

# **Cooperative Learning: interactive pedagogy for all**



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## What is cooperative learning?

### True or false?

1. Students sit together at one table and talk about their work.
2. Everyone in a group is aware of their roles and responsibilities and each one is accountable for his or her contribution.
3. Students feel valued and respected by the group and support each other to learn.
4. Some members of a group lead, whilst others listen.
5. When the teacher asks a question of the learners, everyone is given time to think about the question, and usually to talk to a peer, before sharing an answer.

### Why does cooperative learning work?

Two main reasons:

1. Motivational / social cohesion
2. Cognitive

Research<sup>1</sup> over the last fifty years has shown that cooperative learning techniques:

- promote student learning and academic achievement
- increase student retention
- enhance student satisfaction with their learning
- help students develop skills in oral communication
- develop students' social skills
- promote students' self-esteem
- help to promote inclusion and a more democratic classroom

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<sup>1</sup> Hattie, J. (2009). *Visible Learning: A synthesis of over 800 meta-analyses relating to achievement*. London: Routledge.

Johnson, D. W., Johnson, R. T. (1975). *Learning Together and Alone: Cooperative, Competitive and Individualistic Learning*. Needham Heights, MA: Allyn and Bacon

Johnson, D. W. and Johnson, R. (1989). *Cooperation and Competition: Theory and research*. Edina, MN: Interaction Book Company.

Kyndt, E., Raes, E., Lismont, B., Timmers, F., Cascallar, E., Dochy, F. (2013). A meta-analysis of the effects of face-to-face cooperative learning. Do recent studies falsify or verify earlier findings? *Educational Research Review* 10 133–149.

Slavin, R. E. (1995). *Cooperative Learning: Theory, research, and practice*, Boston: Allyn and Bacon.

Sharan, S. (1990). *Cooperative Learning: Theory and research*, Westport, CN, Praeger.

***Cooperative learning requires students to work together in small groups to support each other to improve their own learning and that of others.***

To be genuinely cooperative, five basic elements of cooperative Learning are needed. They are often known by the acronym: **PIGSF**.



### **1. Positive Interdependence**

Students must feel that they need each other in order to complete the group's task that they "sink or swim" together. Some ways to create this feeling are through establishing mutual goals (students must learn the material and ensure all group members learn the material); joint rewards for completing tasks or achieving a certain mark, shared materials and information (one paper for each group, or each member receives only part of the information needed to do the assignment) and assigned roles (summariser, encourager of participation, elaborator, time checker, resource manager etc.).

### **2. Individual Accountability**

Cooperative learning groups are not successful until every member has learned the material, or has helped with and understood the assignment. Therefore, it is important to frequently stress and assess individual learning so that group members can appropriately support and help each other. Some ways of structuring individual accountability are by giving each group member an individual exam which contributes to a group score, or by randomly selecting one member to give an answer for the entire group.

### **3. Face-to-Face Promotive Interaction**

Promotive interaction exists when individuals encourage and facilitate each other's efforts to complete tasks and to reach the group goals. Ways to ensure face-to-face promotive interaction include: oral summarising, giving and receiving explanations, and elaborating (e.g. relating what is being learned to previous learning). Careful consideration of the layout of the classroom to facilitate face-to-face interaction is an important factor.

### **4. Interpersonal and Small Group Skills**

Students do not necessarily have the social skills they need to collaborate effectively with others. So, teachers need to teach the appropriate communication, trust, decision-making and conflict management skills to students and provide the motivation to use these skills in order for groups to function effectively.

### **5. Group Processing**

Processing means giving students time and procedures to analyse how well their groups are functioning and how well they are using the necessary skills. The processing helps all group members achieve while maintaining effective working relationships among members. Feedback from the teacher and/or student observers on how well they observed the groups working may help processing effectiveness.

Based on (Johnson, D. W., Johnson, R. & Holubec, E. (1993). *Circles of learning: Cooperation in the classroom*. (4th edn.). Edina, MN: Interaction Book Company.

## Effective Implementation of cooperative learning

### Step 1: Establish class cohesion and a democratic learning environment

- Establishing a community of learners. Some examples of strategies for getting to know each other include:

#### **The story of my name**

Where does your name come from? Share the story of where your name comes from and what your name means. This helps to build intercultural respect and understanding.

#### **Your scar story**

The aim is for learners in pairs or groups to say something about themselves. The teacher should quickly model this, with a short story about how s/he got a scar. S/he then asks learners to take turns in pairs or groups to tell theirs, explaining that this does not mean anyone has to undress!

#### **Three-step interview**

Here such as 'sell your house' where students describe their house to a partner but are allowed to exaggerate to make it more interesting. The partner listens carefully and later working with another pair, the partner 'sells' the house to the group.

- Celebrating diversity is another key aspect of creating a cohesive classroom ethos. The teacher is the key in through providing opportunities for differences to be recognised and appreciated. This demonstrates that each pupil is valued and the classroom is a much more interesting place because of this diversity.
- Building class identity - Important aspects include setting up regular class meetings and or having circle discussions / circle time. Older students, they can take on the role of chair for the meetings.

### Step 2 - Teambuilding

Particularly when using students are spending time working in groups, it is essential to begin by team-building. This can be helped by:

1. Getting to know each other  
Begin by ensuring that the team knows each other and have some getting to know-you activities and ice-breakers.
2. Creating a team identity. Possible activities include:
  - Windows, or this is sometimes called One and All. First a box is drawn in the centre of a piece of A4 paper. Second a corner of the box is connected to the outside corner of the paper. Third, corners are connected to each corner of the paper to create a 'window'. Each outside section is numbered 1 to 4 with a blank in the middle. In turn students have to write down something about themselves, such as what they particularly like to eat, or a hobby or favourite sport. When each member of the group has recorded something, they decide what they have in common and this is used to decide on the team name which is recorded in the middle segment. Once a team name has been decided, the team can agree a banner or logo and a team 'cheer' to celebrate their achievements.

- Squiggle art. Here the team is given one piece of A3 paper. Each pupil draws one line on the paper and then passes the paper to a person on the right in the team. The paper goes around to everyone and then continues until they are asked to stop with each person building on what others have drawn to create a picture. These are shared with the class and can be used to help create the team name.
3. Building trust. A range of games can be used for this including:
- Mirror-mirror – here pairs of students stand facing each other about half a metre apart. One student is the actor the other is the mirror image. The students are given some written scenarios which the actor only can see and then he or she has to enact it. Their partner can only follow the actions and there is no speaking. After each scenario, partners swap.  
Scenarios could include:
    - Playing football/netball etc.
    - Brushing teeth/hair
    - Writing in class
    - Shouting for help as the building is on fire.
4. Respecting one another's views
- This is where teams need to come to a consensus for various scenarios. For example, using a list of predicaments cards, students in a group take turns to read out one and they discuss and must agree on one answer within a given time limit. Predicaments can include:
- Your house is on fire and you only have time to save five things. What are they?
  - You are accused of stealing some money by the teacher. You did not do it but you know who did. What do you do?
  - Someone is spreading lies about you on social media. What do you do?
5. Team projects
- Setting a project for the group to solve is a good way of team-building. Examples include:
- Rectangles where students work in teams to find as many rectangles there are in a three by three rectangle, or a four by four rectangle. They can begin by working with a partner and then compare with others in their group and agree. They need to consider what strategies they used and also what they did well as a group and what they could do even better.

### **Step 3 - Developing the skills of cooperating**

There are two types of skills: task skills and working relationship skills.

Task skills are focused on the content of the task and include:

1. Following instructions
2. Staying on task
3. Generating and elaborating on ideas
4. Managing time successfully
5. Planning and reviewing progress

Working relationship skills are focused on the relationships within the group and include:

1. Everyone participating
2. Helping and encouraging each other
3. Reaching agreement
4. Showing appreciation

A progression in developing these skills can be helpful, for example:

#### ***Starting out***

Eye contact; posture, tone of voice, personal space

***Basic group skills***

Sharing and taking turns, including others, being positive, expressing your opinion, listening and asking good questions

***Advanced group skills***

Respecting other people's ideas and opinions, negotiating, mediating disagreement

Making decisions in a group, managing time, summarising, clarifying

**Step 4 – Conflict resolution**

An inevitable part of working with others is that at some point conflict will arise and one of the important skills is learning how to deal with conflict.

The two important aspects to resolving conflict are:

1. being able to stop and calm down
2. being able to see another person's point of view.

Students often do not know how to deal with disagreements. They may engage in personal attacks or 'put downs', get up and walk away. To ensure successful group work, strategies are needed so students can learn to disagree. It is also important to realise that some minor disagreements can be quickly resolved and when using roles in groups, having a participation checker for example, can be the person who checks that someone's views are being taken into account and help avoid escalation.

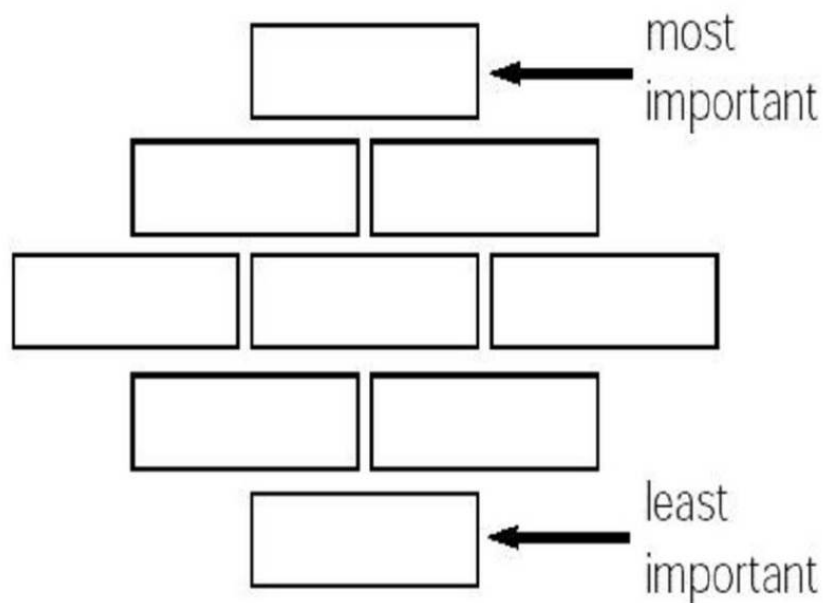
**Step 5 - Phased introduction in lessons**

1. Establish a cohesive learning environment and begin teaching teamwork and working relationship skills (this needs to be ongoing).
2. Begin with small informal groups including: pairs and trios, with simple structures and non-complex tasks.  
Where appropriate move from students in twos to fours to work together for short periods  
Ensure positive interdependence and individual accountability (important for all stages).
3. Move to formal task groups for short durations with tasks with low academic challenge, and students grouped by random selection  
Introduce more structures  
Introduce reflection in groups  
Continue teaching skills including team-building.
4. Continue informal groups and formal groups for parts or whole lessons where appropriate.  
Introduce wider range of structures and increase complexity of tasks.  
Continue developing skills and ensure reflection time.
5. Develop formal task groups further, including more established teacher selected teams for longer periods. Introduce roles in groups, e.g. note-taker/scribe, materials manager, participation checker, time-keeper, reporter







## Phased introduction

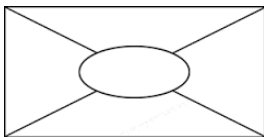
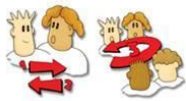

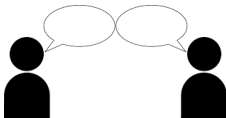
Rank the statements below:

1. Establish an inclusive classroom ethos where pupils know each other well.
2. Work with pupils positively; developing shared norms of behaviour.
3. Teach the skills required to work cooperatively.
4. Introduce a range of cooperative structures as appropriate.
5. Ensure time for reflection by groups on how well they are cooperating.
6. Introduce cooperative learning gradually in lessons moving from paired work to more established groups.
7. Include team building activities for new teams.
8. Monitor the work of groups using three sweeps of the classroom: (1) to check pupils understand the task/activity, (2) to check on progress and (3) to alert groups to how much time is left to complete the task.
9. Consider carefully the composition of longer term groups, and consider roles in groups to draw on pupils' strengths.



## Cooperative Learning Structures: top ten

Structure	Explanation	How it is used
<p>1. Think/pair/share</p> 	<p>1. Teacher asks a question</p> <p>2. Learners are given time think about it individually.</p> <p>3. They discuss their answer with a partner.</p> <p>4. When asked by the teacher, pairs share their answers with the class.</p>	<p>Used at key points to help clarify thinking and to provide interaction with learners. Important that questions used are open-ended. This can be adapted to 'timed talking' where pairs are given specific amounts of time to talk which helps ensure equal participation.</p>
<p>2. Roundrobin</p> 	<p>1. Teacher asks a multi-answer question.</p> <p>2. Learners are grouped in 3s, 4s or 5s.</p> <p>3. Learners either write or say their answers, taking turns round the group, passing a paper if writing.</p> <p>4. The class discusses different answers.</p>	<p>This is used for brainstorming any topic. It can be useful to pre-test what pupils know about a topic.</p> <p>It can also be to review what has been recalled from a previous lesson.</p>
<p>3. Showdown</p> 	<p>1. Learners are divided into groups of four.</p> <p>2. The teacher gives the class an oral question or problem.</p> <p>3. Each member of the group writes their answer on an individual sheet.</p> <p>4. When the teacher says, "SHOWDOWN" each member of the group displays their answer to the rest of the group and they compare.</p>	<p>This is best used with short answers so that it can progress quickly.</p> <p>This can be adapted with a set of questions on cards provided for each group. The team selects a showdown captain who draws each card and reads the question.</p>
<p>4. Twos to fours</p> 	<p>Pairs work together and then share their ideas with another pair.</p>	<p>This is a quick way of creating larger groups at spontaneous times during a lesson.</p> <p>It is useful for sharing and pooling ideas.</p>
<p>5. Two stay and two stray</p> 	<p>After working on a topic, two members of the team move to an adjoining team to share ideas. Pairs then move back to their original teams to compare and share information.</p>	<p>This is a very useful way of reporting back after an activity so groups share their products etc.</p>
<p>6. Corners</p> 	<p>1. This involves posting different words, pictures, or statements, at corners of the room.</p> <p>2. Each learner is then asked to choose one to find out more.</p> <p>3. Learners go to the chosen corner</p>	<p>Corners is a good way to get students moving around to engage in conversations around a topic.</p>

	and discuss the topic	
<p>7. Placemat (One and All)</p> 	<ol style="list-style-type: none"> <li>1. Learners work in groups of 4.</li> <li>2. With one sheet of A4 paper, with a rectangle, or shape, in the centre of the paper and four equal sections around the outside.</li> <li>3. Learners take turns to write their favourite item (e.g. food) in each outside section.</li> <li>5. Learners discuss and write things they have in common in the middle.</li> </ol>	<p>This is a simple framework for discovering similarities and differences between team members. It can be used as a team building activity with the middle section containing what they have in common which can be used to create a team name.</p>
<p>8. Three step interview</p> 	<ol style="list-style-type: none"> <li>1. Teams work in pairs to describe or explain something.</li> <li>2. Their partner listens carefully and then they swap.</li> <li>3. Each team member then explains to the team what their partner has told them.</li> </ol>	<p>This is a good team building activity but also supports active listening skills and can be used for recalling or checking on information.</p>
<p>9. Doughnut (inside/outside circle)</p>  <p>INSIDE OUTSIDE CIRCLE</p>	<ol style="list-style-type: none"> <li>1. One-half of the participants form a circle facing out.</li> <li>2. The other half of the participants form a circle around the first group.</li> <li>3. The teacher asks a question for the inside circle person to discuss with their face partner.</li> <li>4. The teacher instructs one circle to rotate one or two places.</li> <li>5. The newly formed partners then continue the process. This can continue a few times.</li> </ol>	<p>This is a very useful activity for reporting, or for a plenary to a lesson to check on understanding.</p>
<p>10. Check and coach</p> 	<ol style="list-style-type: none"> <li>1. Teams work on a project which requires them to process material e.g. to create a graphic organiser.</li> <li>2. The team needs to check everyone can understand and explain the work.</li> <li>3. The team prepares a list of questions based on the project.</li> <li>4. Team members pair with a member of another team. One person is partner 1 and the other partner 2.</li> <li>5. They take it in turns to ask questions on the list and the partner tries to answer. The aim is to help the partner to get the right answer.</li> </ol>	<p>This is for reviewing newly learned material and checking out understanding. It can be adapted with partners from the same team, or ad hoc partners, checking understanding using a list of questions. Pairs take it in turns to answer the questions with the other partner prompting and coaching.</p>

See: Ferguson-Patrick, K. and Jolliffe, W. (2018). *Cooperative learning for intercultural classrooms: case studies for inclusive pedagogy*. Abingdon: Routledge.