

Review of evidence on teaching maths: call for proposals



November 2016

The Education Endowment Foundation (EEF) is commissioning a systematic review of the best available evidence about maths teaching in upper primary and lower secondary schools, and support for pupils making the transition between the two phases. We are seeking proposals from research teams able to complete this review by end of May 2017.

The review will be used to inform the creation of a series of guidance reports on teaching maths.

Background

The review will be used by the EEF team to inform the creation of two resources for a non-technical audience:

- the first in a series of EEF guidance reports
- application guidance for EEF grant funding

GUIDANCE REPORTS

EEF guidance reports summarise the best available research evidence on an aspect of teaching and present actionable recommendations for practice. Guidance reports are based on rigorous systematic reviews of research evidence and are produced in collaboration with practitioners. The EEF has published two guidance reports so far:

- [Making Best Use of Teaching Assistants](#)
- [Improving Literacy in Key Stage 1](#)

The outline of the process for producing EEF guidance reports is as follows.

1. The EEF appoints a panel of practitioners, academics, and other stakeholders to support the creation of the guidance report.
2. The EEF commissions a review of the research evidence related to the focus of the guidance report.
3. The completed review is then presented to the EEF panel. Together, the panel and the EEF will use the evidence review to draft a series of evidence-based recommendations for practice. The evidence reviewer will be expected to provide ongoing support during the process of writing recommendations.

The next series of guidance reports published by the EEF will focus on teaching maths. The series will begin with a report focused on maths teaching in the late primary and early secondary stages. This will include guidance on promoting a successful transition from primary to secondary school. Subsequent reports will focus on teaching in early years settings and later in secondary school.

GRANT FUNDING

The review will inform application guidance to potential applicants for EEF funding. It will also be used by the EEF team to inform the selection of programmes for funding. Our focus is on supporting projects that show promising evidence of having a measurable impact on attainment or a directly related outcome. We are interested in testing projects' effectiveness through robust independent evaluations, where appropriate as randomised controlled trials.

Review focus and methods

The review will synthesize the best available international evidence regarding teaching maths to children between the ages of 9 and 14.

Where possible we would expect the review team to build on previous review work, including the reviews underpinning the What Works Clearinghouse practice guides, and to work closely with other teams currently conducting systematic reviews in this field.

We would like the review to be completed using an approach that allows it to be easily updated in the future. EEF guidance reports are "live" documents that will be updated as the evidence base evolves.

The review will focus on two types of research evidence:

- Evidence about the typical development of mathematical abilities
- Evidence about effective practice in the teaching of maths.

1. Review the evidence regarding typical development of mathematical abilities.

We would like the review to briefly summarise the literature on typical development of maths knowledge and skills. This section should set out a model of maths development that is useful and applicable for practitioners, and how it can be used to identify when and why a child might be struggling to develop mathematical skills. This aspect of the review will be used to construct recommendations regarding effective diagnosis of pupils' strengths and weaknesses in maths.

Questions we would like to answer include:

- What does typical maths development look like throughout the age range covered by the review?
- What are useful models that practitioners can use to identify problems with maths and numeracy development?

2. Review the evidence on effective practice

We would like the review to synthesize the research literature on effective practice in maths teaching for this age group. We would also like the review to consider effective practice for supporting struggling pupils at the transition from primary to secondary school. The review should assess the strength of existing studies. We are most interested in robust, causal evidence of impact using experimental and quasi-experimental designs, including studies carried out both within the UK and internationally.

The systematic reviews that underpin the Teaching and Learning Toolkit and Early Years Toolkit should provide a useful starting point for this work. We would also expect the reviewer to make use of recently conducted reviews by the What Works Clearinghouse.

This section of the review should also highlight evidence that suggests certain practices are ineffective, and gaps in the evidence base where more research is needed.

TIMING

The deadline for proposals is Thursday 12th January 2017. We are looking to appoint a team to begin working as soon as possible and expect the work to be delivered by the end of May 2017.

APPOINTMENT PROCESS

If you would like to be considered to undertake the review, please send a brief outline describing your proposed approach. Please include an overview of your relevant skills and experience, and an estimated budget. Proposals should be no more than 1,500 words.

Similar reviews funded by the EEF can be found on the [literature reviews section](#) of the EEF website.

We recognise that different aspects of this review may require different expertise, so are open to joint applications from multiple teams. We are open to applications from teams based outside of the UK.

We will finalise the specification with the successful team and the final report will be peer reviewed. Report length and budget are open for discussion at this stage.

If you have any questions, please contact Peter Henderson:

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Please send your proposal to: peter.henderson@eefoundation.org.uk
by **Thursday 12th January 2017**.