

Mathematics Education

A systematic review of strategies to raise pupils' motivational effort in Key Stage 4 Mathematics

What do we want to know?

The review sought to identify which strategies can help to raise motivational effort towards mathematics in Key Stage 4 among pupils whose attainment in mathematics at the start of the stage is slightly below average.

Who wants to know and why?

Teachers and policy makers have expressed a concern about the level of motivation of pupils towards mathematics in Key Stage 4, in particular about those pupils whose attainment at the start of the stage is slightly below average. Improving the engagement of these pupils during Key Stage 4 is likely to have a positive impact on their level of attainment in GCSE mathematics.

What did we find?

The strategies that were identified fell into four key areas:

- Grouping
- Pupil identity

- Teaching for engagement
- Innovative methods

The most effective strategies appeared to be those which enhanced pupils' self-confidence by enabling them to see themselves as pupils who can understand and can do mathematics.

How did we get these results?

The research evidence for the findings is based on an in-depth analysis of 25 studies. The review question was:

What strategies can raise motivational effort in Key Stage 4 Mathematics among pupils in the mid-below-average to average range of mathematical attainment in England?

What are the implications?

Teachers need to consider how to make effective use of such strategies.

Teachers need to be offered opportunities to work together to explore and evaluate changes in their own classroom practice which incorporate such strategies.



Where to find further information

For more information about the content of this review please contact:

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The results of this systematic review are available in four formats:

SUMMARY

Explains the purpose of the review and the main messages from the research evidence

FINAL REPORT

Describes the background and the findings of the review(s) but without full technical details of the methods used

TECHNICAL REPORT

Includes the background, main findings, and full technical details of the review

DATABASES

Access to codings describing each research study included in the review

These can be downloaded or accessed at <http://eppi.ioe.ac.uk/reel/>

The references for the reports of this review are:

REPORT

Kyriacou C, Goulding M (2006) A systematic review of strategies to raise pupils' motivational effort in Key Stage 4 Mathematics. Report. In: *Research Evidence in Education Library*. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

TECHNICAL REPORT

Kyriacou C, Goulding M (2006) A systematic review of strategies to raise pupils' motivational effort in Key Stage 4 Mathematics. Technical Report. In: *Research Evidence in Education Library*. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

This document is available in a range of accessible formats including large print. Please contact the Institute of Education for assistance:

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