A Method of Cooperative Learning: The Jigsaw Classroom

Basic idea:
The jigsaw classroom (developed and implemented by Elliot Aronson in 1971) is a specific cooperative learning technique. Just as in a jigsaw puzzle, each piece – each student's part – is essential for the completion and full understanding of the final “product”. If each student's part is essential, then each student is essential; and that is precisely what makes this strategy so effective: No student can succeed completely unless all students work well together as a team. This "cooperation by design" facilitates interaction among all students in the class, leading them to value each other as contributors to their common task. Each student - the bright ones as well as the slow ones – is responsible for all the other students of his team.

Where to use jigsaw
The jigsaw classroom is a remarkably efficient way to learn new material either in “normal” lessons or on field trips. The method is not very suitable to be used for exercises.

Requirements
It must be possible to split up the material to be learned in portions that do not depend on one another and that can be worked on in approximately the same time. The students should have a basic knowledge in the techniques of presentation and information gathering. They should also have some experience in working together as a team.

How it works
The run of events described below is valid for “ideal” (that means very small) classes. You can easily adapt this system to your class by changing the number of persons per jigsaw group or the number of different topics.

• Divide the students into 3 – person jigsaw groups (JG1 ... JG4, see fig.).
• Divide the lesson to be learnt into 3 segments.
• Assign each student to learn one segment, making sure students have direct access only to their own segment. Give students time to read over their segment at least twice and become familiar with it. There is no need for them to memorize it.
• Form temporary "expert groups" (EG1 ... EG3) by having one student from each jigsaw group join other students assigned to the same segment. Give students in these expert groups time to discuss the main points of their segment and to rehearse the presentations they will make to their jigsaw group.
• Bring the students back into their jigsaw groups. Ask each student to present her or his segment to the group. Encourage others in the group to ask questions for clarification.
• Float from group to group, observing the process. If any group is having trouble (e.g., a member is dominating or disruptive), make an appropriate intervention.
• At the end of the session, give a quiz on the material so that students quickly come to realize that these sessions are not just fun and games but really count.
Advantages

- students acquire not only expert knowledge but also skills in presentation and information gathering without assistance.
- presentation in small groups is much easier (especially for younger students) than speaking to the whole class.
- students learn to take different roles in a group and to be responsible for the learning and the progress of others.

Problems

- reports of experts may differ in quality
- teacher can not always control the learning process during a lesson
- jigsaw method often requires enlarged resources (material, time, preparation of the teacher, ...)

Findings

Research on the method (e.g. Aronson et al) show that jigsaw students
- have higher self-esteem
- learn just as much as (or even more than) students in “normal” lessons
- transform competitive classrooms in which many students are struggling into cooperative classrooms
- have improved social relations
- show less prejudice and stereotyping

Cited research and additional sources

- http://www.jigsaw.org/index.html (official website of Elliot Aronson)
- http://olc.spsd.sk.ca/DE/PD/instr/strats/jigsaw/ (many useful links)
- http://www.public.asu.edu/~ledlow/sledlow/jigsaw.htm (Susan Ledlow)
- http://clte.asu.edu/active/usingjig.pdf (Susan Ledlow)