



# **CEE BOOK SERIES**

## **Effective Implementation of Student Centred Learning, Part 1: ENGAGING LEARNERS THROUGH ACTIVE LEARNING**

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## 2.4 Informal CL Activities

The following are 20 informal CL structured activities that can be used in the classroom. These activities can be used with the Book-ends Division of a class session.

1. Brainstorming*	11. Thinking Aloud Pair Problem Solving
2. Focus Listing*	12. Pair Composition
3. Opening Question*	13. Pair Testing
4. Introductory Focused Discussion Pairs*	14. Individual and Pair Testing
5. Cooperative Note Taking Pairs	15. Question and Answer Pairs
6. Reflection	16. Read and Explain Pairs
7. In-class Teams	17. Turn to Neighbours Summaries**
8. Think Pair Share	18. Two-minutes Papers**
9. Note Checking	19. One Final Question**
10. Guided Reciprocal Peer Questioning	20. Closure Review Pairs**

Note:

\* signifies activities for advanced organizing

\*\* signifies activities for closure focused discussions

Activities without any \* are intermittent discussion activities

We will use a formal CL activity, the Jigsaw activity, to learn about these informal CL activities.

### 1. BRAINSTORMING

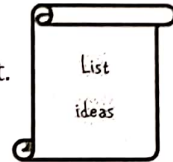
- a) Ask students (individually, in pairs, or groups) to brainstorm about any concept/issue/problem
- b) Give time to brainstorm (2 – 3 minutes).
- c) Randomly call any student to share their thoughts on the issue.



The main rules of brainstorming are to acknowledge every offering by writing it down and save any critiquing until after the idea generation time is over. Do NOT judge the idea during brainstorming no matter how different or crazy it may sound. The aim is to generate as many ideas as possible.

## 2. FOCUSED LISTING

- a) Ask the students to take out a sheet of paper.
- b) In 1 to 3 minutes - Individually list as many points as the student can about any concept/issue/problem/topic.
- c) Then, student discuss the list with neighbour, and come up with a better list.
- d) Randomly call on students to discuss with the whole class.



## 3. OPENING QUESTION

- a) Pose a question related to the topic or material to be learned in the class. Try to give a question that would interest the students or make them curious.
- b) In 1 minute, ask the students to individually think of the question and how it is related to their lives or the real world, and write down the important points
- c) In 2 minutes, ask students to discuss their answer with his/her neighbour.
- d) Discuss with the whole class.



## 4. INTRODUCTORY FOCUSED DISCUSSION PAIRS (Johnson, Johnson and Smith, 2006)

- a) Instructor plans a series of questions on the content of the class.
- b) Assign students in pairs.
- c) Each student individually formulates and writes the answer to the questions.
- d) Each student takes turn to share answer with partner, the other student must listen carefully to partner's answer.
- e) Pairs create better answer from each initial answer, building on each other's thoughts to synthesize from the initial answers and ideas.
- f) A member of a pair will be randomly selected to explain answer.
- g) Then, ask the class for volunteers to share his/her knowledge with the class.



5. COOPERATIVE NOTES TAKING PAIRS (Johnson, Johnson and Smith, 2006)

- a) Students form pairs to work together during the class period.
- b) Inform students at the beginning of class time that they will improve on each other's notes, so each of them must take notes during the lesson.
- c) After a short lecture segment, one partner summarizes his or her notes to the other.
- d) The other partner adds information or corrects or add whatever is missing.
- e) Each student must take something from the other's notes to improve his/her own notes.

The goal is for everyone to improve his or her notes.



6. REFLECTION

- a) In 2 minutes, ask the students to individually reflect on any concept/issue/problem that had been learned, what they think about the concept and how they learned/solved it. Ask them, whether they can see any relationship between the concept and the new topic that they will learn today, as well as the concepts learned earlier, and how they are used in the real world, and how to best approach learning the new topic.
- b) Students share the reflection with neighbour in 3 minutes.
- c) Finally, ask the students to share with the whole class the interesting reflections of their partners.



## 7. IN-CLASS TEAMS

Form teams of 2-4 students and choose team recorders/scribers. Give teams 30 seconds – 5 minutes or more to (choose one of the following):

- Recall prior material
- Answer a question
- Start a problem solution
- Work out the next step in a derivation
- Think of an example or application
- Figure out why a given result may be wrong
- Brainstorm a question (goal is quantity, not quality)
- Generate a question
- Summarize a lecture

Collect some or all answers. This activity works for all class levels and sizes.

## 8. THINK-PAIR SHARE

- Instructor poses a question to the class and the students think and write about their response individually.
- Then, students pair with a partner to discuss their answers or ideas, and together they come up with a better answer or idea.
- Finally, students share their ideas with the class.



## 9. NOTE CHECKING

- Instruct students to individually write down notes from your Powerpoint slides/lectures
- Ask the students to compare their notes with a partner.
- In pairs, summarize the most important information from the notes and identify any sticking points in the notes to seek clarification.
- Open the class discussion and get students to ask questions that they have.



## 10. GUIDED RECIPROCAL PEER QUESTIONING



- a) Students work in groups of 3 or 4.
- b) Each student individually prepares 2 or 3 thought-provoking questions on the content presented in the lecture/reading based on a set of generic question stems given by the instructor that will require higher order thinking, such as:
  - How does ... relate to what I've learned before?
  - What conclusions can I draw about.. ?
  - What is the difference between ... and ... ?
  - What is the main idea of ... ?
  - Why is ... important?
- c) Then, group members take turns answering the questions they generated.
- d) After the small group discussion, the whole class discusses questions that were especially interesting or did not yield a satisfying answer in the small group discussion.

1 Husband (1H)  
4 wives (4W)

## 11. THINK ALOUD PAIR PROBLEM SOLVING (TAPPS)

Apply to key problem, example, derivation, passage in text.

The technique is time consuming, but powerful

- a) Students form pair: one problem-solver, one listener.
- b) Instructor defines activity (problem solver explains passage or works through derivation or solution).
- c) Problem solver talks through first part of solution. Listener questions, prompts to keep talking, gives clues when necessary.
- d) After about 10 minutes, collect partial solutions from several listeners, discuss and reach agreement with the whole class.
- e) Reverse roles in pairs and continue with another part of the problem



The roles of the problem solver and the listener are as follows:



**The Problem Solver (PS)**

- Get paper and pencil ready
- Read problem aloud
- Start to solve problem -- your partner is only listening and is not collaborating
- Thinking aloud isn't easy. Say whatever comes to mind. You speak at about 100 wpm but think at 800 wpm.
- Go back over any part using words like I'm stuck, or I'm lost



**The Listener**

- Establish as quickly as possible that you are the questioner and not a critic
- Remind PS to keep talking, and make sure that PS follows the strategy, help PS improve accuracy, help reflect on mental process PS uses, make sure that you understand PS
- Do not turn away and start to work problem on your own
- Do not let PS continue if you don't understand, or you think a mistake is made

## 12. PAIR COMPOSITION

- Students work in pairs to complete individual essays (article summary, research paper, composition).
- Student A describes to Student B his plans for the essay. After asking probing and clarifying questions, Student B outlines Student A's composition and gives it to Student A. Then, the procedure is reversed.
- Each student researches the topic.
- Together, the pair write the first paragraph of each other's composition. Then each student writes his/her composition individually.
- When completed, the students proofread each other's compositions and make suggestions for revision.
- After individual revision, students read both compositions and sign them to indicate there are no errors which both students have checked.

### 13. PAIR TESTING

- a) Students take one or two of the course quizzes in pairs rather than individually.
- b) Make the questions more difficult and challenging

### 14. INDIVIDUAL & PAIR TESTING

Individual Test Followed by pair Test (or vice versa):

- a) A test/quiz is given individually for a grade.
- b) In the next class, before discussing the test/quiz answer, the same test/quiz is given to pairs whose task is to correctly answer each question with one answer that both can agree upon and explain. The process can be repeated with two pairs synthesizing agreed upon answers.
- c) Example reward: if the pair scores 90% or better on the pair test/quiz, each receives a bonus of 5 or 10 points to be added to the individual test score.

### 15. QUESTION AND ANSWER PAIRS

- a) Ask every student to take a minute and come up with one question on today's topic/concept/formula/diagram.
- b) The students pair up; A asks a prepared question and B responds; then B asks a prepared question and A responds
- c) Discuss the questions that has unsatisfactory or uncertain answers with the whole class

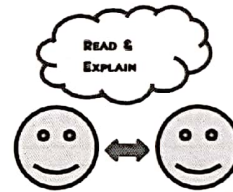




## 16. READ AND EXPLAIN PAIRS (Johnson, Johnson and Smith, 2006)

**Aim:** Students learn the material being read by establishing the meaning of each paragraph and integrating the meaning of the paragraphs

- a) Assign students in pairs (A and B).
- b) Students individually read all the headings to get overview, and then silently read the first paragraph.
- c) Initially assign student A as summarizer and B as accuracy checker. Rotate roles after each paragraph.
- d) Summarizer summarizes in own words content of the paragraph to partner.
- e) Accuracy checker listens carefully, corrects any misstatements and adds anything left out. Then, explains how the material relates to something they already know. Formulates questions if there were any hazy points to both A and B.
- f) Move to next paragraph, switch roles and repeat procedure. Continue until finished.
- g) Both students summarize and agree on overall meaning of the entire material.
- h) Finally, randomly select students to explain what they read, and encourage intergroup cooperation.



## 17. TURN TO NEIGHBOUR SUMMARIES

**Task:** Students explain their answers and reasoning to a partner and practice their skill in explaining.

**Goal:** create a joint answer that both members agree and can explain.

- a) Students individually formulate answer to question that requires them to summarize the lesson up to a certain point in class
- b) Turn to neighbour to share answer and reasoning
- c) Listen carefully to partner's explanation
- d) The pair creates a new answer that is superior to initial formulations through synthesizing their ideas.
- e) Instructor assist pairs and randomly ask students to explain the joint answer created.

### 18. TWO-MINUTE PAPER

- a) Ask the students to take out a sheet of paper.
- b) In 2 – 3 minutes, ask them individually to summarize the most important points of concept/issue/principle/formula that was learned in class today.
- c) Respond to the comments received in the next class

### 19. ONE FINAL QUESTION

In 2 minutes, individually or in pairs, ask the students to identify further questions that they have on any concept/topic from the lesson that they want to find out further/learn more/try in the class.



### 20. CLOSURE REVIEW PAIRS (Johnson, Johnson and Smith, 2006)

**Goal:** come up with a set of summaries about the major topics learned in the class session

**Task:** students recall what they learned about each topic

- a) Assign pairs of students to a list of major topics covered during the class session. Each pair takes one topic at a time and writes down best answer on the following questions:
  - What is the topic and why is it important?
  - What activities undergone to learn about the topic?
  - What interests you most about the topic?
- b) Randomly ask a student to explain topic. Note topics most difficult for students
- c) Ask pairs to hand in answers and read some responses.