

What Works or What's Worked? Evidence for Education in the UK

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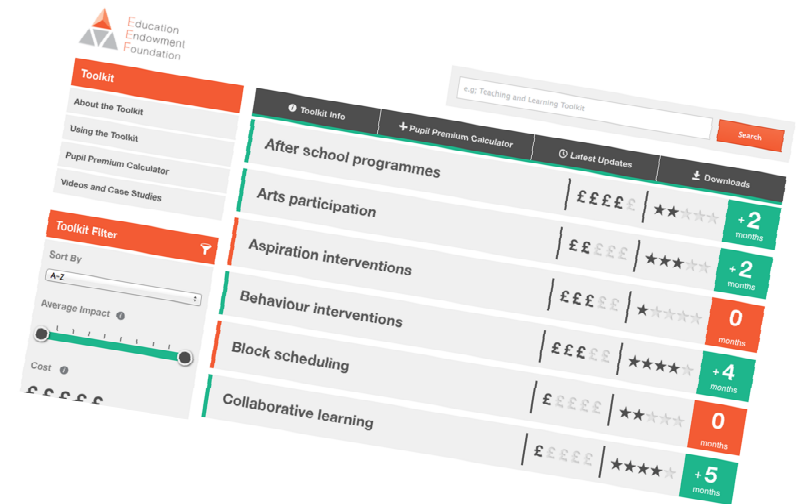
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3rd International Evidence
Informed Policy and Practice in
Education in Europe (EIPPEE)
Conference
May 14-15, 2014 – Oslo, Norway

Sutton Trust/ Education Endowment Foundation (EEF) 'Toolkit'



- Website of research-based approaches to support teaching and learning in schools
- 34 approaches so far classified by:
 - Cost estimate (additional outlay for schools)
 - Strength of evidence
 - Potential learning gain (months progress)

Summaries

What is it?

How effective is it?

How secure is the evidence?

What are the costs?

What should I consider?

Aim is to support professional judgment

Collaborative learning

Moderate impact for very low cost, based on extensive evidence.

£ £ £ £ £

★★★★★

+5 months

What is it?

Collaborative or cooperative learning can be defined as learning tasks or activities where students work together in a group small enough for everyone to participate on a collective task that has been clearly assigned. This can be either a joint task where group members do different aspects of the task but contribute to a common overall outcome, or a shared task where group members work together throughout the activity. Some collaborative learning approaches also get mixed ability teams or groups to work in competition with each other, in order to drive more effective collaboration. There is a very wide a range of approaches to collaborative and co-operative learning involving different kinds of organisation and tasks, but this summary does not include [Peer tutoring](#) which is reviewed separately

How effective is it?

The impact of collaborative approaches on learning is consistently positive, but it does vary so it is important to get the detail right. Effective collaborative learning requires much more than just sitting pupils together and asking them to work together; structured approaches, with well-designed tasks lead to the greatest learning gains. There is some evidence that collaboration can be supported with competition between groups, but this is not always necessary, and can lead to learners focusing on the competition rather than the learning it aims to support. Approaches which promote talk and interaction between learners tend to promote the best gains.

How secure is the evidence?

Evidence about the benefits of collaborative learning has been found consistently for over 40 years and a number of systematic reviews and meta-analyses of research studies have been completed. In addition to direct evidence from research into collaborative learning approaches, there is also indirect evidence where collaboration has been shown to the effectiveness of other approaches such as mastery learning or digital technology. It appears to work well for all ages if activities are suitably structured for learners' capabilities and positive evidence has been found across the curriculum. Not all of the specific approaches to collaborative learning that are adopted by schools have been evaluated so it is important to evaluate any new initiative in this area.

What are the costs?

The direct costs involved are very low, though professional development is advisable. Estimated costs for a class of 25 pupils are about £500 or £20 per pupil per year, plus the costs of monitoring and evaluating impact of adopting the approach. Overall the costs are estimated as very low.

What should I consider?

- Pupils will need support and practice to work together; this does not happen automatically.
- Tasks need to be designed carefully so that working together is effective and efficient, otherwise some pupils will try to work on their own.
- Competition between groups can be used to support pupils in working together more effectively within their group, though over-use of competition can focus learners on the competition rather than succeeding in their learning so it needs to be used cautiously.
- It is particularly important to encourage lower achieving pupils to talk and articulate their thinking in collaborative tasks as they may contribute less.
- Have you considered the professional development required to support effective use of these approaches?

Download Approach



Videos & Case Studies

Toolkit Talks: Collaborative learning



Related Projects

- + Chatterbooks
- + Success for All

Programmes

Training

Good CPD Guide



Find training providers to support professional development related to collaborative learning.

[Follow Link](#)

Evaluation Guide

EEF DIY Evaluation Guide

An accessible resource for teachers which introduces the key principles of educational evaluation and provides guidance on how to conduct small-scale evaluations in schools

[Follow Link](#)

Further Reading

Education Scotland

Education Scotland have some online resources to support professional development about collaborative learning.

[Follow Link](#)

Behaviour Adviser website

An introduction to collaborative learning.

[Follow Link](#)

Concept to Classroom

An introduction to collaborative and co-operative learning.

[Follow Link](#)

Case studies/
video

EEF Projects

Programmes
Training & CPD

Evaluation
guide

Further
reading &
references

Abstracts
from meta-
analyses

Policy context



- Response to UK's *Pupil Premium* initiative
- €1100 per pupil for the 20% least affluent pupils¹, plus high accountability framework – “value for money”²
- Adopted by the EEF as central to their approach
- Toolkit currently used by nearly half of schools in England
- Designated the ‘*What Works Centre for “Improving education outcomes for school-aged children”*’ in March 2013 by UK Government

Approach

- Systematic search for quantitative syntheses in each theme (with cognate terms)
- Inclusion criteria - experimental comparisons; school age pupils; tested educational outcomes (mainly literacy and numeracy);
- Other data used for effect size estimate where meta-analyses not available
- Details set out in technical appendices

Comparative synthesis

- Quantitative estimate the *size* of the effect
 - Standardised Mean Difference = 'Months of gain'
 - Inverse variance weighted average
- Estimate the *costs* of adopting
 - From studies or similar evaluations
 - Information not always available
- Comparative index, *relative* benefit
- Quality index for each meta-analysis includes:
 - search criteria; ES type; exploration of variance (e.g. random/ non-random); consistency of findings

	📄 Toolkit Info	+ Pupil Premium Calculator	🕒 Latest Updates	📄 Downloads
	Feedback	£ £ £ £ £	★★★★★	+8 months
	Meta-cognition and self-regulation	£ £ £ £ £	★★★★★	+8 months
	Peer tutoring	£ £ £ £ £	★★★★★	+6 months
	Early years intervention	£ £ £ £ £	★★★★★	+6 months
Updated entry	One to one tuition	£ £ £ £ £	★★★★★	+5 months
	Homework (Secondary)	£ £ £ £ £	★★★★★	+5 months
Updated entry	Collaborative learning	£ £ £ £ £	★★★★★	+5 months
New entry Feb	Oral language interventions	£ £ £ £ £	★★★★★	+5 months
	Mastery learning	£ £ £ £ £	★★★★★	+5 months
	Phonics	£ £ £ £ £	★★★★★	+4 months

Updated entry

Small group tuition	£ £ £ £ £	★★★★★	+ 4 months
Behaviour interventions	£ £ £ £ £	★★★★★	+ 4 months
Digital technology	£ £ £ £ £	★★★★★	+ 4 months
Social and emotional learning	£ £ £ £ £	★★★★★	+ 4 months
Parental involvement	£ £ £ £ £	★★★★★	+ 3 months
Reducing class size	£ £ £ £ £	★★★★★	+ 3 months
Summer schools	£ £ £ £ £	★★★★★	+ 3 months
Outdoor adventure learning	£ £ £ £ £	★★★★★	+ 3 months
Sports participation	£ £ £ £ £	★★★★★	+ 2 months
Arts participation	£ £ £ £ £	★★★★★	+ 2 months

Updated entry

Individualised instruction	£ £ £ £ £	★★★★★	+2 months
Extended school time	£ £ £ £ £	★★★★★	+2 months
After school programmes	£ £ £ £ £	★★★★★	+2 months
Learning styles	£ £ £ £ £	★★★★★	+2 months
Mentoring	£ £ £ £ £	★★★★★	+1 month
Teaching assistants	£ £ £ £ £	★★★★★	+1 month
Homework (Primary)	£ £ £ £ £	★★★★★	+1 month







Performance pay	£ £ £ £ £	★★★★★	0 months
Aspiration interventions	£ £ £ £ £	★★★★★	0 months
Block scheduling	£ £ £ £ £	★★★☆☆	0 months
School uniform	£ £ £ £ £	★★★★★	0 months
Physical environment	£ £ £ £ £	★★★★★	0 months
Setting or streaming	£ £ £ £ £	★★★★★	-1 month
Repeating a year	£ £ £ £ £	★★★★★	-4 months

Updated entry

EEF commissioning of projects

- EEF commissions projects guided by the Toolkit
 - Since launch in 2013 the EEF has awarded:
 - £37.4 million (€48.9M) to 72 projects (57 RCTs) working with over 500,000 pupils in over 2,300 schools in England
 - Toolkit findings (and other recent studies) included in updates (weighted mean ES)
- Aim is to scale successful interventions
 - Depending on evidence of promise
 - Pilot → Efficacy → Effectiveness → Take to scale
 - Compile database of all interventions, with national attainment data to assess longer term impact

Preliminary results

Toolkit theme	ES (d)	EEF Project	Impact (d)	Notes	Security of findings
One-to-one tuition ¹	0.44 (overall) 0.22 (TAs)	Catch up Numeracy (using Teaching Assistants)	0.21 0.27	Catch up group (v controls) Time equivalent group (v. controls)	 
One-to-one tuition (using TAs)	0.44 (overall) 0.22 (TAs)	Switch on Reading (using TAs)	0.24		
Summer school	0.19	Future Foundations Summer School	0.17 0.00	English Maths	
Summer school	0.19	Discover Summer School	0.21 0.24	Reading Writing	TBC
Small group (Grammar instruction)	0.34 -0.32	Grammar ² for Writing	0.10 0.21	Overall impact Small group v control	
One to one Small group	0.44 0.34	Response to intervention	0.19 0.48	Overall - high attrition FSM group	
Meta-cognition and self-regulation	0.62	Calderdale Writing Project	0.74	"self-regulated strategy development"	TBC
Arts Participation	0.16	Rhythm for Reading	0.03 n.s	Rhythm based notation reading	TBC

¹ Programmes which used experienced and specifically trained teachers tend to be more effective than those using volunteers or classroom assistants (nearly double the effect): <http://educationendowmentfoundation.org.uk/toolkit/one-to-one-tuition/>

² Grammar instruction d= -0.32 (Graham and Perrin 2007)

Conclusions: iterative knowledge brokerage

- Education Endowment Foundation as 'knowledge broker'
- Funds development of the Toolkit
- Promotes the Toolkit to schools (and policy makers) and encourages them to evaluate
- Commissions research to improve outcomes for disadvantaged pupils
- Feeds findings from research back into the Toolkit
- Will evaluate long term impact of interventions