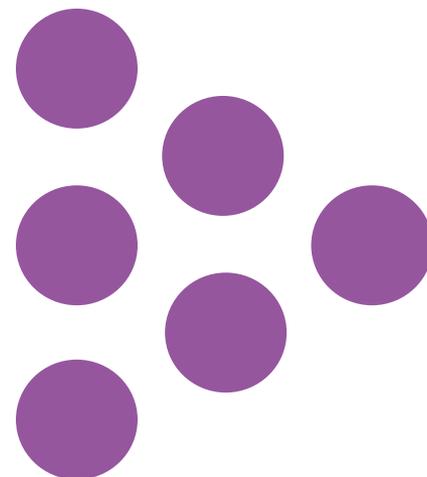

The Charms and Challenges of the Literacy Octopus

RCTs in the Social Sciences York Conference, 2018

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6th September 2018



What did the trial investigate?

Research objectives

- To explore whether sharing evidence-based resources with teachers in various ways made a difference to teaching and learning
 - To help understand the best ways of communicating/disseminating research evidence to teachers
 - To explore the impact on teachers' research engagement and research use (secondary outcome)
 - Ultimately ... to explore the impact on pupils' learning outcomes in Key Stage 2 literacy (primary outcome)
 - To help explore change mechanisms in evidence-informed-education (i.e. where teachers reported changes, how did these occur?)

Who was involved?

A multi-partner trial

- Four providers of evidence-based resources for schools, each with an active and a passive approach
 - Institute for Effective Education (IEE) at the University of York
 - Campaign for Learning / Train Visual delivering Teaching How2s
 - Centre for Evaluation and Monitoring (CEM) at Durham University
 - ResearchEd in partnership with NatCen
- Funded by EEF, DfE and the Mayor's London Schools Excellence Fund

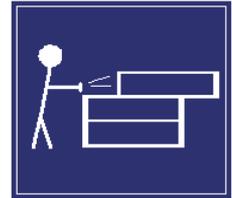


What was involved?

A range of communication/dissemination approaches

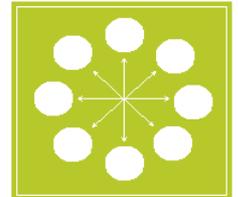
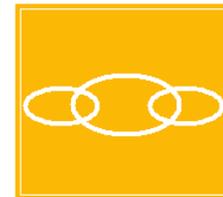
Some were passive ...

- Resources and materials shared by email or post
- Access to an evidence-based website with resources and tools
- Invitations to a conference on research use



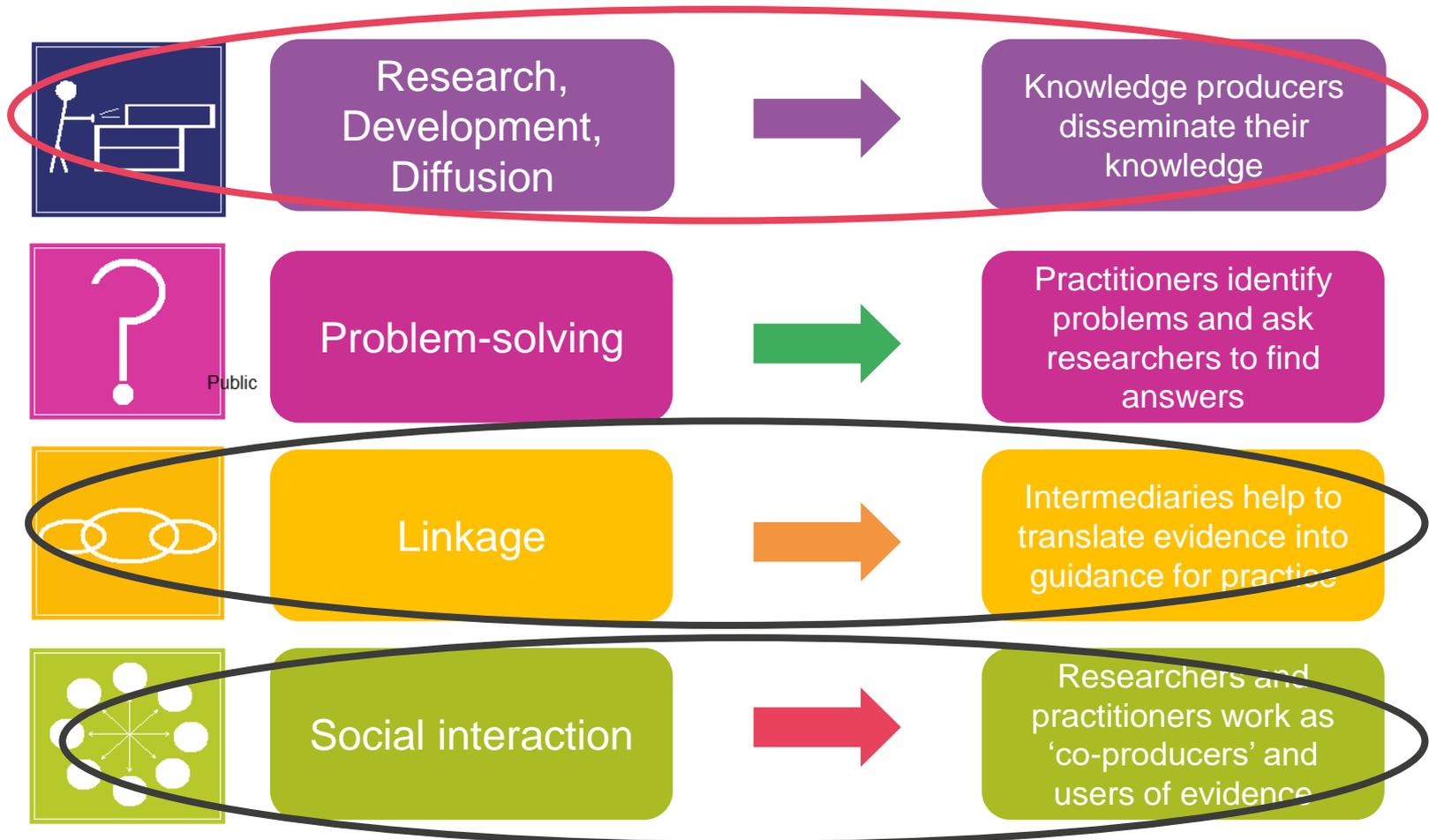
Some were more supported or active ...

- Resources **plus** attending an evidence fair or a CPD session
- Access to a website **plus** support
- A conference **plus** pre and post webinar support



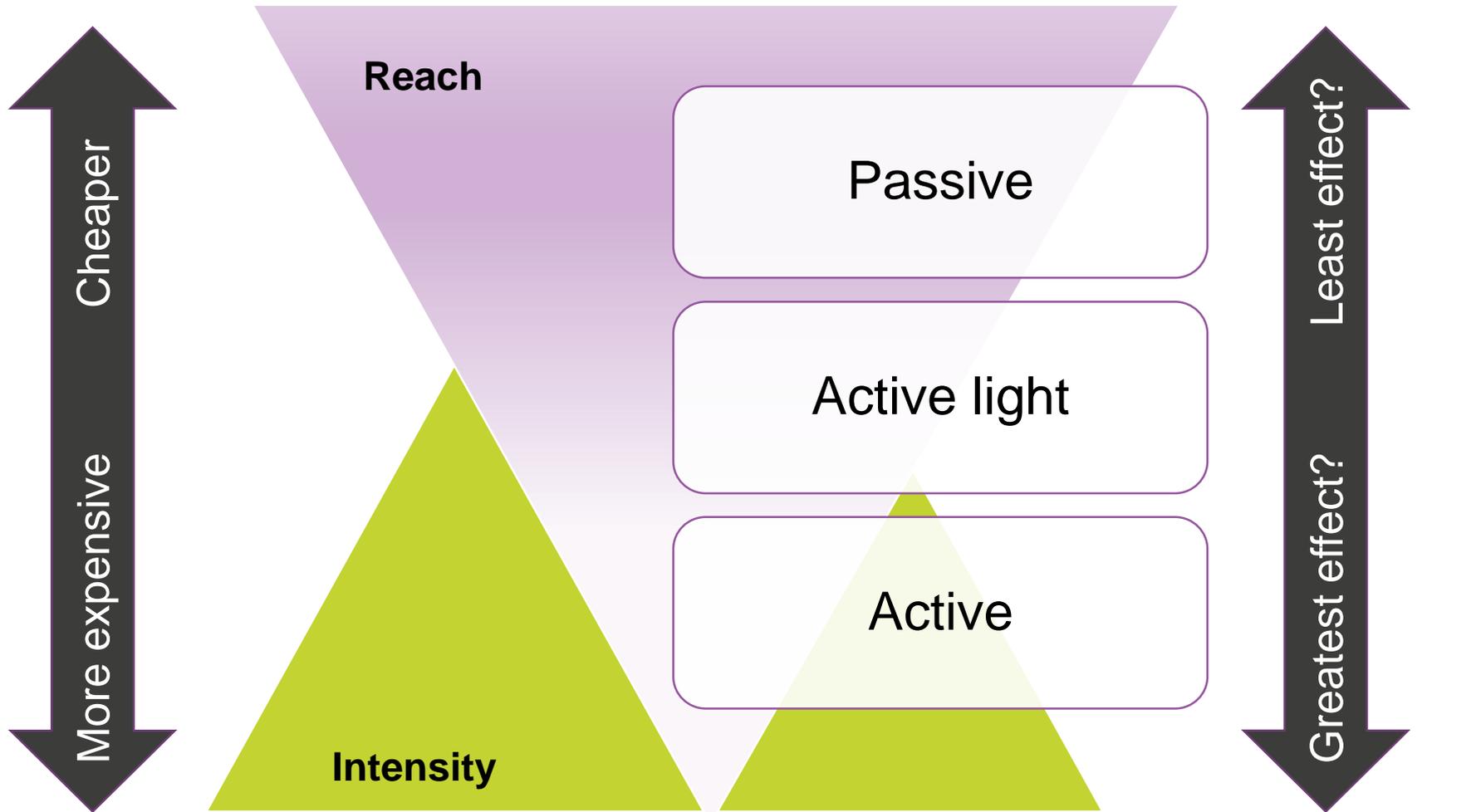
All focused on KS2 literacy, with an element of cooperative learning.

Why? Approaches to disseminating research evidence ...



Adapted from Becheikh, N., Ziam, S., Idrissi, O., Castonguay, Y. and Landry, R. (2009). 'How to improve knowledge transfer strategies and practices in education? Answers from a systematic literature review', *Research in Higher Education Journal*, **7**, 1–21.

... and a theory of change



How? The trial design

Large-scale active RCT

- 823 primary schools in England
- School-level randomisation
- 10 arms
- Outcomes: attainment in literacy (age 11 2014/15, **2015/16**, 2016/17)
- Secondary outcomes: teacher research-use

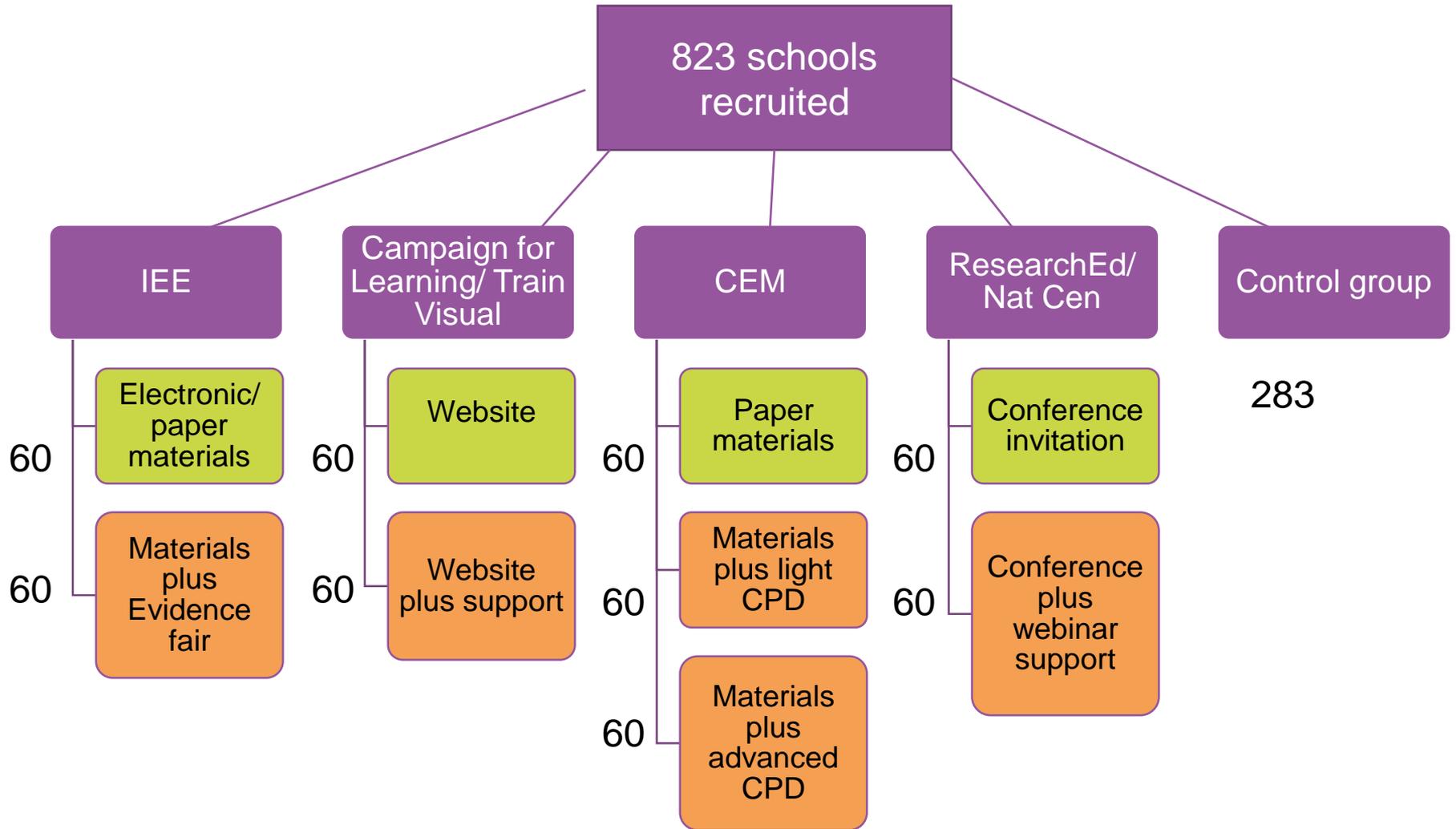
Process evaluation

Cost evaluation

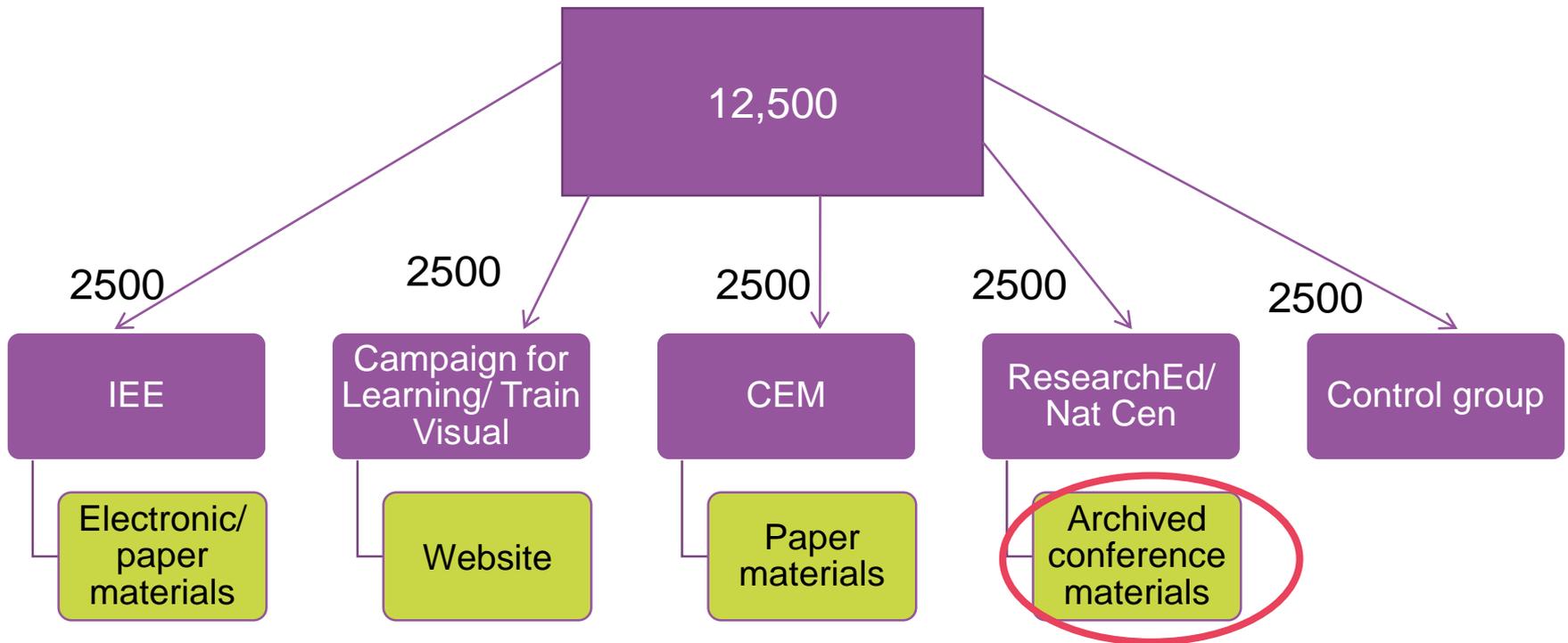
Large-scale passive RCT

- 12,500 primary schools in England
- School-level randomisation
- 5 arms
- Outcomes: attainment in literacy (age 11 **2015/16** and 2016/17)

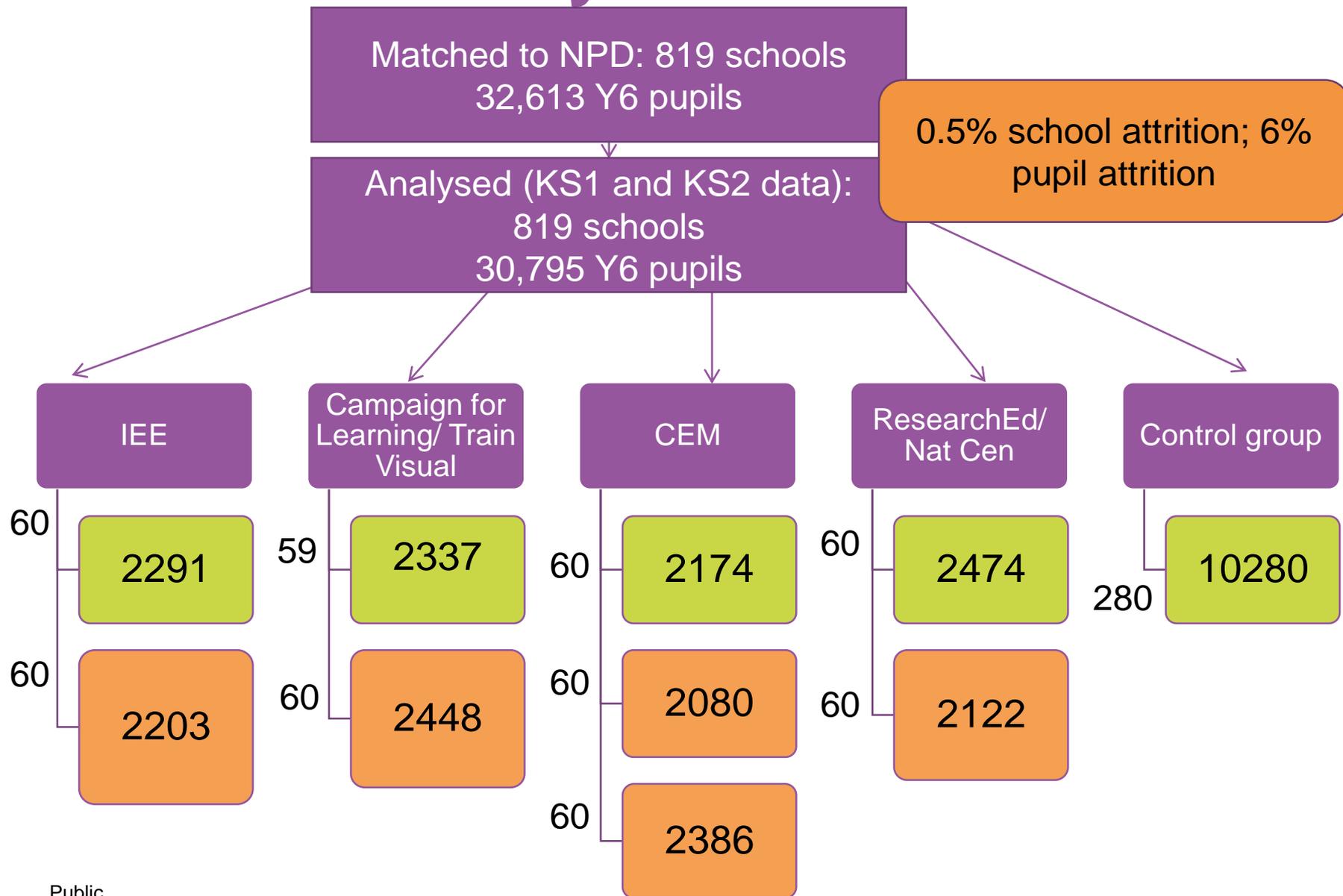
Active trial recruited



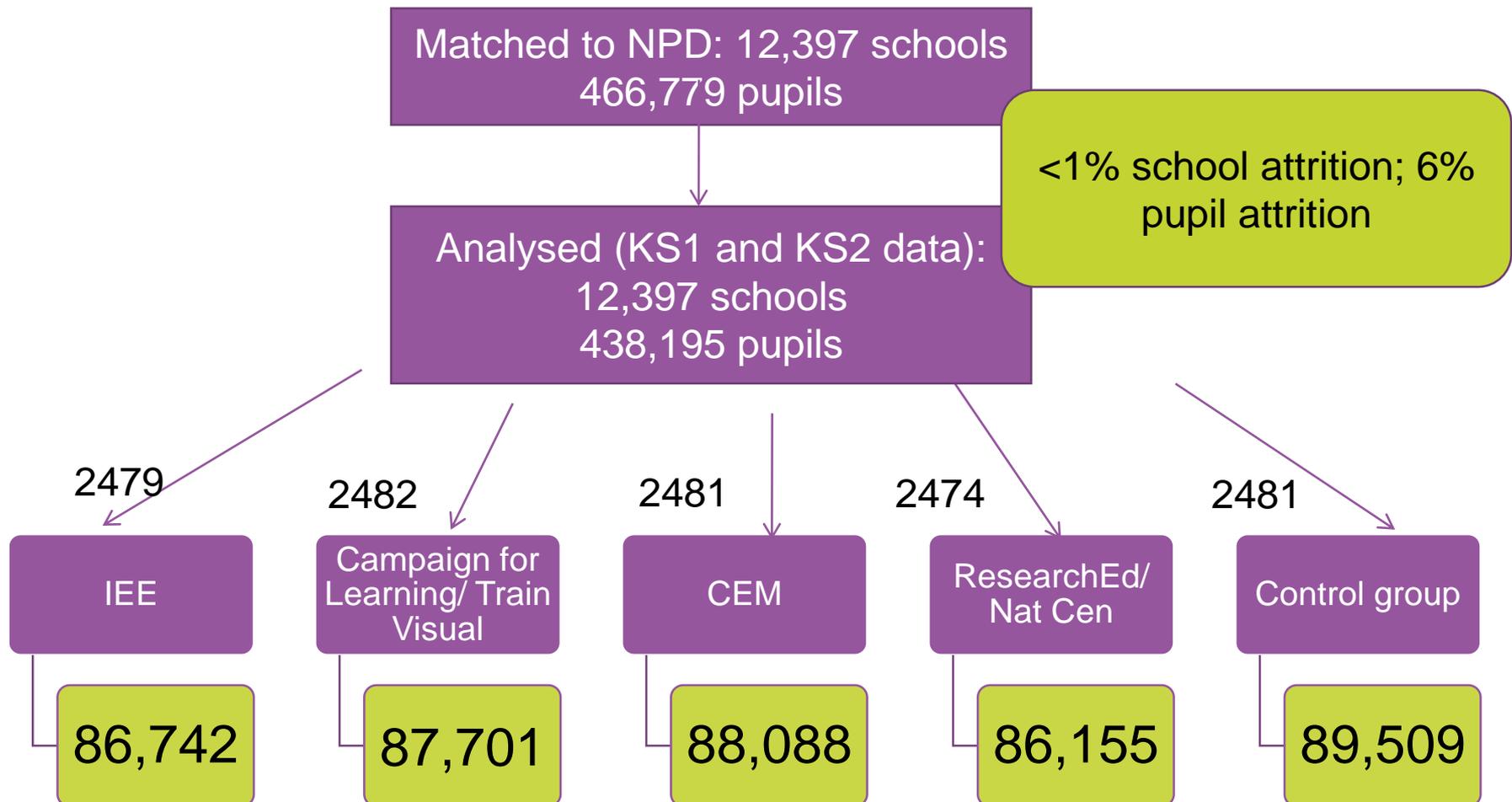
Passive trial recruited



Active trial analysed



Passive trial analysed



Active trial results (2015/16)

Group	Effect size (95% CI)	Est. months' progress	Per pupil per year cost	No. of pupils*	P value**
IEE Passive Arm 1 vs control	-0.02 (-0.14, 0.10)	0	£0.31	2,291	0.98
IEE Active Arm 2 vs control	-0.04 (-0.15, 0.08)	0	£0.73	2,203	
How2s Passive Arm 3 vs control	0.00 (-0.12, 0.11)	0	£3.90	2,337	
How2s Active Arm 4 vs control	-0.03 (-0.14, 0.09)	0	£4.11	2,448	
CEM Passive Arm 5 vs control	0.00 (-0.12, 0.11)	0	£0.09	2,174	
CEM Active Light Arm 6 vs control	0.03 (-0.09, 0.14)	0	£0.39	2,080	
CEM Active Arm 7 vs control	0.03 (-0.09, 0.14)	0	£10.77	2,386	
ResearchEd Passive Arm 8 vs control	0.00 (-0.11, 0.12)	0	£0.26	2,474	
ResearchEd Active Arm 9 vs control	0.01 (-0.11, 0.13)	0	£0.26	2,122	

*Note, the model included results from 10,280 control group pupils.

**The p-value results from a single likelihood ratio test (LRT) across all trial arms.

Passive trial results (2015/16)

Group	Effect size (95% confidence interval)	Estimated months' progress	No. of pupils*	P value**
CEM Passive Arm 1 vs control	0.01 (-0.01, 0.03)	0	88,088	0.48
IEE Passive Arm 2 vs control	0.01 (-0.01, 0.03)	0	86,742	
ResearchEd Passive Arm 3 vs control	0.01 (-0.01, 0.03)	0	86,155	
How2s Passive Arm 4 vs control	0.01 (-0.01, 0.03)	0	87,701	

*Note, the model included results from 89,509 control group pupils.

**The p-value results from a single likelihood ratio test (LRT) across all trial arms.

Research use (secondary outcomes)

Measure 1: positive disposition to academic research in informing teaching practice

Measure 2: uses academic research to inform selection of teaching approaches

Measure 3: perception that academic research is not useful in learning

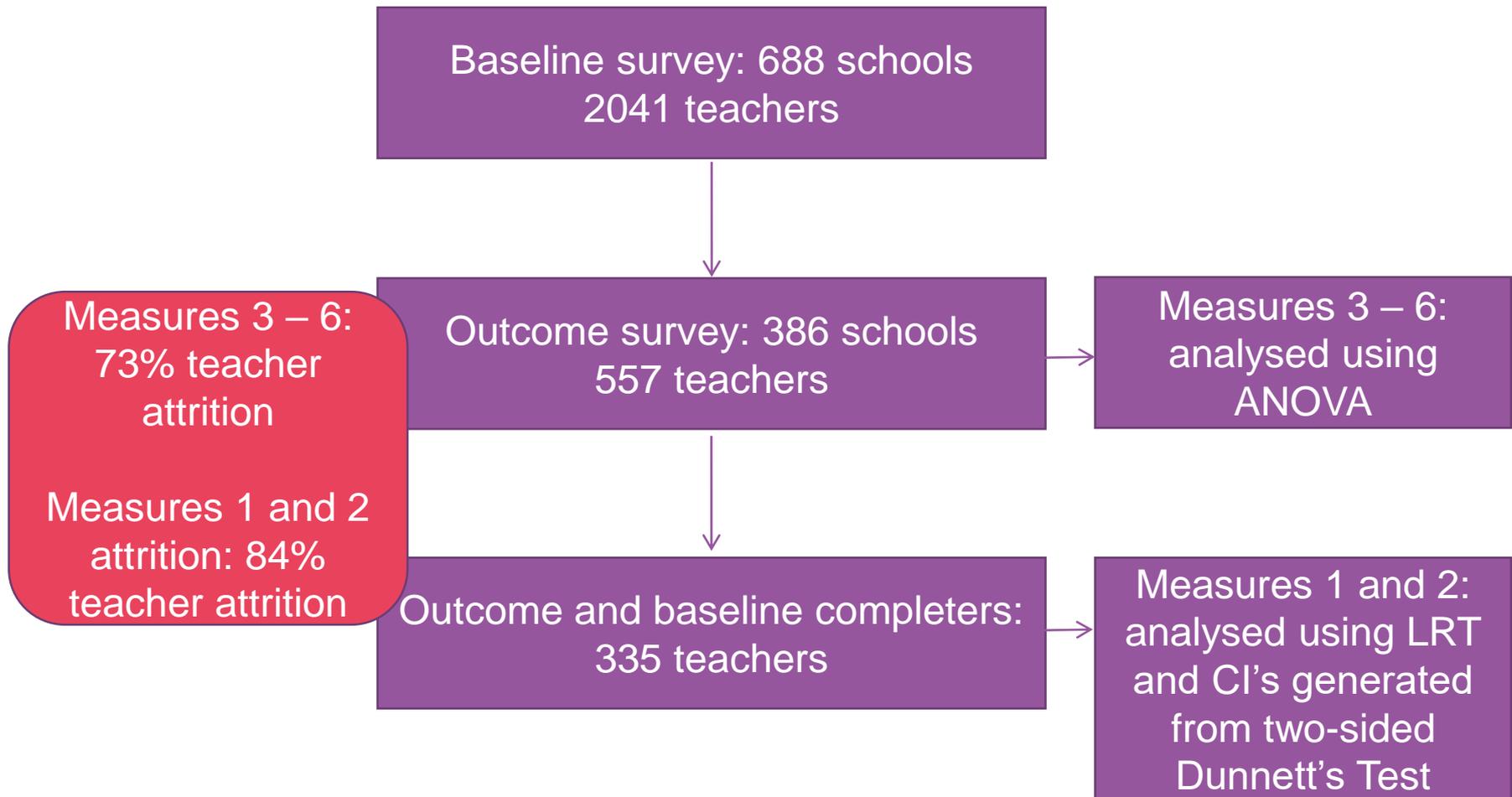
Measure 4: perception that own school does not encourage use of academic research

Measure 5: active engagement with online evidence platforms

Measure 6: your knowledge about research.

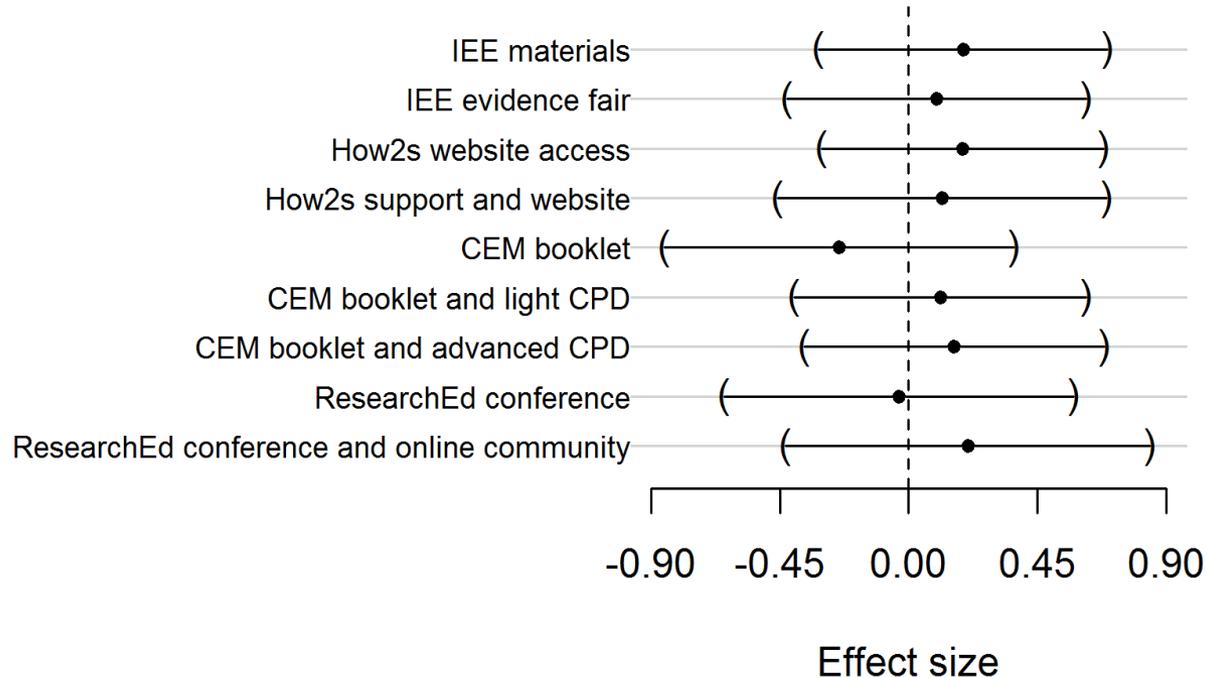
Research Use Outcomes Survey (Poet *et al.*, 2015)

Teacher research use analysed



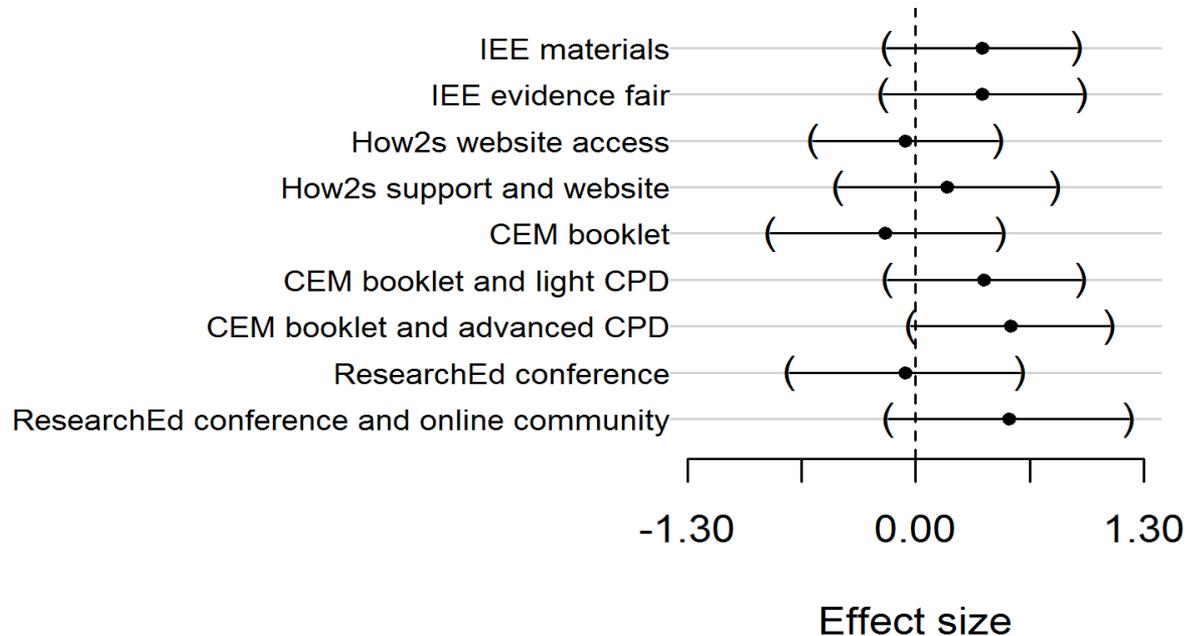
Teacher research use results (1)

Effect size between control group and trial arm for positive disposition to academic research in informing teaching practice (measure 1)



Teacher research use results (2)

Effect size between control group and trial arm for uses of academic research to inform selection of teaching approaches (measure 2)



It was a multi-partner trial – we worked with four partners with expertise in providing evidence-based materials to schools

It was two trials – an active and a passive trial, nationwide, with the passive trial sending materials to over 12,000 primary schools in the country

It was a multi-armed trial - schools were randomly allocated to receive support or materials via one of a number of different approaches, or to the control group

Charms ...

It was a repeated cohort design for the longitudinal element – i.e. successive Year 6 cohorts, so negligible drop out over time for the attainment outcome

We used NPD administrative data on pupils attainment and background variables – hence minimal drop out (attrition was related to school closures, change of school status, pupils not having KS1 and KS2 scores or not found on the database at both time points)

Low teacher response rates to follow-up questionnaire – limited robustness of analysis

Both trials had null results - how to interpret? – is it worth sending materials to schools, would more support make a difference, is it too early to impact on attainment?

But when we conducted CACE analysis, extent of engagement had no association with attainment results

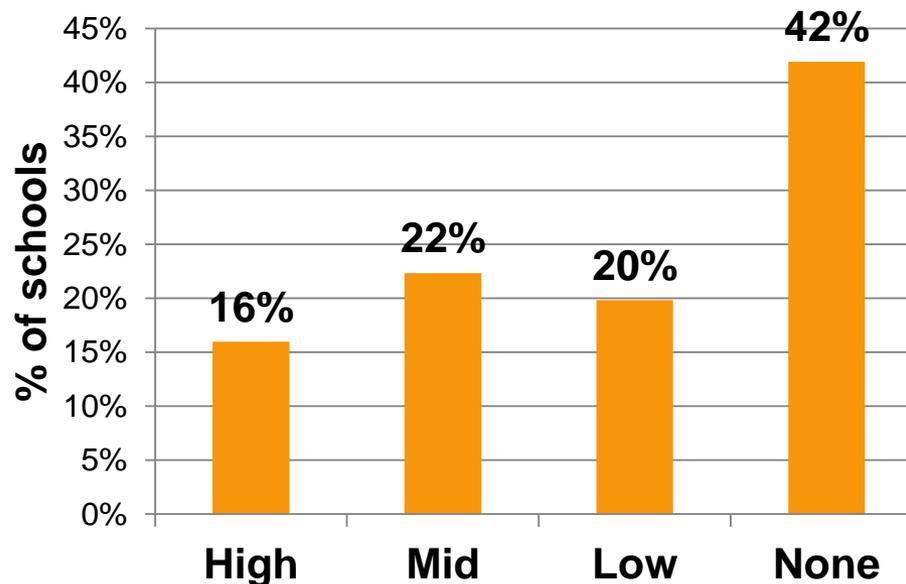
Challenges

...

How to measure engagement or dosage, when all arms are different?

There was limited engagement – around two fifths of schools did not engage at all with the materials, around a fifth did less than expected, another fifth engaged as expected. 16% did more than expected.

School engagement level



Process evaluation ...

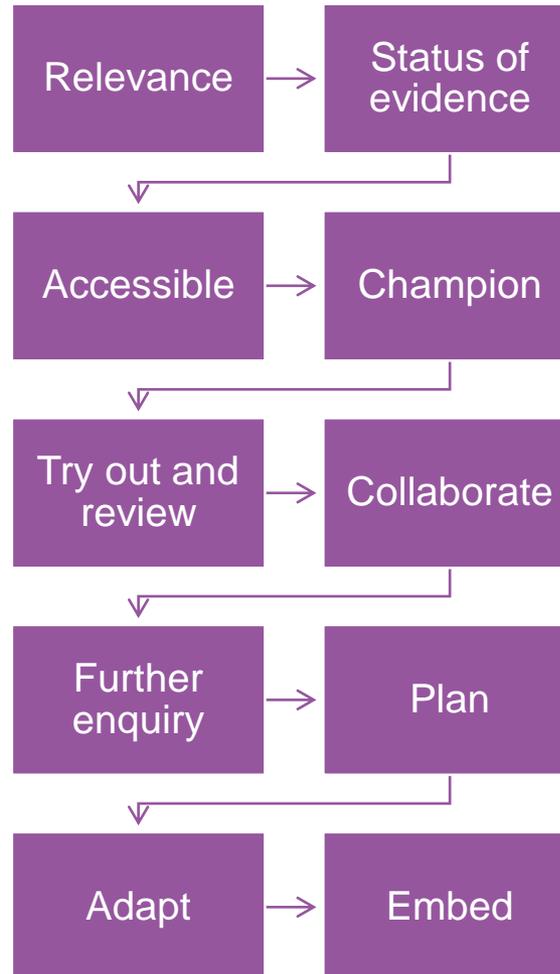
... but for some schools, they did ...

- **Engage with the materials and/or support**
- **Act on the evidence-based materials/support**
- **Increase their understanding/awareness of the evidence**
- **Try things out**
- **Collaborative approaches with other staff**
- **Further enquiry and follow-up**
- **Adapt it to their context ...**
- **Embed it**
- **Perceive outcomes for teachers, teaching and learning**

Challenge – how to
unpack mechanisms
when the trial results
show no impact

Typology of mechanisms

Schools:
consider how to
engage and
implement



Research-providers:
consider how to
transform and facilitate

What next?

Results from 2014/15 and 2016/17 to be published later this year ...

Contact details:

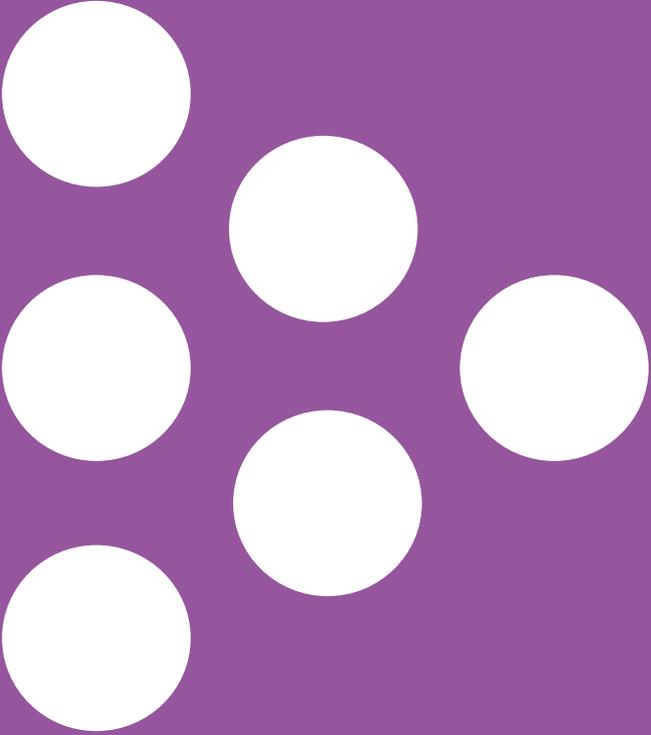
- Pippa Lord, Senior Trials Manager
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- Tel: 01904 567633

Reports available at:

<https://www.nfer.ac.uk/evidence-based-literacy-support-the-literacy-octopus-trial-evaluation-report-and-executive-summary>

<https://www.nfer.ac.uk/literacy-octopus-dissemination-trial-evaluation-report-and-executive-summary>

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Evidence for excellence in education

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