

## Editorial by Dr. Nadia Siddiqui

Dr Stuart Kime is leading Evidence Based Education known for providing evidence-led training and professional development courses. In this article, Dr Kime discusses the challenges of promoting evidence use in teaching practice. There are also some useful insights into evaluation of a programme on teachers' use of evidence.

## Research evidence and professional experience

### Stuart Kime, Evidence Based Education



### What works for evidence-based education?

In the work that I do with schools – something of a hybrid activity sitting between the worlds of research, policy and classroom practice - I find myself in a state of apology quite frequently. As the number of teachers and school leaders interested in engaging with and using research evidence to inform the decisions they make in their day-to-day practice increases, questions often arise about how good, how useful, and how relevant research evidence is for the decisions they must make. Invariably, this is where the apologies start.

While I do think that there is an awful lot of research evidence in the field of education which is of poor quality, of little relevance to teachers and school leaders, and whose original studies wouldn't have been funded if I held the purse strings, I am convinced that – for the purpose of making the kinds of decisions those in our schools must – some useful material exists. Moreover, I think we can learn lessons from what has come before – in terms of both what was investigated and how the research was conducted and published - to inform what we do from here.

In this brief article, I outline some of things that I think are instrumental in advancing the use of policies and practices in education which are based on sound, rigorous and relevant evidence.

### First and foremost, we need rigorous and relevant evidence base.

Teachers and school leaders must make decisions at every turn, often with incomplete information and a web of competing needs pressing in on them. If we are to help teachers develop evidence-based approaches, we need a sound and accessible evidence base. Only then can educators working in complex, dynamic environments engage in what Rob Coe has referred to (in both his original and updated 'Manifesto(s) for evidence-based education') as "an approach which argues that policy and practice should be capable of being justified in terms of sound evidence about their likely effects". This is how he – and I – describe 'evidence-based education'.

There are other supporting factors in the implementation of an evidence-based / evidence-informed approach, but high-quality, relevant and rigorous evidence is a must. While I recognise that we do not currently know a great deal about precisely what constitutes such evidence, nor how best to present it - nor indeed who needs what and at what point in their decision-making - we can work with what we have already, test its use (as is the case with such investigations as the EEF's evaluation of the RISE Project), and learn as we go.

Any evidence base that is offered to teachers and leaders should not come simply in the form of journal articles, conference proceedings and chapters in books costing ten times that of the average hardback. Summaries of the best available evidence pertaining to real-world problems faced in classrooms, accompanied by explanations of how the approaches investigated have been / might be applied in practice, and guidance (and ideally tools) on implementation and evaluation are needed by classroom practitioners and school leaders. Resources such as the Education Endowment Foundation's Teaching and Learning Toolkit have shown a way forward in this endeavour, and have also highlighted the miles yet to travel. Encouragingly, there is exciting work underway to improve the quality of summary information on offer in the Toolkit by 'unzipping' the meta-analytic studies that have gone into it. And it's to meta-analysis that I now turn my attention.

## **An exercise in mega-silliness?**

In the late 1970s, American researcher Gene Glass applied his innovative statistical mind and, using meta-analysis for the first time, found a sizeable treatment effect for psychotherapy - a result which has been confirmed by other researchers subsequently. At the time, however, Glass and his colleagues' work was derided as 'An Exercise in Mega-Silliness' in a 1978 American Psychologist article written by psychologist Hans Eysenck.

## **Knowledge is power**

Having access to summaries of the best available evidence (and that word 'available' points to another of the problems with the evidence base - the file drawer problem), drawn from strong meta-analyses based on well-constructed trials, requires independent 'guardians' of the evidence, preferably in the form of bodies akin to the National Institute for Health and Care Excellence.

But even if such organisations exist and ensure that the power of research evidence does not become a political or ideological weapon, an evidence base is only one part of what I envisage in an evidence-informed education system. Alongside the evidence itself must come an understanding of what training and tools are required for both researchers and educators at different stages of their careers and in different capacities - and this is only one area where research is sorely needed - followed by innovations which meet the identified needs for all concerned.

## **Training and tools for researchers**

For evidence-based education to be of greater use to decision-makers in schools and colleges, thinking about the training and support available to the researchers who generate the evidence (especially during their research training) is as important as the training and tools provided to the school leaders and teachers who engage with their work. Organisations such as the STEPP Center in Chicago are beginning to use their resources to "develop and assess methods for generating, synthesizing, and translating evidence to improve policy and practice." The Center's 'Generalizer' tool is one example of methodologists' efforts to offer solutions to common problems associated with research (such as recruiting appropriate samples). We have to make it easier and more

attractive for researchers to engage in the generation of rigorous, relevant research evidence to support the kinds of decisions that, ultimately, school leaders and their teachers make. That they will make those decisions is not the issue here. That they will make them devoid of important guidance drawn from excellent scholarship is.

## **Technology and the speed of evidence**

For those working in schools and colleges, every day counts. With limited time and resources, teachers and lecturers have small windows of opportunity - in the forms of lessons, workshops, lectures and so on - to do things which make a difference. If we are to provide support for them to truly adopt an evidence-informed approach to their work, we need methodologists, policy-makers and funders to rethink the ways in which we research and evaluate.

As Rob Coe and I put it in 'A (new) manifesto for evidence-based education':

"There needs to be a shift in the relationship between research funders, researchers, teachers, leaders, and policy-makers. Such a shift must see the production of research evidence in education as problem-oriented, driven by demonstrable need, and in collaboration with school and college-based practitioners. Methodologists must improve the tools available to researchers charged with finding answers to important questions; those researchers must receive training which is fit for newly-emerging purposes."

The small band of researchers who understand the inner workings of randomised controlled trials know that intention-to-treat analysis provides an answer to the question 'What is the effect of offering this intervention?', but sheds no light on the effect of doing everything as specified by an intervention compared with doing only a portion of it. They know the limitations of the measurement instruments available, the challenges of recruiting and retaining samples, the difficulty in reliably measuring differential levels of compliance to assigned conditions in trials... With the ultimate goal of helping to build a rigorous and relevant evidence base which is accessible and meaningful for those who daily make decisions in those small windows of opportunity, researchers must be supported by funders and their institutions to address the methodological issues, to work in collaboration with schools, and to build the tools and techniques that are so urgently needed.

# TRANSLATIONAL RESEARCH INSIGHTS

## Training and tools for teachers and school leaders

The RISE Project (mentioned above) was an attempt to test out a programme of training and support designed to help school leaders embed an evidence-informed school improvement cycle in their schools. That school improvement cycle is represented in the diagram (an early version of the cycle now used by the EEF) below:



The findings from the evaluation of the RISE Project reveal some of the significant challenges faced in trying to change cultures, practices and policies within institutions, and if nothing else it tells us that more work is needed if we are to understand how and when to intervene in a teacher or school leader's career to help them use research evidence fruitfully.

I am still in contact with a number of people who were in that RISE Project cohort, leaders who have gone on to encourage colleagues in their schools, colleges, MATs and local authorities to engage with research evidence as one part of the jigsaw puzzle of education. There is no way of capturing the fullness of what those people derived from the Project, nor the effects that they themselves have had on others. Anecdotally, however, they will tell you that it changed aspects of their thinking and, for some, re-energised their careers. One of the things that they share – irrespective of the contexts in which they work – is the challenge of making change in organisations. So to this, we should pay attention and turn our gaze to the research evidence on behavioural economics.

### EAST

To inform our thinking about how to support educators in the use of evidence to inform decision-making, I argue that we should look to the literature from behavioural economics. So-called 'nudges' have been popularised in recent

years, particularly by the work of groups such as the Behavioural Insights Unit. Spun out of the Cabinet Office in 2010 and rebranded as the Behavioural Insights Team, the BIT website proclaims that the group "generate and apply behavioural insights to inform policy, improve public services, and deliver positive results for people and communities." So how can behavioural economics help teachers and school leaders make evidence-based decisions?

Ultimately, I see the whole endeavour of evidence-informed decision-making as one underpinned by the need to help people – human beings with feelings, families and frailties – make better decisions more easily. Doing the right thing is often really hard. Changing human behaviour is really hard. Classrooms, schools and colleges are busy, dynamic and demanding places in which the fast-paced and pressurised nature of teaching and school leadership could benefit from better choice architecture, something that I've seen in action in Norfolk, UK.

Behavioural insights have been applied in interesting ways at Norwich Research School in Norfolk. Using the simple 'EAST' model (easy, attractive, social, timely), the Norwich team of Niki Kaiser, Roger Higgins and Susi Waters have focused on the human obstacles to teachers and leaders engaging with research evidence. Simple 'nudges' such as reading lists of curated evidence summaries and the enticement of social gatherings (with pizza) have helped to create an environment in which the 'hard' activity of 'being evidence-informed' is made easier in small ways. It does not reduce the cognitive demands of the endeavour, but it certainly deals with some of the practical obstacles.

### Leadership

Ultimately, none of what I have briefly described above happens without leadership. What I have described is not easy, and we are still figuring out how to do it effectively and efficiently, but what seems to be clear is that leaders – leaders of policy, practice and research – need to question and be self-critical, to accept that there are so many 'unknown unknowns' in education, but that through well-led, well-managed and well-resourced approaches, we may be able to draw together research, policy and practice in a way that means we can do away with the label 'evidence-based education' and, instead, simply call it 'education'.

# TRANSLATIONAL RESEARCH INSIGHTS

## DECE news

The DECE team attended this year's Evidence Week in Parliament, which was organised by Sense About Science in collaboration with the House of Commons Library, POST and the House of Commons Science and Technology Committee. As well as attending the opening event, we had an evidence pod where we briefed Parliamentarians on evidence of the impact of Pupil Premium. To coincide with Evidence Week, we also launched new briefings on Pupil Premium, higher education and teacher supply. More information on Evidence Week and copies of the briefings are available at [www.dur.ac.uk/dece/events/evidenceweek](http://www.dur.ac.uk/dece/events/evidenceweek).



Congratulations to our PGR students Ourania Ventista, Nada el Soufi, and Ismail Shafeeu who graduated with PhDs from Durham University in July!

## Understanding the complex determinants of teacher shortages: Project update

Since October, Dr Beng Huat See, Prof Stephen Gorard, Dr Rebecca Morris and Dr Ourania Ventista have been working on an ESRC funded project on teacher shortages (ES/R007349/1). Our undergraduate survey has reached over 4500 respondents from 30 institutions in England, covering students from 23 disciplines. This is the first phase of the survey. The next phase will be interviewing undergraduates on their career

intentions. This will be followed by a survey of teacher trainees in the new academic year.

Preliminary research findings were presented at Evidence Week, and we have published a paper looking at the role of government policies on teacher shortages: <https://doi.org/10.1080/02671522.2019.1568535>.

We will be presenting our survey findings and the impact of initiatives to attract and retain teachers in hard-to-staff areas at the ECER conference in Hamburg and BERA conference at Manchester this September.

News about future presentations and more information about the project can be found at: [www.dur.ac.uk/dece/projects/teachershortages](http://www.dur.ac.uk/dece/projects/teachershortages). You can also contact [o.m.ventista@durham.ac.uk](mailto:o.m.ventista@durham.ac.uk).

## New publications by DECE members:

Boliver, V. (2019) Promoting fairer access to Scottish universities – how can this be achieved? CES Briefing No. 68. Available from: [www.ces.ed.ac.uk/briefings/67/](http://www.ces.ed.ac.uk/briefings/67/)

Gorard, S., Siddiqui, N. & See, BH. (2019) The difficulties of judging what difference the Pupil Premium has made to school intakes and outcomes in England. DECE Briefing. Available from: [www.dur.ac.uk/dece/briefings](http://www.dur.ac.uk/dece/briefings)

See, BH., Gorard, S., Morris, R. & El Soufi, N. (2019) Attracting and retaining teachers in hard to staff areas: What does the evidence say? DECE Briefing. Available from: [www.dur.ac.uk/dece/briefings](http://www.dur.ac.uk/dece/briefings)

## Upcoming events:

**2nd - 6th September:** Dr Ourania Ventista presenting at ECER Conference in Hamburg

**10th - 12th September:** Prof Stephen Gorard presenting at BERA Conference in Manchester

**2nd November:** ESRC Festival of Social Sciences

## DECE members include:

Prof Stephen Gorard (Director)	
Prof Carole Torgerson	Prof Vikki Boliver
Prof Tony Chapman	Dr Sol Gamsu
Dr Nadia Siddiqui	Dr Beng Huat See
Prof Peter Tymms	Prof Steve Higgins
Dr Ourania Ventista	Miss Lindsey Wardle

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