

# Cooperative Learning: A Smart Pedagogy for Successful Learning



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## **Section A: Key questions**

- What is cooperative learning?
- What are the benefits of cooperative learning?
- What are the basic principles of cooperative learning?
- What does the research say?

# What is cooperative learning?

## **Definition**

Cooperative learning involves students working together in small groups to accomplish shared goals. (Gillies, R., 2007)

## **Informal Cooperative Learning**

Informal cooperative learning involves students working in small groups for a few minutes to help students process what has been taught, to think about a particular question, to assist the teacher to identify and address any misunderstandings about the content, etc.

## **Formal Cooperative Learning**

Formal cooperative learning consists of students working together, for one class period over several weeks to achieve shared learning goals and complete jointly specific tasks and assignments. (Johnson, Johnson & Holubic, 2008)

## **Base Groups**

Base groups are long-term, heterogeneous cooperative learning groups with stable membership. Members' primary responsibilities are to (a) provide one another with support, encouragement, and assistance in completing assignments; (b) hold one another accountable for striving to learn; and (c) ensure that all members are making good academic progress. Typically, cooperative base groups are heterogeneous in membership, especially in terms of achievement, motivation and task orientation. They meet regularly for the duration of the class. (Johnson, D.W. & Johnson, F.P., 2009)

## **Benefits of Cooperative and Collaborative Learning**

Academic gains

Positive working relations

Less need to discipline

Higher levels of self-esteem

Promotes acceptance of others

More inclusive language

More explanations

# **Why Does Cooperative/Collaborative Learning Work?**

It works because it fulfils all the basic psychological needs of:

1. Belonging (being accepted and part of the group)
2. Power (it enables students to gain mastery over their work or the task)
3. Freedom (it provides students with the autonomy over their own work)

# Advantages of Small Group Instruction

1. Emphasis on the diversity of instruction rather than uniformity
2. More time for peer learning and teacher assistance
3. Greater flexibility for teachers to adjust learning objectives
4. Repetition for low achievers
5. Students orally rehearse material, explain it to others, discover solutions, debate and discuss procedural issues
6. Opportunities to promote higher order thinking skills
7. Motivates students to learn information
8. Opportunities to develop social and communication skills

# Constructing Groups – What the research says

1. Groups of 3-4 persons are better than larger groups.
2. Mixed ability groups are better than same ability groups.
3. Groups of one high-, two medium-, and one-low ability student is one of the better mixed-ability combinations.
4. Balanced for gender, or all male, or all female groups seem to encourage more interactions among members.
5. Friendship groups may be better with adolescents.
6. Need to make sure the group members understand what the group task is and how everyone is required to participate.
7. Need to check that positive interdependence has been established.
8. Members need to be trained in interpersonal and small-group skills.
9. Group members need to be given time at the end of the session to discuss group processes.



## Group size depends on “Team”

<b>T</b>	=	<b>Time limits</b>
<b>E</b>	=	<b>Experience working in groups</b>
<b>A</b>	=	<b>Age</b>
<b>M</b>	=	<b>Materials and equipment available</b>

### Reference

Johnson, D. & Johnson, F. (2009). *Joining together: Group theory and group skills* (10<sup>th</sup> ed.). Boston: Allyn and Bacon.



# Key Elements of Cooperative Learning

1. Positive interdependence
2. Individual accountability
3. Promotive interaction
4. Interpersonal and small-group skills
5. Group processing

## 1. Positive Interdependence

Positive interdependence exists when students perceive that they are linked to other members in the group in such a way that they cannot succeed unless they all do and they must coordinate their efforts with each other in order to complete the task.

*We sink or swim together.*

## 2. Individual Accountability

Individual accountability involves each student:

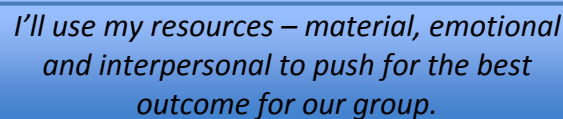
- (a) being responsible for part of the task;
- (b) reporting to the group on their progress;
- (c) reporting on the group's progress to the whole class and
- (d) being rewarded (e.g., receiving bonus points) on the basis of all group members completing their tasks/goals.

*I'll contribute because I have something valuable to offer the group.*

### 3. Promotive Interaction

Promotive interaction involves individuals encouraging and facilitating each other's efforts to complete the task and achieve the group's goals. Promotive interaction involves students:

- (a) providing each other with efficient and effective help and assistance, exchanging needed resources;
- (c) providing each other with feedback in order to improve their continuing performance on tasks;
- (d) challenging each other's conclusions;
- (e) advocating efforts to achieve mutual goals;
- (f) influencing each other's efforts to achieve mutual goals;
- (g) having faith and trust in each other;
- (h) being motivated to strive for mutual benefits, and
- (i) feeling less anxiety and stress.



*I'll use my resources – material, emotional and interpersonal to push for the best outcome for our group.*

### 4. Interpersonal and Small-group Skills

Interpersonal skills:

- (a) Actively listening
- (b) Stating ideas freely
- (c) Accepting responsibility
- (d) Providing constructive criticism

Small-group skills:

- (a) Taking turns
- (b) Sharing tasks
- (c) Democratic decision making
- (d) Perspective taking
- (e) Clarifying differences

In order to do this effectively, students must:

- (a) get to know each other and trust each other;
- (b) communicate accurately;
- (c) accept and support each other and
- (d) resolve conflicts constructively.

*I'll share the tasks and communicate positively and clearly and affirm others.  
No put downs.*

## **5. Group Processing**

Group processing is reflecting on a group's session

- (a) describing what members actions were helpful and unhelpful and
- (b) making decisions about what actions to continue or change.

*I need to know how I am going and to reflect on how we're going as a group.*

### **References**

Johnson, D. & Johnson, R. (2010). *Cooperative Learning Institute & Interaction Book Company*. Retrieved from [http://www.co-operation.org/?page\\_id=65](http://www.co-operation.org/?page_id=65)

Johnson, D., Johnson, R. & Houlbec, E. (2009). *Circles of learning* (6th ed.). Edina, Minnesota: Interaction Book Company.

# Skills to Facilitate Interpersonal Communication

1. Body language (eye contact, posture that is open and inclusive)
2. Verbal encouragers (Mm!, Ah! Sure, Yes)
3. Open questions: How, What, When, Where
4. Paraphrasing (repeating back main point in an interaction)
5. Summarizing main points of the story or interaction
6. Empathic identity skills:  
You must have been scared ...  
Sounds like you've had a rough trot ...
7. Clarifying misperceptions: I'm not sure I understand what you've said. Can you explain it to me again, please?
8. Assertively expressing a point of view: I think you've got a good point there but I think that it might be better if we ....
9. Tentatively offering suggestions:  
Have you thought of ...?  
Maybe you could do it this way?
10. Self-disclosure: We all make mistakes. I know what it was like for me when....

# Examples of Interpersonal and Small-group Skills

Skill	Looks like	Sounds like
<b>1. Listening</b>	Eye contact	Yes; I see; Ah! Mm!
<b>2. Stating ideas clearly</b>	Scan group, face group	I think...
<b>3. Constructive criticism</b>	Eye contact	I liked ... but have you thought of ....
<b>4. Accepting responsibility</b>	Scan group, face group	I -statements
<b>5. Sharing tasks</b>	Pass the materials, jobs.	Have we all got something?
<b>6. Taking turns</b>	Eye contact, facing group	I've had my go...
<b>7. Understanding others</b>	Appropriate facial gestures	Do you mean ...? Are you saying ...?
<b>8. Clarifying differences</b>	Eye contact, face group	I'm not sure I understand ...?

# Group processing and reflecting

## Background

Group processing is critically important for student learning as it allows members to discuss how well they are achieving their goals and maintaining effective working relationships (Gillies, 2007, p. 43). Johnson and his colleagues (1990) suggested that both teacher-led and student-led discussions promoted greater success in problem solving and achievement gains than students involved in cooperative learning who did not follow up with processing their experiences in groups. Group processing involves reflecting on a group's session through:

- (a) Describing members' actions were helpful and unhelpful;
- (b) Making decisions about what actions to continue or change.

It is suggested by Gillies (2007) that involving students in reflective processes promotes metacognitive abilities which impacts on students' abilities to provide supportive feedback and to implement social skills more frequently. One important and potentially reinforcing aspect of group processing is that it can provide an opportunity for group members to celebrate their success.

## What to do

Gillies (2007) suggests a number of ideas that might be employed to undertake processing successfully. These are:

- Considering the format required and the information that will be obtained - Approximately 10 mins at the end of a session is devoted to students' identifying – what they have achieved and what they still have to learn. A number of formats are available to assist this process. Commonly, questions are posed to encourage a “Yes/No” response – e.g., Did we encourage one another to contribute to the discussion? Where deeper processing might be required, students are encouraged to consider the quality of behaviour across a continuum. For example, in response to the statement, “We encouraged one another to contribute to the discussion”, students choose along a continuum from *Strongly agree* to *Strongly disagree*. Some formats allow for student comments.
- Processing is linked with a problem solving metacognitive strategy. For example, groups are expected to follow a procedure for executing a task (What is the problem? What are we going to do? How are we going? How did we go? What might we have done better? See for example, “Cooperative learning: Promoting effective learning and teaching to support the science curriculum” for a number of formats.
- Creating quick representations (e.g., a graph) to show group effort, what has been achieved, still to be achieved

At the end of a unit of work or project, students as individuals can be fruitfully encouraged to consider how “I” contributed to the productivity and welfare of the group.

## Sources:

Gillies, R. M. (2007). *Cooperative learning: Integrating theory and practice*. Los Angeles: Sage.

Kagan, S., & Kagan, M. (2009). *Kagan Cooperative Learning*. San Clemente, CA: Kagan Publishing.

# Student Checklist: Cooperation

**I contributed my ideas and information.**

Always ☐ Sometimes ☐ Never ☐

**I asked others for their ideas and information.**

Always ☐ Sometimes ☐ Never ☐

**I summarized all our ideas and information.**

Always ☐ Sometimes ☐ Never ☐

**I asked for help when I needed it.**

Always ☐ Sometimes ☐ Never ☐

**I helped the other members of my group learn.**

Always ☐ Sometimes ☐ Never ☐

**I made sure everyone in my group understood how to do the school work we were studying.**

Always ☐ Sometimes ☐ Never ☐

**I helped keep the group studying.**

Always ☐ Sometimes ☐ Never ☐

**I included everyone in our work.**

Always ☐ Sometimes ☐ Never ☐

# How Did We Work Today?

1. How well did your group share the load today?



Right on



Pretty good



OK



Not so good



Missed the mark

2. How well did your group stay on the job today?



Right on



Pretty good



OK



Not so good



Missed the mark

3. What did you do to help one another? Did you ...

(a) try to make each other feel good?



Right on



Pretty good



OK



Not so good



Missed the mark

(b) listen to one another?



Right on



Pretty good



OK



Not so good



Missed the mark



(c) try to help other members say what they think?



Right on



Pretty good



OK



Not so good



Missed the mark

---

(d) take turns in talking and listening?



Right on



Pretty good



OK



Not so good



Missed the mark

---

4. How did you show one another that you were really listening?

(Tick [✓] the things that you did.)

- Nodded to show that you were listening.
- Said: "That's a good idea!" or "That's good" when you liked an idea.
- Asked questions.
- Listened and tried to answer questions.
- Tried sometimes to add on information to another member's thoughts or ideas.


---

5. Overall, how successful was your group today?



Right on



Pretty good



OK



Not so good



Missed the mark

# Teacher Observation of Groups

## Observation Sheet 1

GROUPS	EXPLAINING CONCEPTS	ENCOURAGING PARTICIPATION	CHECKING UNDERSTANDING	ORGANISING THE WORK
1				
2				
3				
4				
5				
6				
7				

# Teacher Observation of Individual Students in Groups

## Observation Sheet 2

### Directions for Use:

- Put names of group members above each column.
- Put a tally mark in the appropriate box each time a group member contributes.
- Make notes on the back when interesting things happen which are not captured by the categories.
- It is a good idea to collect one (or more) good things that each group member does.

	Student A	Student B	Student C	Student D	Student E	TOTALS
1 Contributes Ideas						
2 Explains Concepts						
3 Provides Examples to Add To or Illustrate an Idea						
4 Asks a Question to Promote Conversation						
5 Gives Reasons for an Answer						
6 Provides Suggestion for Approaching Task or Experiment						
7 Builds on Ideas of Others in Groups						
8 Affirms Ideas of Others						
<b>TOTALS</b>						

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# Recommended Readings and References

## Recommended Texts for CL

Gillies, R. M. (2007). *Cooperative learning: Integrating theory and practice*. Los Angeles: Sage.

In integrating theory and practice, Gillies provides “nuts and bolts” descriptions of the important components of CL, lots of real-life examples of practice, case studies and strategies for implementing CL successfully. This book is an excellent resource for all teachers wishing to develop over time a solid foundation for their practice.

Kagan, S., & Kagan, M. (2009). *Kagan Cooperative learning*. San Clemente, CA: Kagan Publishing.

Well-known for his workshops across the world, Spencer Kagan and his colleague provide a wealth of structures, an abundance of fun-activities, blackline masters and a wealth of tips and ideas for teambuilding, structuring activities, planning, etc.

## Recommended Texts for Fostering Thinking Skills

Wilson, J., & Wing Jan, L. (2008). *Smart thinking: Developing reflection and metacognition*. Carlton South, Victoria: Curriculum Corporation.

This book provides a wealth of tools and strategies that can assist students to become more independent thinkers and learners. While many of the strategies (e.g., Six Thinking Hats) included will be familiar to the experienced teacher, the text provides a structure that enables teachers to promote thinking, reflection and metacognitive processes in a coherent fashion.

## References

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## NOTES

