



HOW CAN WE IMPROVE THE USE OF RESEARCH EVIDENCE (IN PRACTICE)?

## Can users judge what is ‘promising’ evidence in education?



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Evidence can be used to inform decision-making by reducing uncertainty about the impact of programmes, policies and interventions (Raphael, 2000), and can yield better educational outcomes. Evidence can be confusing, however, as it varies in terms of form, quality and trustworthiness. It should be judged on the basis of its relevance to the research question, its quality and its reliability. We can assess the quality of evidence based on the research design, scale and validity, strength of measures, completeness and the dependability of the reported information (Gorard, 2015). This article discusses current definitions of what might be classed as ‘promising’ evidence for teachers and how this could be used in practice.

Even the best evidence-based programmes will not always yield the expected effects for all cases experiencing it under recommended conditions. Evidence that reduces the maximum level of uncertainty can be labelled promising, indicating that a programme, policy or intervention has worked in the past and is among the ‘best bets’ for the future. An overview of organisations that specialise in generating evidence in education suggests that there are different levels of evidence, categorised as strong, promising, moderate and other. These categories are different based on the research designs and rigour applied. However,

there are no standard definitions of these terms, and organisations across the world use them differently.

Fifteen years ago, slow progress in pupils’ achievement patterns was attributed to the lack of evidence on effective interventions and policies in education. The situation has gradually changed, and teachers now have a choice of interventions presented as effective programmes, such as those offered via the Education Endowment Foundation (EEF) Toolkits. The range of available evidence is not bound by the organisations that generated it or the local context in which the interventions have been evaluated. It is a common observation that teachers in the UK buy products and implement interventions that have been evaluated in the US, Australia and elsewhere. Teachers’ selection of these interventions might be informed by the evidence, but it is also important that they understand the terminological differences, have a strong knowledge of the research designs underlying these labels, and are able to judge the effective interventions for their target pupils.

At present, 17 programmes which have shown a positive impact on learning outcomes have been listed as promising by the EEF in England (EEF, 2020). However, the EEF has not clearly defined the term ‘promising evidence’, frequently used in its guidance and Toolkits.

The evaluations have been conducted in real classroom and school settings, using a randomised controlled trial (RCT) design, and trials have met the EEF security ratings of high-quality evidence. As a result, the 17 promising interventions form a strong evidence base and are recommended for disadvantaged pupils in addition to normal classroom learning. Some have also been commissioned for further trials on the basis of these initial findings. Although 150 RCTs have been conducted since the inception of the EEF, only those with positive results and high security ratings were called promising.

## Selecting promising programmes, according to the EEF standards, is still not enough to achieve positive learning outcomes.

Based in the US, the National Center for Education Evaluation (NCEE) and the Institute of Education Sciences are the equivalents/precursors of the EEF in England. NCEE categorises promising evidence as a third category after strong and moderate evidence (NCEE, 2018). According to this model, promising evidence suggests the programme has a positive impact, and the evaluation is based on correlational or quasi-experimental study design in which matching instead of randomisation of cases has taken place. In literacy, 231 programmes have been evaluated using RCT designs and 57 were found to be potentially positive for targeted literacy outcomes.

Passed in 2015, the Every Student Succeeds Act (ESSA) gives more control to US states in setting their educational targets for improvement, for which they will be accountable to the US Department of Education (Gordon, 2018). ESSA encourages the use of evidence-based practices in teaching and clearly defines four tiers of evidence, the first three based on rigour in research design. Strong evidence is based on an experimental design, moderate evidence is a study with a quasi-experimental design, and promising evidence is a study with correlational design and use of control variables. The fourth tier does not need to have a specific design-based study and it could be just a practice that demonstrates a rationale for research, subject to evaluation.

In all of these examples, promising evidence has different definitions and quality standards in terms of research design and scale, and replicability of programme effects. Programmes with strong evidence (as defined by NCEE and ESSA) or promising evidence (as defined by the EEF) are of different

pedagogical designs, required conditions, costs and the recommended dosage to show effects. Teachers' confusion about these differences in terminology could make an important difference to their decisions.

The list of evidence-based interventions is gradually increasing. Promising interventions in EEF terms are only suggestions, allowing schools and teachers to make informed decisions for their teaching practice. Selecting promising programmes, according to the EEF standards, is still not enough to achieve positive learning outcomes because teachers' knowledge and judgment of carefully produced and high-quality evidence would still be highly relevant (Siddiqui, Gorard & See, 2018). Teachers need to have a deeper understanding of promising evidence and its subsequent impacts in order to implement it with the appropriate target group (Siddiqui, 2020).

Many teacher training courses, even those led by university academic departments, do not currently provide sufficient skills for teachers in understanding and being able to judge research that can enhance their teaching practice and have direct benefits for pupils' learning outcomes. There is surely a need for embedding high-quality research capacity-building in initial and advanced teacher training programmes.

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