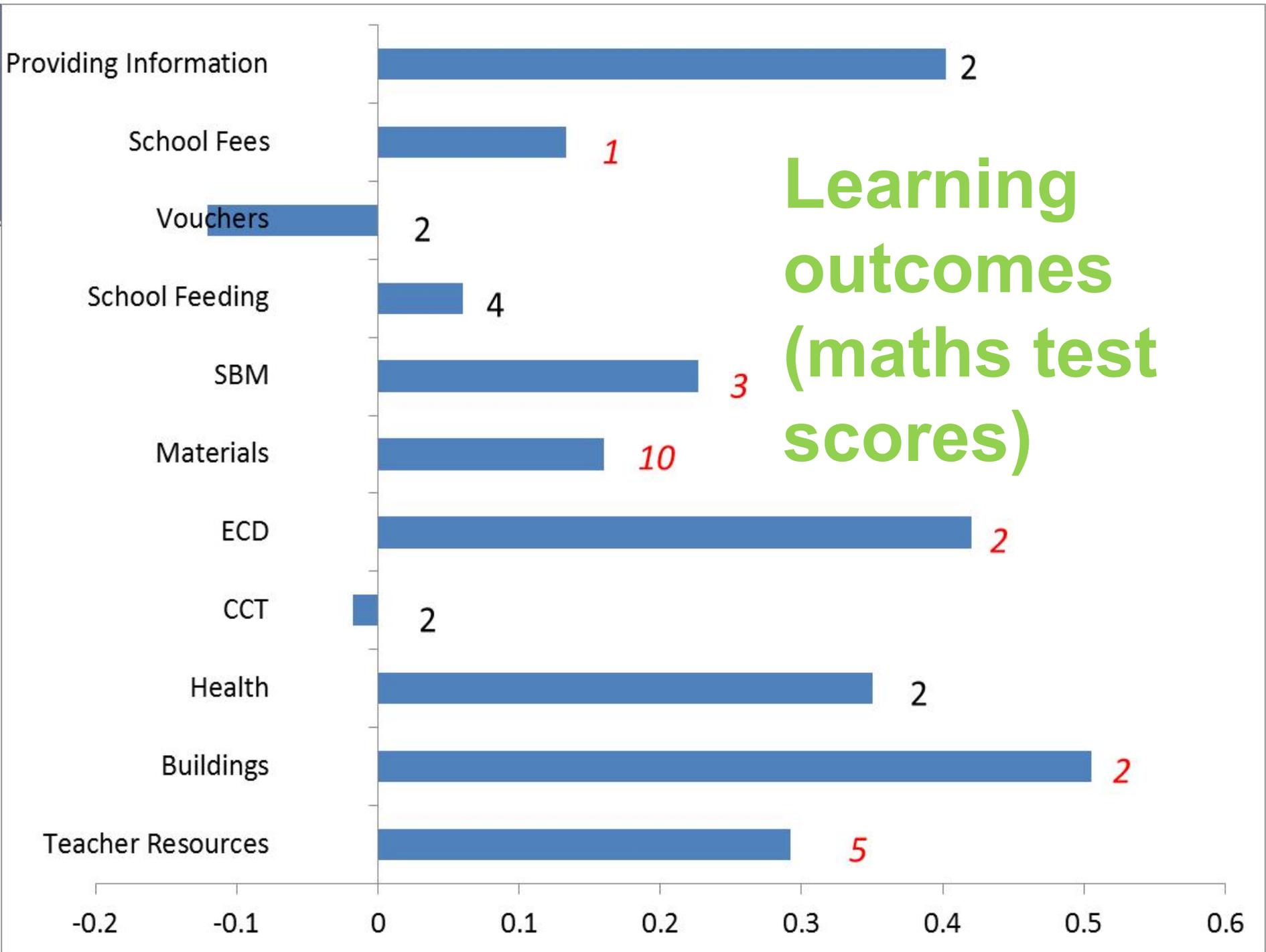
Typology of education interventions



Enrolments and attendance

But these interventions are mostly not the ones which affect learning outcomes





Conditional cash transfers



Cash payment on conditions:

- Education with 80% attendance and maintaining certain grade
- Health: Ante-natal care, child immunization

Targeted both geographically and by means test

- Mexico: Progressa launched 1996 (renamed Oportunidades)
- Brazil: 12 million families by 2010

Design questions:

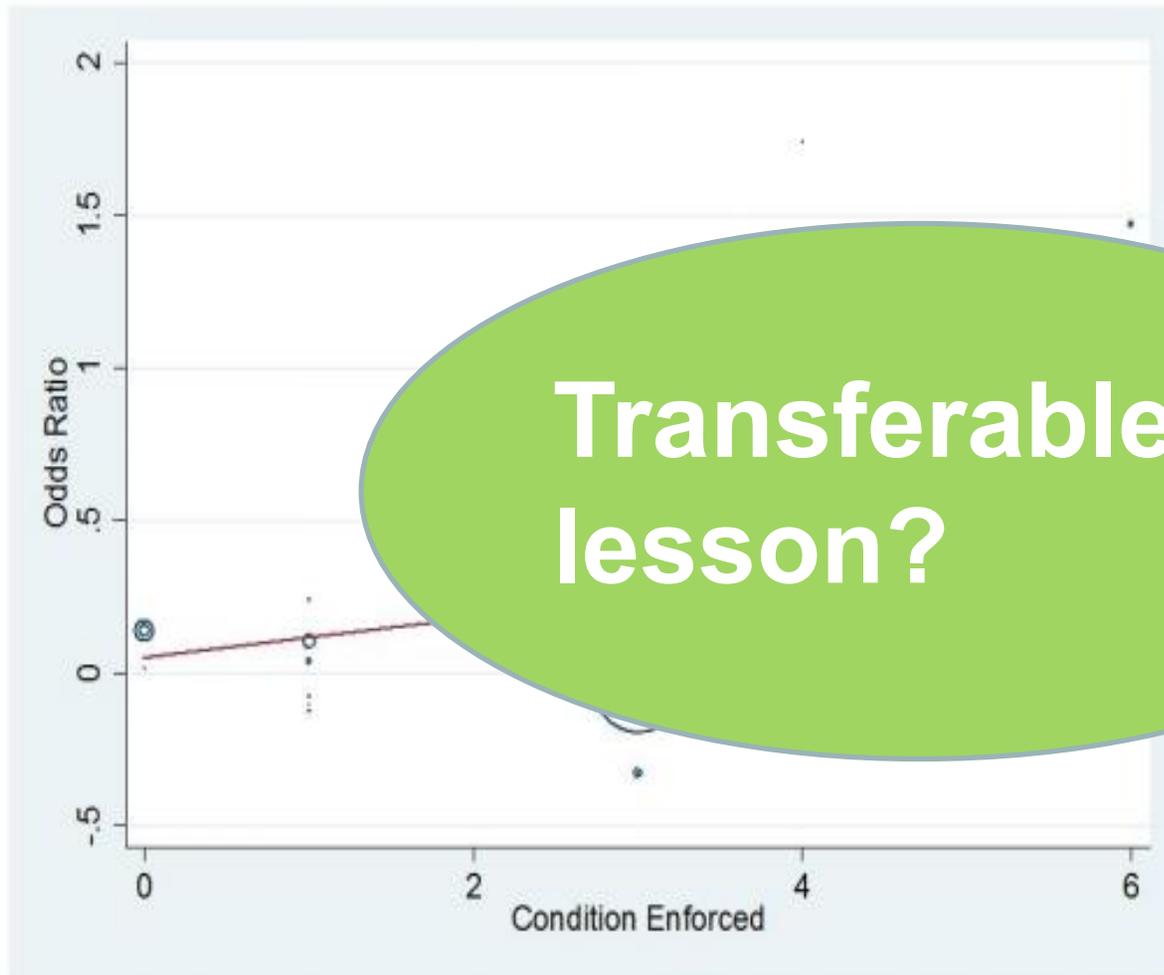
- Do conditions matter?
- Timing, nature and size of payment
- Who to give it to

CCTs: impact of conditions



Children 60% more likely to be in school

Conditionality is monitored and enforced compared to no conditions



Vouchers



- Surprisingly little evidence
- Increase private school enrolment
- But not learning outcomes



Howard White

**Philippines
theory of
change**

www.3ieimpact.org



The frontiers of SR research



- Causal chain analysis, requiring better quality qualitative synthesis
- Answering design questions
- Cost-effectiveness analysis (allowing for 'redundant payments')
- Network meta-analysis
- Seeing the wood for the trees
- Policy-friendly SR presentations



Insights for study designs



- Understand context
 - Supply or demand ‘constrained’
- How to answer policy-relevant questions
 - CAL: (a) children/computer, (b) required training and technical support, (c) appropriate software, (d) who supervises classes
- Looking at unintended effects
 - Interventions disrupt classrooms, or
 - Distract teachers
- Collect process data (design failure or implementation failure?) and cost data

Please visit: www.3ieimpact.org/

Education report

<http://www.3ieimpact.org/en/evaluation/working-papers/working-paper-20/>

