

## Technical Appendix

### Definition

Homework refers to tasks given to pupils by their teachers to be completed outside of usual lessons. Common homework activities in secondary schools are completing tasks assigned in lessons, such as practicing further questions or problems in mathematics, or preparing for tasks in future lessons. It may also include routine course work or revising for tests and examinations. In some models of 'flipped learning', pupils prepare at home for classroom discussion and application tasks. It also includes activities such as 'homework clubs' where pupils are given the opportunity to complete their assigned tasks in school, usually at the end of the school day.

Search terms: homework, homework clubs, home assignment, home reading, flipped learning.

### Evidence Rating

Homework has been extensively studied and is a controversial topic. Studies have mainly looked at the correlation between homework and how well schools or pupils perform. There is a relatively consistent finding that there is a positive association but that this reduces when ability and home background are taken into account. There are a smaller number of studies which have investigated what happens when homework is introduced and comparison is made with classes where homework is not given, where the typical gain is as much as five or six months additional progress for secondary pupils. There are two meta-analyses, one published in the last ten years, and one recent systematic review. The variation in what is assigned as 'homework' and how this relates to what happens in school means the variation in reported impact between different studies is always likely to be large. Overall the evidence is rated as limited.

## References

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## Summary of effects

Meta-analyses	Effect size	FSM effect size	
Cooper, H., Robinson, J.C., Patall, E.A., (2006)	0.54	-	(RCT - secondary homework/ no homework)
	0.49	-	(Secondary, correlational)
Paschal, R.A., Weinstein, T. & Walberg, H.J., (1984)	0.36	0.15	(Primary and Secondary)
Weighted mean	0.44		

The right hand column provides detail on the specific outcome measures or, if in brackets, details of the intervention or control group.

## Meta-analyses abstracts

### 2 Cooper, H., Robinson, J.C., Patall, E.A. (2006)

In this article, research conducted in the US since 1987 on the effects of homework is summarized. Studies are grouped into four research designs. The authors found that all studies, regardless of type, had design flaws. However, both within and across design types, there was generally consistent evidence for a positive influence of homework on achievement. Studies that reported simple homework-achievement correlations revealed evidence that a stronger correlation existed a) in Grades 7-12 than in K-6 and b) when students rather than parents reported time on homework. No strong evidence was found for an association between the homework-achievement link and the outcome measure (grades as opposed to standardized tests) or the subject matter (reading as opposed to math). On the basis of these results and others, the authors suggest future research.

### 7 Paschal, R.A., Weinstein, T. & Walberg, H.J. (1984)

This paper synthesizes empirical studies of homework and of various homework strategies on the academic achievement and attitude of elementary and secondary students. A computer search yielded 15 published and unpublished studies with explicit statistical results. Fifty-four characteristics of treatments, contexts, conditions, validity, and outcomes were coded for each study. About 85% of the effect sizes favored the homework groups. The mean effect size is .36 (probability less than .0001). Homework that was graded or contained teachers' comments produced stronger effects (.80).