Cooperative Learning Strategies

(Empowering ESOL Teachers, 1995)

Jigsaw

Overview:

1. May be used with any textbook by dividing material to be read into logical sections.
2. Students are divided into HOME groups depending on how many sections of material are to be covered, e.g., three sections of material will require home groups of three members (or multiples of three).
3. Students number off in home groups.
4. All students then go to EXPERT groups where they read and discuss the section of material assigned to that expert group and complete any other tasks assigned to expert groups.

Students then return to home groups and teach their section of material to other members of their group and complete any additional tasks assigned to home groups.

HOME Groups:

Number in home group will vary depending on size of group and number of sections of reading material. 3-6 in a group is best. A jigsaw may be described by the number in each group, e.g., a three-legged jigsaw has three sections of material to be covered and three members in each home group (or multiples of three).

Home groups count off by number of sections of reading material, e.g. for a three-legged jigsaw each group of three would count off 1, 2, 3.

EXPERT groups:

All number 1's from all home groups gather in an area of the classroom, all 2's in an area, etc. to form expert groups. Each expert group is to read and discuss the assigned section of material, and prepare to teach the assigned section to members of their home group. Additional tasks may be assigned such as prepare a 2 question quiz to administer to home group, outline the material, prepare a transparency/ chart including main points of the material.

HOME groups:

Students return to home group and teach the material on which they became experts to their group members. Once each "expert" has presented, the group may be assigned a task which may be varied according to the goals of the teacher e.g., decide on the most important points from each presentation, decide how the sets of material are related, answer specific questions about the material. Each group may be required to produce a product to share with the class, if desired.

Additional notes: Groups of 3-6 (both home and expert) are best so try to divide material so that your groups will have this number. If you have a class of 33, and have three sections of material, so that you would have 11 groups of three, then have two expert groups for each set of material so your expert groups will be smaller. With uneven numbers, you may have more than a single 1 or 2 or 3 in a home group. In that case, one expert will present part of the material and the other expert the remainder. Everyone must become an expert and present.

Numbered Heads Review
Instructions:
1. Prepare a list of questions over materials to be learned or reviewed. Questions may be on transparency and uncovered one by one, or simply read. Alternative: Have students prepare and write on cards questions for each section as they read it. Pick up cards and use for procedure.
2. Divide class into groups of 1-4(5) depending on size of class. Each group should be given a designation (name, color, number, letter).
3. Groups count off 1-4(5).
4. Assign all groups to read a section of a selection.
5. Ask a question on the section and instruct each group to discuss and arrive at an answer. Everyone in each group should be involved in arriving at an answer.
6. Choose a number (e.g., "one"), pause briefly (60 seconds or use your judgment) so that all "one's" are sure of the answer, then choose a group (e.g., "Group A"). You may use various methods of selecting groups/numbers such as spinning a wheel, drawing numbers, etc.
7. The person who is number one in group A answers the question. You may then ask if other "ones" have additional information to add if you have time.
8. You may have as many questions on a section as needed.
9. Repeat procedure for all questions on a section, then assign new section to be read and repeat until all information has been covered.
10. For review, assigning sections for reading may not be necessary although you may wish to allow students to have textbooks, notes, etc. available for arriving at answers.

Think/Write, Pair/Share
Instructions:
1. Class may be given a reading assignment with a topic for reflection on the assignment or just a topic (sentence, experience, idea, etc.).
2. Each person thinks about the topic.
3. Each person writes down thoughts on the topic.
4. Each person pairs with another person and discusses/shares their thoughts.
5. Each pair joins with another pair to discuss/share.
6. Each foursome reports one major insight/fact/whatever to the entire group.
7. Responses from each foursome may be written on chart paper, overhead, or semantic web as given.

Semantic Web
May be used as an activator of prior knowledge or as review.

1. Topic is placed in center of transparency.
2. Responses are generated by the group and recorded on the transparency. Try to organize responses into areas of the transparency. Then draw lines to show connections between the responses.

Advanced Organizers
While not strictly cooperative learning strategies, advance organizers (sunshine outline, line story maps, vocabulary development maps, content review maps, KWL Charts) and brainstorming are all tools which are very useful in helping students to activate prior knowledge and to review knowledge gained. There are many of these around in many different formats. A teacher can use the ones which work best for his or her personal style and content area.

Pair Problem Solving
Participants/students are placed in pairs. Each pair is given a problem - problem may be the same for all pairs, different for each pair, or any combination. The problem ideally should be one that may be solved using several different approaches. The goal is as much for students to monitor the thought processes/approaches used to solve the problem as the actual solving of the problem. The follow-up discussion should focus more on different approaches to solving the problem. Students will gain much from becoming aware that many problems can be solved using more than one approach and from increased awareness of their thought processes

A variation is to give individuals the problem (with strict silence) - have them work on it for a brief time - then let them work in pairs - goal to point up that working together and discussing ideas frequently makes solving problem easier.

Integration Information Gap
Another example of how working together can make work easier: Choose a complex problem. Divide the information needed to solve the problem into 2-3-4-5 parts (whatever is logical) - divide students into groups containing the same number as the number of parts to the problem. Give each person in the group a card with a part of the information needed to solve the problem. Students may share information on their card orally, but may not show information to anyone. Through discussion students arrive at the solution to the problem.

Round Robin
Each student in turn shares some bit/kind of information on a topic/subject with classmates/teammates. Can be facts from a bit of reading, ideas, or opinions. Topic/subject can be teacher or group choice.

Matching
Prepare a container with cards with a word on each card or have each student write a word of a particular category (noun, verb, process) on a subject/topic on a card and place in a container. Objects related to a topic could also be used. Have a student draw two cards/objects from the container and tell how the words/objects are alike/different/etc. (_____ is like _____ because they both _____.) Could be used with numbered heads review and have groups arrive at answer before calling a group and number. Know your students well - choose a very dry subject - or be prepared for some "interesting" answers.

Paraphrase Passport
Students correctly paraphrase the ideas/information given by the student who has just spoken and then add their own ideas/information.

Send a Problem
Each student writes a review problem on a card and asks other teammates to answer or solve the problem. After all team problems have been solved, pass the cards to another team.

Cooperative Review
Cooperative review is any type of game which may be used by groups to review material.

Co-op Co-op
Students work in groups to produce a group product. Each student MUST make a contribution to the product. The contribution of each student should be decided on by the group before beginning the project. Teacher should know what the contribution each student makes.

Partners
Students work in pairs to create or master content. Each pair may then join with another pair to expand mastery as in think/write/pair/share.

Additional Notes on Cooperative Learning:

Cooperative Learning is NOT

- having students sit side-by-side at the same table to talk with each other as they do their individual assignments
- assigning a report to a group of students where one student does all the work and the others put their names on the product.

Cooperative Learning IS

- positive interdependence - students must perceive that by working together they can learn/achieve more by sharing goals, labor, materials, resources, information
- face-to-face interaction - interaction patterns and verbal interchange promoted by positive interdependence affect educational outcomes
- individual accountability for mastering the assigned material.
- appropriate use of interpersonal skills with students taught to use the skills and to analyze how well the group is functioning

One simple way to achieve this is to have students work in groups to master work. Evaluate each student individually, and, if all students in a group achieve a predetermined level on the evaluation, award all members of that group a predetermined number of bonus points. (NOTE: Do not penalize groups not achieving by deducting points.)

In cooperative learning groups:

- membership is typically heterogeneous
- all members share responsibility for performing leadership actions
- responsibility for learning is shared with group members expected to provide help and encouragement to each other
- good working relationships are maintained
- interpersonal skills necessary to work together are directly taught/modeled
- the teacher observes and analyzes not only how well the students are learning but how well the groups are working together

Cooperative learning strategies can work well and enhance learning for all students; however, the language interactions they produce make them especially effective for limited English proficient students. The strategies allow and encourage students to use language for interaction to solve real problems, thus speeding up the acquisition of the English language.