

# Non-Deficit Based Models of Teacher Development

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“We don’t normally have conversation like this...”





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# From 'White Heat'...



- Comprehensives
- Expansion
- Social mobility
- Equality of opportunity
- 'Progressivism'
- Science and technology
- Teacher as social engineer, activist, autonomous professional



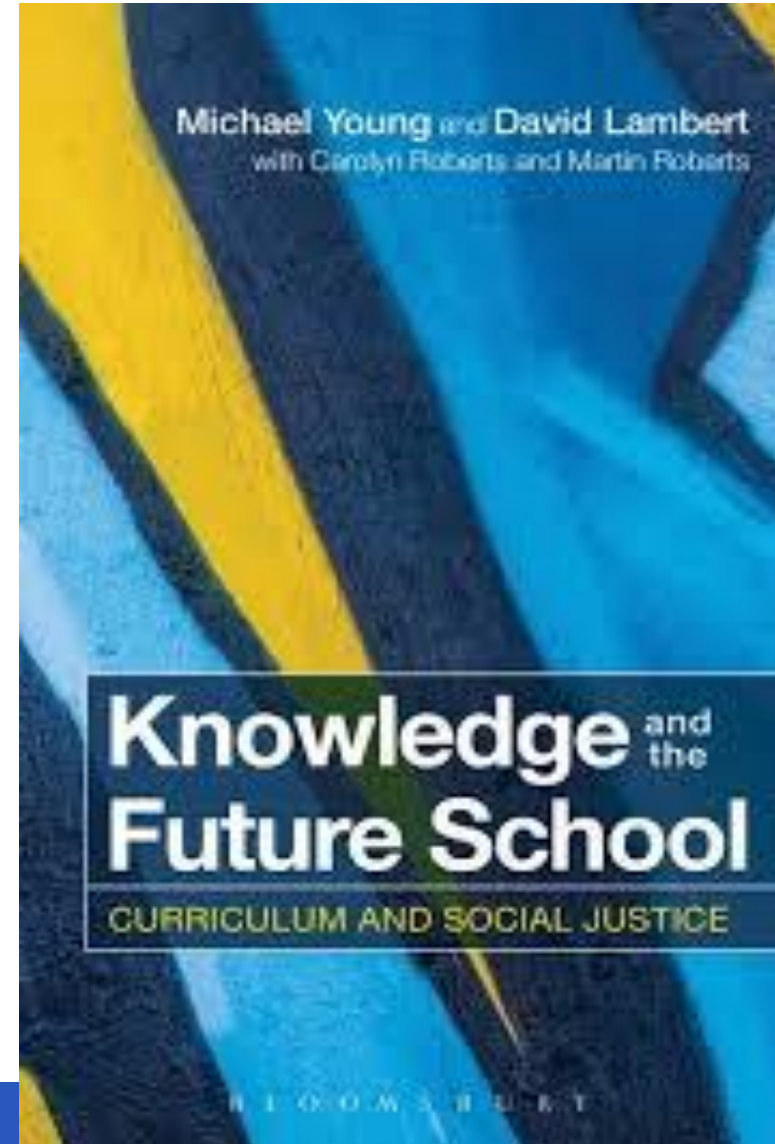
# ...to 21<sup>st</sup> century classrooms

- Mixed economy of schools
- Inclusion
- Build human capital
- Focus on outcomes
- New progressivism
- Technology driven
- Teacher as knowledge -broker



# Teacher as a knowledge broker

The dominance of constructionist views of knowledge in teacher education (along with the rise of a therapeutic culture) means that schools and teachers have lost sight of the one of thing that they can offer – powerful knowledge for all students.



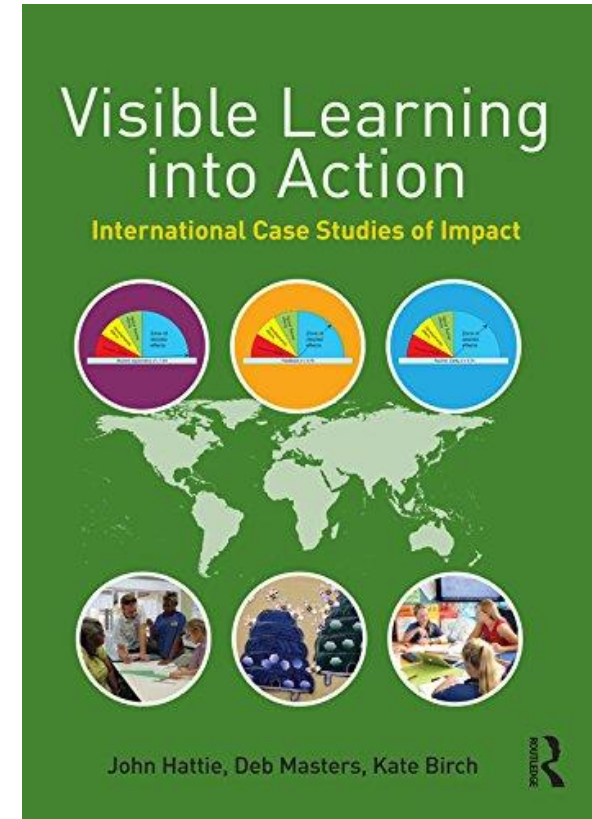
# Visible learning: teacher as a technician

We have statistically reliable evidence of strategies that are effective in raising student outcomes. We know 'what works' and should design our teaching programs accordingly.

Standardisation

Evidence-based practice

Toolkits



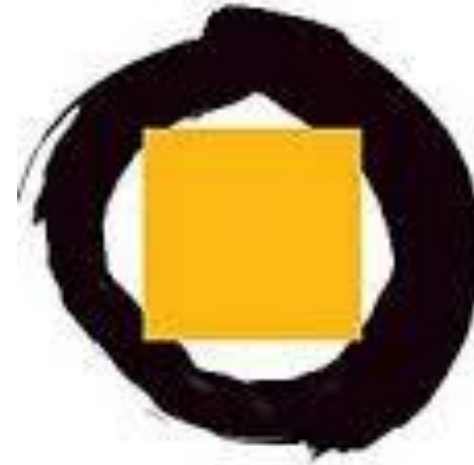
The complex nature of teacher learning is reduced to a small number of performance indicators that are easily measurable





## Expert teachers

We can find evidence of what works, but it doesn't lie in a statistic or 'effect size'. It is rich, context-dependent and though generalizable, cannot necessarily be picked off the shelf. Teachers should study their classrooms and share their expertise.



# What **EXPERT** teachers do

Enhancing professional knowledge  
for classroom practice

**JOHN LOUGHRAN**



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Biesta (2007) Why “what works” won’t work: evidence-based practice and the democratic deficit in educational research. *Educational Theory*. Vol 57. No.1

Questioning whether an evidence-based approach has usefulness in education



## Why might one question whether an evidence-based approach has usefulness in education?

- It's not like medicine! – administering a treatment; but being a student is not an illness?
- Positivist assumptions and narrow conceptions of research – is education a causal process?
- Managerial agenda of evidence-based education and its linear, top-down approach to educational improvement
- Lack of an acknowledgment of the crucial role of values in educational research and practice – interventions may not be desirable



## Why might one question whether an evidence-based approach has usefulness in education?

“Evidence-based education seems to favour a technocratic model in which it is assumed that the only relevant research questions are questions about the effectiveness of educational means and techniques, forgetting, among other things, that what counts as “effective” crucially depends on judgments about what is educationally desirable.”

“On the practice side, evidence-based education seems to limit severely the opportunities for educational practitioners to make such judgments in a way that is sensitive to and relevant for their own contextualised settings”

# Why what works won't work?

“While we may want to refer to the activities of teachers as interventions — and one could argue that teaching always intervenes in some way or another in an existing course of events — we should not think of these interventions as causes but as opportunities for students to respond and, through their response, to learn something from them.”

It is not the case that in education we can simply use any means as long as they are effective



# So what is the subject knowledge required for science teaching

Pedagogical Content Knowledge?

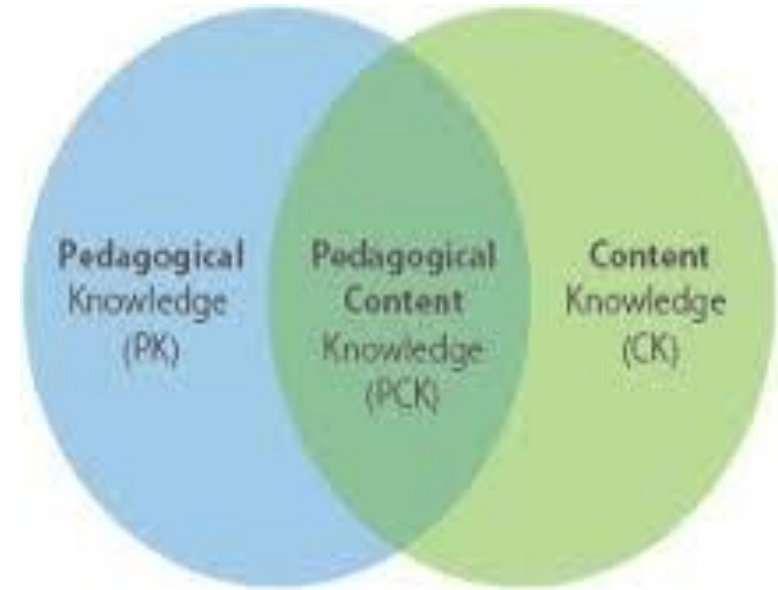


## “Pedagogical Content Knowledge” - an appealing idea

First articulated by Shulman (1986) – a “special amalgam of content and pedagogy that is uniquely the province of teachers”

An appealing construct because it

- a) attempts to stabilise teacher knowledge,; tempting researchers to measure it (objectifies knowledge)
- b) has breadth across subjects, e.g. in P.E., it helps to distinguish a teacher’s own proficiency in say throwing a javelin, from knowledge of the skill that is needed in order to teach it to students



## “Pedagogical Content Knowledge” - a bothersome construct

- Focuses on teachers’ cognition and does not recognise the complexity and influence of the classroom
- PCK is treated as “knowledge to be measured” (able to be articulated and ready for transfer) without regard for how it is manifested in action – enshrined in Teachers’ Standard 3.
- Too easily leaves the content behind and becomes a generic term for “teacher knowledge” (Settlage, 2013)
- Doesn’t focus on students’ conceptual learning (what is the link between a teachers’ understanding of evaporation and condensation, and a student’s ability to explain fogged up windows?)





## Implications for my research

- Wanting to understand knowledge development from the point of view of the science teacher (their experience) - exploratory, longitudinal research that recognizes the non-linear and evolutionary nature of teachers' learning
- A desire to examine teacher actions in the classroom, rather than what might be stored in science teachers' heads
- Concerned that the work resonated with values pertaining to social justice – recognising the opportunities and diversity afforded by the sociocultural context of the classroom for science learning (science accessible for all children)
- A study that focuses on “what’s it like for them?” and “how is knowledge used in practice”

## How am I investigating this?

- Probing what teachers do in the classroom as they teach; how they respond to pupils' questions and make decisions “in the moment”, the links they make to previous experiences and educational theory, how their conceptual explanations change over time
- Examining “critical classroom incidents” (particularly questions) and “teachable moments”



## How am I investigating this?

- Sample: following a small number of science teachers through the first few years of their teaching careers (4 years), with an emphasis on capturing experience and collaborative interpretation
- We meet termly as a group to discuss the teaching of particular concepts, Meetings are audio recorded.
- “We found that direct questions about content knowledge did not capture teachers’ understandings” (Rhoads & Webber, 2016)
- Data collection: multiple, individual interviews that use a Stimulated Recall Interview (SRI) protocol (Dempsey, 2010). A lesson will be filmed and the footage used to enable selection of clips that will provide stimulus for reflective dialogue. The interview is audio recorded and transcribed



## To finish with.....

“Professional learning is not developed through simply gaining more knowledge, rather, professional learning is enhanced by one becoming more perceptive to the complexities, possibilities and nuances of teaching contexts”

