

Cost

£££££

Evidence strength



Impact (months)

+5

Effect size

0.45

What is it?

A collaborative (or cooperative) learning approach involves pupils working together on activities or learning tasks in a group small enough to ensure that everyone participates. Pupils in the group may work on separate tasks contributing to a common overall outcome, or work together on a shared task. This is distinct from unstructured group work.

Some collaborative learning approaches put pairs, groups or teams of mixed attainment to work in competition with each other in order to drive more effective collaboration. There is a very wide range of approaches to collaborative and cooperative learning involving many different kinds of organisation and tasks. [Peer tutoring](#) can also be considered as a type of collaborative learning, but is reviewed as a separate topic in the Toolkit.

Key Findings

1. Collaborative learning approaches have a positive impact, on average, and may be a cost-effective approach for raising attainment.
2. Pupils need support and practice to work together; it does not happen automatically. Professional development can support the effective management of collaborative learning activities.
3. Tasks and activities need to be designed carefully so that working together is effective and efficient, otherwise some pupils may struggle to participate or try to work on their own. It is important to ensure that all pupils talk and articulate their thinking in collaborative tasks to ensure they benefit fully.
4. Competition between groups can be used to support pupils in working together more effectively. However, overemphasis on competition can cause learners to focus on winning rather than

succeeding in their learning.

5. The most promising collaborative learning approaches tend to have group sizes between 3 and 5 pupils and have a shared outcome or goal.

How effective is the approach?

The impact of collaborative approaches on learning is consistently positive, with pupils making an additional 5 months' progress, on average, over the course of an academic year. However, the size of impact varies, so it is important to get the detail right.

Collaborative learning can describe a large variety of approaches, but effective collaborative learning requires much more than just sitting pupils together and asking them to work in pairs or group; 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. Most of the positive approaches include the promotion of talk and interaction between learners.

The evidence indicates that groups of 3-5 is most effective for collaborative learning approaches - there are smaller positive impacts for both paired work and collaborative learning activities with more than 5 pupils in a group. There is also some evidence that collaborative learning approaches are particularly promising when used to teach science.

A limited number of published studies on collaborative learning are available in the Arab world. There is, however, some evidence of promise where the approach has been applied. Studies in Libya, Saudi Arabia, and UAE have examined the effect of the collaborative learning. Reported benefits include interpersonal skills, self-confidence, student attitudes, productivity, alongside academic outputs.

However, researchers have highlighted some potential barriers to implementing collaborative learning approaches in the Arab world. Examples include: the hierarchical education systems, overloaded curriculum, lack of resources and lack of high quality teacher training in the region. Researchers have suggested selecting textbooks that embed collaborative learning activities, as one way of implementing the approach.

Behind the average

The effects of collaborative learning are slightly higher in secondary schools (+6 months) than primary schools (+5 months).

The impact of collaborative learning is slightly lower in literacy (+3 months) than mathematics (+ 5 months) and science (+10 months).

Small groups of 3-5 pupils with responsibility for a joint outcome appears to be the most successful structure.

Studies that deliver collaborative learning through digital technology tend to have lower impact (+3 months overall).

Closing the disadvantage gap

There is limited evidence on differential impact for pupils from disadvantaged backgrounds. There is some evidence that collaborative learning approaches may benefit those with low prior attainment by providing opportunities for pupils to work with peers to articulate their thinking, share knowledge and skills and address misconceptions through peer support and discussion.

It is crucial that support is provided through well-structured and carefully designed learning activities to ensure that lower-attaining pupils are involved, challenged and learn successfully. If collaborative learning approaches just involve high attaining pupils solving problems with no input from their peers – this is likely to widen existing gaps in attainment.

How could you implement in your setting?

There are many theories about how collaborative learning might benefit pupil outcomes. Through collaboration, pupils may develop explanation, demonstration, problem-solving, and metacognitive skills, or pupils may benefit from sharing the load of challenging tasks. It is important that schools ensure that within collaborative learning:

- all pupils, particularly pupils with low prior attainment, are supported to fully participate.
- the make-up of pairings and groups is carefully considered
- teachers promote good practice in collaboration – for example modelling high quality discussions so that collaborative activities are productive
- teachers carefully monitor collaborative activities and support pupils that are struggling or

not contributing

There is a broad range of approaches to collaborative or cooperative learning involving different kinds of organisation and tasks across the curriculum. Not all of the specific approaches to collaborative learning adopted by schools have been evaluated, so it is important to evaluate any new initiative in this area. Professional development is likely to be required to maximise the effectiveness of approaches and monitor the impact of different approaches in the classroom.

When introducing new approaches, schools should consider implementation. For more information see [Putting Evidence to Work – A School’s Guide to Implementation](#).

What does it cost?

The global evidence indicates that the average cost of collaborative learning is expected to be very low with the cost to schools largely based on teacher training and resources. As a classroom-based approach, implementing collaborative learning will also require a small amount of staff time for planning and monitoring, compared with other approaches.

Alongside time and cost, school leaders should consider how to maximise the effectiveness of collaborative learning through teacher professional development to support the use of well-designed tasks and should carefully monitor the impact of approaches on lower-attaining pupils.

As yet there is no information about local costs.

How secure is the evidence?

The security of the evidence around collaborative learning interventions is rated as low. 212 studies were identified that meet the inclusion criteria of the Toolkit. The topic lost three padlocks because:

- A small percentage of studies that have taken place recently. This might mean that the research is not representative of current practice.
- A large percentage of the studies were not independently evaluated. Evaluations conducted by organisations connected with the approach – for example, commercial providers, typically have larger impacts, which may influence the overall impact of the strand.
- There is a large amount of unexplained variation between the results included in the topic. All reviews contain some variation in results, which is why it is important to look behind the average. Unexplained variation (or heterogeneity) reduces our certainty in the results in ways that we have been unable to test by looking at how context, methodology or approach is influencing impact.

As with any evidence review, the Toolkit summarises the average impact of approaches when researched in academic studies. It is important to consider your context and apply your professional

judgement when implementing an approach in your setting.

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