

# What makes great teaching?

**Robert Coe**

**31 October 2015**

**IB World Regional Conference (AEM), Den Haag NL**

# My argument ...

- If you make decisions about education, you should be informed by a sound **understanding of research**
- If you want to promote great teaching you need to understand **what great teaching is**
- Developing both kinds of understanding requires **substantial professional learning**

Google

eeef toolkit

Google

improving education

Google

What makes great teaching

Google

Developing great teaching

EEF / Toolkit

About Us Print Share Document Library Contact Us Log In



Toolkit

About the Toolkit

Using the Toolkit

Pupil Premium Calculator

Videos and Case Studies

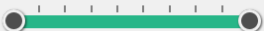
Evidence Briefs

Toolkit Filter

Sort By

Months Progress

Average Impact



Toolkit Info

Feedback

Meta-cognition

Peer tutoring


Early years

One to one

Homework (Secondary)



Should people  
who make ‘policy’  
understand research?



Any  
generalised  
advice or  
constraint (incl  
at school level)

# True or false?

1. Reducing class size is one of the most effective ways to increase learning [\[evidence\]](#)
2. Learning is optimised by differentiating and personalising resources [\[evidence\]](#)
3. Generous praise helps learners persist with hard tasks [\[evidence\]](#)
4. Technology supports learning by engaging and motivating learners [\[evidence\]](#)
5. Enhancing motivation and interest leads to significantly improved attainment [\[evidence\]](#)

# EEF Teaching and Learning Toolkit

Apps Free Hotmail Suggested Sites Imported From IE

EEF / Evidence and Data / Teaching and Learning Toolkit

About Document Library Share Contact Log In



Search Site



Evidence and Data / Projects / Evaluation / Apply for Funding / News & Events / Support Us

## Evidence and Data

Teaching and Learning Toolkit

About the Toolkit

Using the Toolkit

Early Years Toolkit

Families of Schools Data

Videos and Case Studies

Publications

EAL Review

TA Campaign: Resources for Schools

TA Campaign: West and South  
Yorkshire

TEACHING & LEARNING TOOLKIT TOPIC



COST



EVIDENCE



IMPACT



Meta-cognition and self-regulation

£ £ £ £ £

£ £ £ £ £

+8  
months

Feedback

£ £ £ £ £

£ £ £ £ £

+8  
months

Oral language interventions

£ £ £ £ £

£ £ £ £ £

+5  
months

Homework (Secondary)

£ £ £ £ £

£ £ £ £ £

+5  
months

One to one tuition

£ £ £ £ £

£ £ £ £ £

+5  
months

Mastery learning

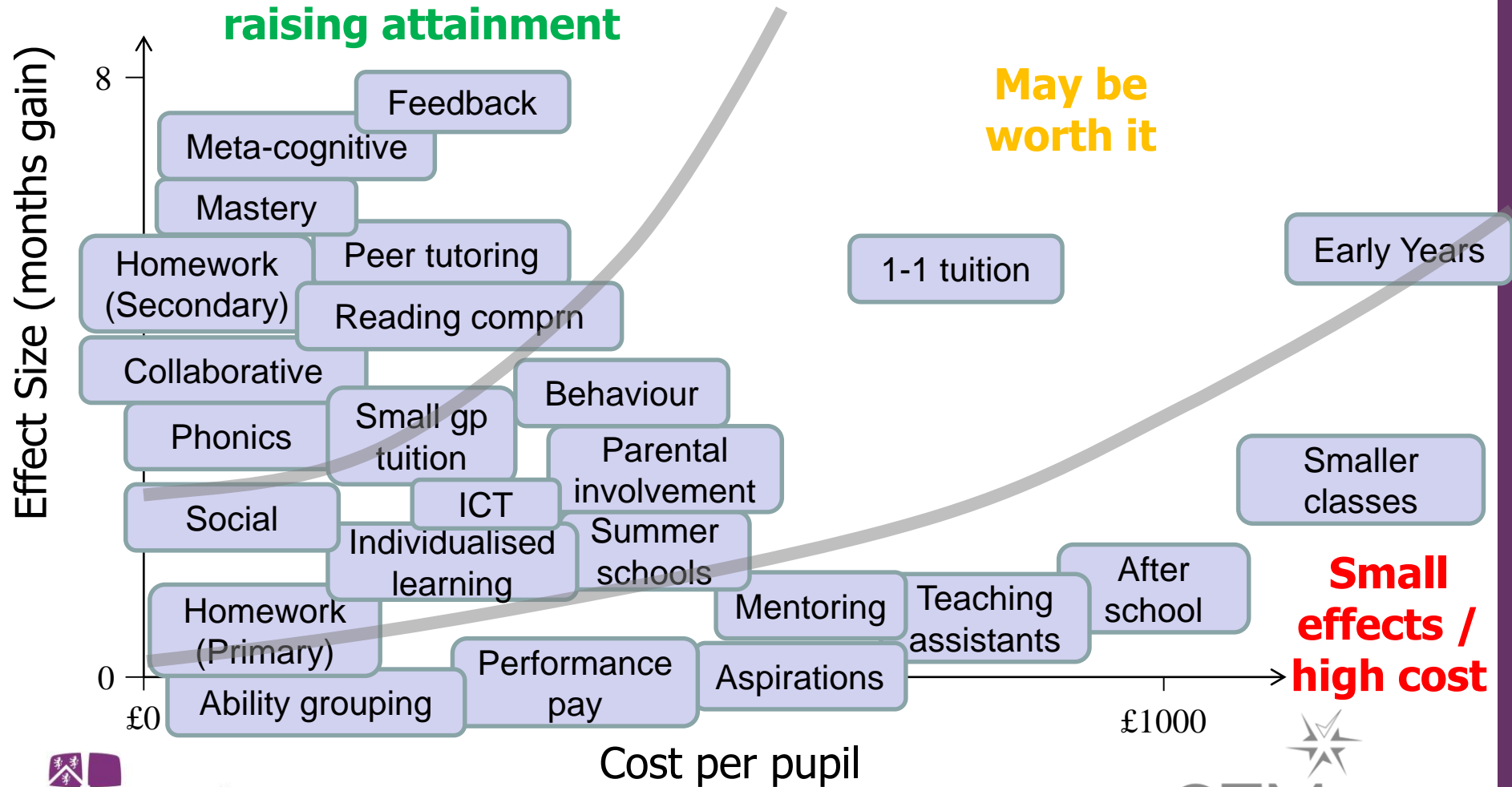
£ £ £ £ £

£ £ £ £ £

+5  
months

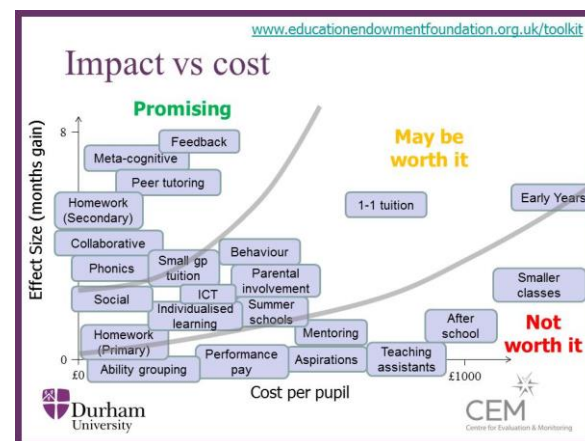
# Impact vs cost

**Most promising for raising attainment**



# Clear, simple advice:

- Choose from the top left
- Go back to school and do it



For every complex problem  
there is an answer that is  
clear, simple, and wrong

H.L. Mencken



# Why not?

- Research evidence is problematic
  - complex, equivocal, artificial, incomplete, inapplicable ...
- Most things that work are complex and subtle
  - Not just compliance, but understanding and skill
- Changing teachers' practice is very hard
  - Especially in ways that are faithful, effective and sustainable, at scale

# Making assessment work

## *The need for understanding and skill*

- Criteria cannot define a standard
- Criteria often trivialise learning aims
- Formative 'hinge questions' are equivocal
- Judging performance requires standardisation
- Teacher assessment is biased/stereotyped
- Accountability drives improvement but is often dysfunctional



MAR 04

## *Would you let this test into your classroom?*

Professor Robert Coe, 27 February 2014

In England, the government has announced the end of using levels for assessment. If that means an end to meaningless numbers based on unstandardized, impressionistic, selective and biased judgements that fail to capture true learning, it is a good thing. But will it? And what have we got that is better?

As schools start to confront the reality of having to design their own assessment systems, or adopt them from elsewhere, two things have become clear to me. The first is that in assessment, quality matters. The difference between good and bad assessment is huge and it makes an important difference. The second is that the understanding of what makes one assessment good and another bad, and the ability to use that understanding to make good choices, seems to be very thinly spread.

Understanding quality of assessment is relevant to a range of educational choices, not just moving beyond levels. For example, as we await the government response to the consultation on Primary Accountability, understanding what kinds of assessment would be suitable to use as a baseline for children starting school is crucial and assessment is not just something we do to students. Recent debates about the value of lesson observation (I wrote about this [in a previous blog](#)) also depend on understanding how teaching can (and cannot) be assessed.



Follow us on twitter



Durham  
University

[Register](#)

[Log in](#)



### *Recent Posts*

Would you let this test into your



Durham  
University

# Poor Proxies for Learning

- Students are busy: lots of work is done (especially written work)
- Students are engaged, interested, motivated
- Students are getting attention: feedback, explanations
- Classroom is ordered, calm, under control
- Curriculum has been 'covered' (ie presented to students in some form)
- (At least some) students have supplied correct answers, even if they
  - Have not really understood them
  - Could not reproduce them independently
  - Will have forgotten it by next week (tomorrow?)
  - Already knew how to do this anyway

A better proxy for learning?

Learning  
happens when  
people have to  
think hard



# Understanding research

- Explain why children in small classes typically learn only slightly more than they would in big classes
- In what ways does understanding depend on knowledge? In what ways does knowledge depend on understanding?
- When does praise support learning?
- Explain why grouping learners by 'ability' (setting, streaming, or in-class grouping) does not seem to make much difference to how much they learn?
- What determines whether learners remember things?

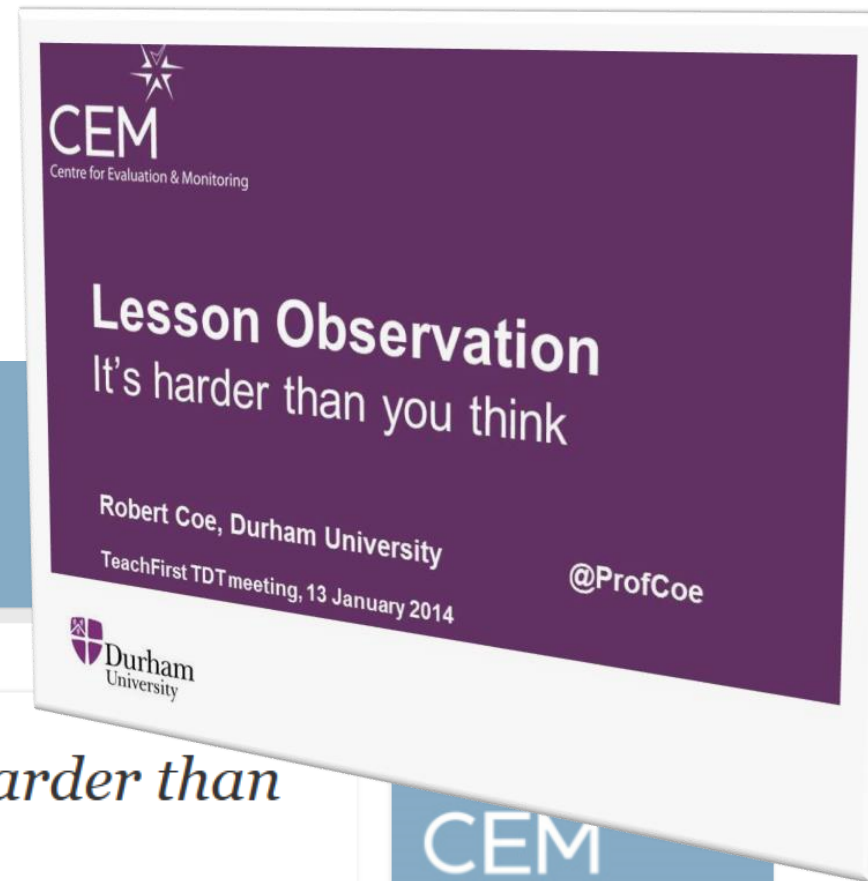
# Applying research

- What can teachers do to increase the amount of time students spend thinking hard about the material we want them to learn?
- How can teachers make it most likely that students will remember what they have taught?
- What kinds of marking convey effective feedback?
- How can teachers give effective feedback to classes of 30 (without killing themselves)?

# Do we know what 'great teaching' is?



# Lesson observation: It's harder than you think



JAN 09

## *Classroom observation: it's harder than you think*

Professor Robert Coe

We've all done it: observed another teacher's lesson and made a judgement about how effective the teaching was. Instinctively it feels valid. I am a good teacher; I'll know a good lesson when I see one. We've all experienced it from the other side – being observed – but this time the feeling may be more mixed. Sometimes you get real insight from someone who sees what you don't, questions what you take for granted and makes you think differently. Sometimes they just tell you what they would have done, or focus on some trivial irrelevance.



Follow us on twitter



# Do We Know a Successful Teacher When We See One?

- Filmed lessons (or short clips) of effective (value-added) and ineffective teachers shown to
  - School Principals and Vice-Principals
  - Teachers
  - Public
- Some agreement among raters, but unable to identify effective teaching
- No difference between education experts and others
- Training in CLASS did help a bit



Simons & Chabris (1999)

# Obvious – but not true

Why do we believe we can spot good teaching?

- We absolutely know what we like
  - Strong emotional response to particular behaviours/styles is hard to over-rule
- We focus on observable proxies for learning
  - Learning is invisible
- Preferences for particular pedagogies are widely shared, but evidence/understanding of their effectiveness is limited
- We assume that if you can do it you can spot it
- We don't believe observation can miss so much

# What makes great teaching?

Review of the underpinning research

Robert Coe, Cesare Aloisi, Steve Higgins and Lee Elliot Major  
October 2014

# Dimensions of great teaching

1. (Pedagogical) content knowledge (PCK)
2. Quality of instruction
3. Classroom management / behaviour / control
4. Classroom climate / relationships / expectations
5. Beliefs (theory) about subject, learning & teaching
6. Wider professional elements: collegiality, PD, stakeholder relationships

# 1. We do that already (don't we?)

- Reviewing previous learning
- Setting high expectations
- Using higher-order questions
- Giving feedback to learners
- Having deep subject knowledge
- Understanding student misconceptions
- Managing time and resources
- Building relationships of trust and challenge
- Dealing with disruption



## 2. Do we always do that?



- Challenging students to identify the reason why an activity is taking place in the lesson
- Asking a large number of questions and checking the responses of all students
- Raising different types of questions (i.e., process and product) at appropriate difficulty level
- Giving time for students to respond to questions
- Spacing-out study or practice on a given topic, with gaps in between for forgetting
- Making students take tests or generate answers, even before they have been taught the material
- Engaging students in weekly and monthly review



### 3. We don't do that (hopefully)

- Use praise lavishly
- Allow learners to discover key ideas for themselves
- Group learners by ability
- Encourage re-reading and highlighting to memorise key ideas
- Address issues of confidence and low aspirations before you try to teach content
- Present information to learners in their preferred learning style
- Ensure learners are always active, rather than listening passively, if you want them to remember



# How can we develop great teaching?

# Improving Teaching

- Teacher quality is what matters
- We need to focus on teacher learning
- Teachers learn just like other people
  - Be clear what you want them to learn
  - Get good information about where they are at
  - Provide appropriate instruction and give good feedback

# Why monitor teaching quality?

- Good evidence of (potential) benefit from
  - Performance feedback (Coe, 2002)
  - Target setting (Locke & Latham, 2006)
  - Accountability (Coe & Sahlgren, 2014)
- Individual teachers matter most
- Teachers typically stop improving after 3-5 years
- Everyone can improve
- Assessment is an essential part of learning (including teacher learning)

# How to monitor teaching quality?

## 1. High-quality assessment

- Not levels (generalised descriptors/criteria)
- Convergent with learning goals & other evidence
- Check for bias & confounds

## 2. Lesson observation

- Be very cautious! (no grades or consequences)
- Based on 'Great Teaching' evidence
- Trust teachers with consistently good outcomes

## 3. Student feedback

- Use validated instruments

Cordingley et al 2015

<http://tdtrust.org/about/dgt/>

Home

About TDT

Advice /

## The CPD test

Posted on July 8, 2015 by david.weston

*by Robert Coe, Philippa Cordingley, Steve Hill*

Our recent review, '[Developing Great Teaching](#)' by the Teacher Development Trust by colleagues from CU has been widely reported as saying that traditional fits-all approach do not work. These headlines from the report are quite complex.

Are there some clear recommendations that teachers make better choices about what kinds of CPD they do?

Yes, and they are in the report. It is not long (11 pages) or technical and every

**DEVELOPING  
GREAT TEACHING**  
Lessons from the international reviews into  
effective professional development

 **TEACHER  
DEVELOPMENT  
TRUST**

## *In your CPD have you ...*

- |                                                                                        | Yes                      | No                       |
|----------------------------------------------------------------------------------------|--------------------------|--------------------------|
| 1. Tried to learn to do something that is relevant and supported by research evidence? | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Focused on (and evaluated success against) students' learning outcomes?             | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Engaged in activity that                                                            |                          |                          |
| a) Surfaced, challenged and developed your thinking about learning and teaching        | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Modelled/demonstrated new approaches                                                | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Allowed experimentation to adapt/apply approaches to your classroom                 | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Included observation and feedback?                                                  | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Took place at least fortnightly over two terms?                                     | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Drawn on explicit support from                                                      |                          |                          |
| a) External experts                                                                    | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Peer networks                                                                       | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Coaches / mentors                                                                   | <input type="checkbox"/> | <input type="checkbox"/> |
| d) School/college leaders                                                              | <input type="checkbox"/> | <input type="checkbox"/> |

# And that is all there is to it ...

1. Understand research evidence
2. Promote evidence-based pedagogy
3. Support teacher learning

[Robert.Coe@cem.dur.ac.uk](mailto:Robert.Coe@cem.dur.ac.uk)

 [@ProfCoe](https://twitter.com/ProfCoe)