

# COOPERATIVE LEARNING

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CAES, UTeM

# Learning Outcomes

At the end of this course, participants should be able to :

- Define Cooperative Learning
- Discuss the Strengths & Challenges of Cooperative Learning
- Describe Experience as a Participant of Cooperative Learning Activities
- Design a Cooperative Learning Activity that Integrates Technology

# XTVT 1: Group activity

- Perform group consist of....
- By using padlet:
- Take group photo (wefie)...upload
- Give a name to your group
- Kindly introduce your group members
- Write simple sentences your expectation and experience on cooperative learning (if any)

**<https://padlet.com/ashaarani/CL>**

**(10 minutes)**

## XTVT 2 - Create a Padlet Folio of your group

- Use padlet apps.
- Log in to padlet.
- Click 'New padlet' to create a new padlet.
- Use your group name as padlet folio.
- You will use this padlet to keep all your works for this 2 hours activities.
- Go back to <https://padlet.com/ashaarani/CL> and edit your info > provide your padlet link.

(10 minutes)



# Memahami Gen-Z

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- Mrk lebih kpd social way of communicating
- Banyak depend on mobile - relate dengan persekitaran mrk & tempat mrk tinggal
- Global influence
- Digital generation blast
- Lebih visual - Info overload (warna, gambar, video)
- More diverse
- Internet & Technical savvy
- Self-taught
- Hyper connected - Never world without internet
- Tapi pada masa yg sama mrk adalah Hyper local
- Mereka lebih confident
- Suka challenge based learning
- Real-list (Mrk nak tahu real thing - Not idealist)
- Depend on **crowdsourcing** (maklumat ada di mana2, cth sebelum beli sesuatu brg survey dulu kat internet apa crowd cakap)

# WHAT IS COOPERATIVE LEARNING?

"Cooperative learning is a teaching method where small group of students work collaboratively towards achieving a goal. It allows students to interact with each other and be an active participant in their learning."

Edumorfosis, (October 7, 2013)

"Cooperative learning is grouping students together to accomplish shared learning goals. Students work in small groups to get the most out of their own learning and each other's learning."

Johnson, and Johnson, (1998)

# TYPES OF COOPERATIVE LEARNING GROUPS

- Often temporary or short term groups
- Can change from lesson to lesson
- Typically involves groups of two
- Typical informal discussions have 4 components: i) formulate response, ii) share response with partner, iii) listen to partner's response, and iv) create a new well-developed response.

## INFORMAL LEARNING GROUPS

- Students work in a group (2-6 people) to achieve goals in task work or project in structured, facilitated, and monitored by the facilitators.
- Groups stay together until it is complete.
- Most groups perform well with 3 to 4 people.

## FORMAL LEARNING GROUPS

# COOPERATIVE LEARNING - BENEFITS

## Participatory teaching method

- Students actively participate by exploring & learning from each other. They made conclusions after exploring a topic thoroughly.
- Increase retention rates. Deeper level of understanding can occur within groups.

## Greater student achievement

- A teaching model supported by research as being very effective
- 63% of the cooperative learning groups analyzed had an increase in achievement. (Slavin, 1984)

## Develop social skills

- Work with members in a group with different cultural backgrounds, attitudes, behaviours, etc.
- Interaction occurs & leads to improvement of communication skills

## Develop team-work skills

- Business and industries work in a team to complete their job.
- Well-trained person (working together) able to complete job better.

## Economic benefits

- Need less materials.
- Student finds their own material and shares with others.
- Save money and enhance the quality of teaching and learning

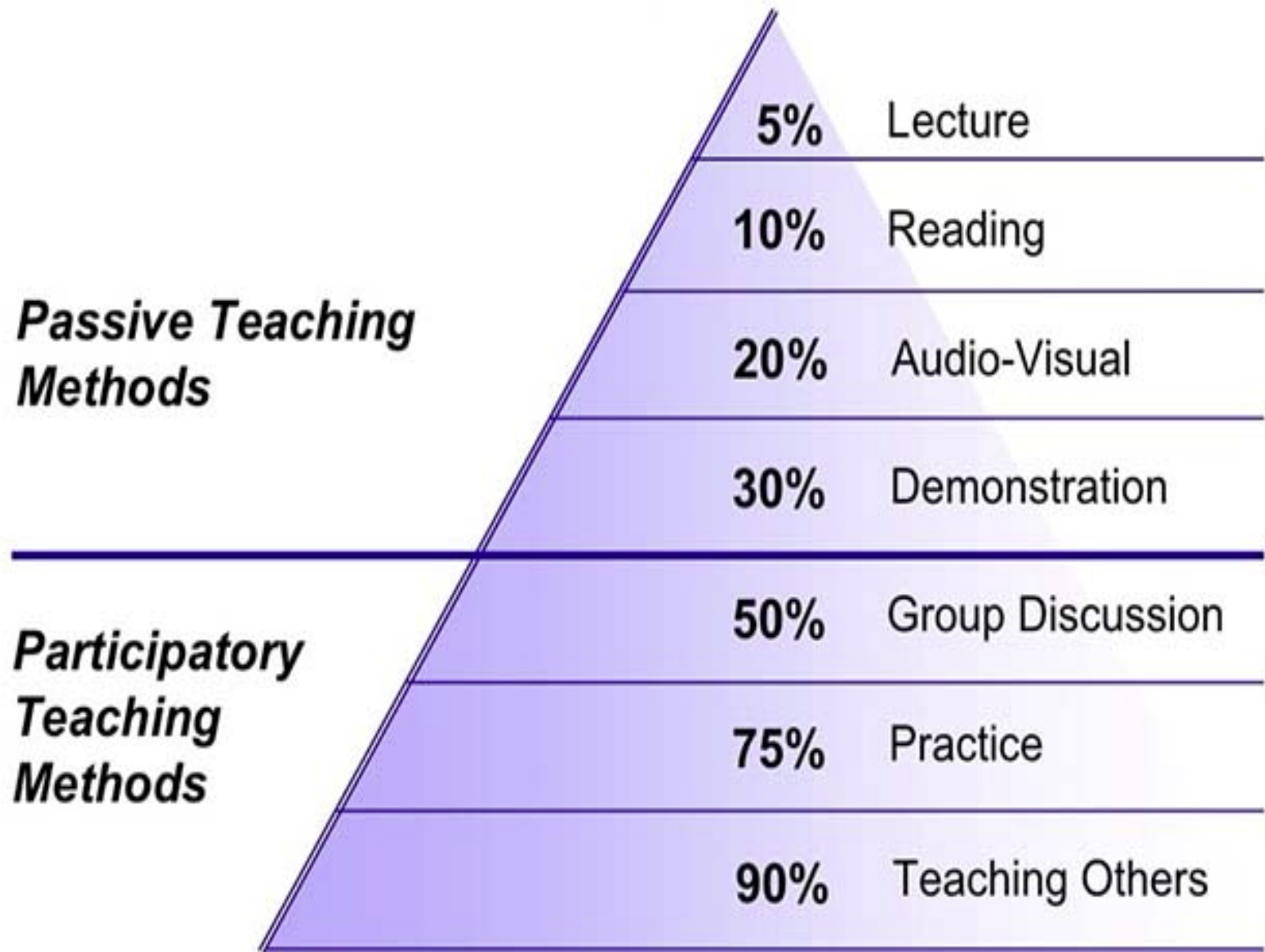
# XTVT 3 – Ask Mr Google

Find more information on ‘Cooperative Learning’

1. Using your findings, discuss and provide your own definition of CL.
2. Cite your references. Eg. Provide links
3. List 2 advantages of using CL in your class (for UTeM students)
4. Update your padlet folio. Upload your findings.

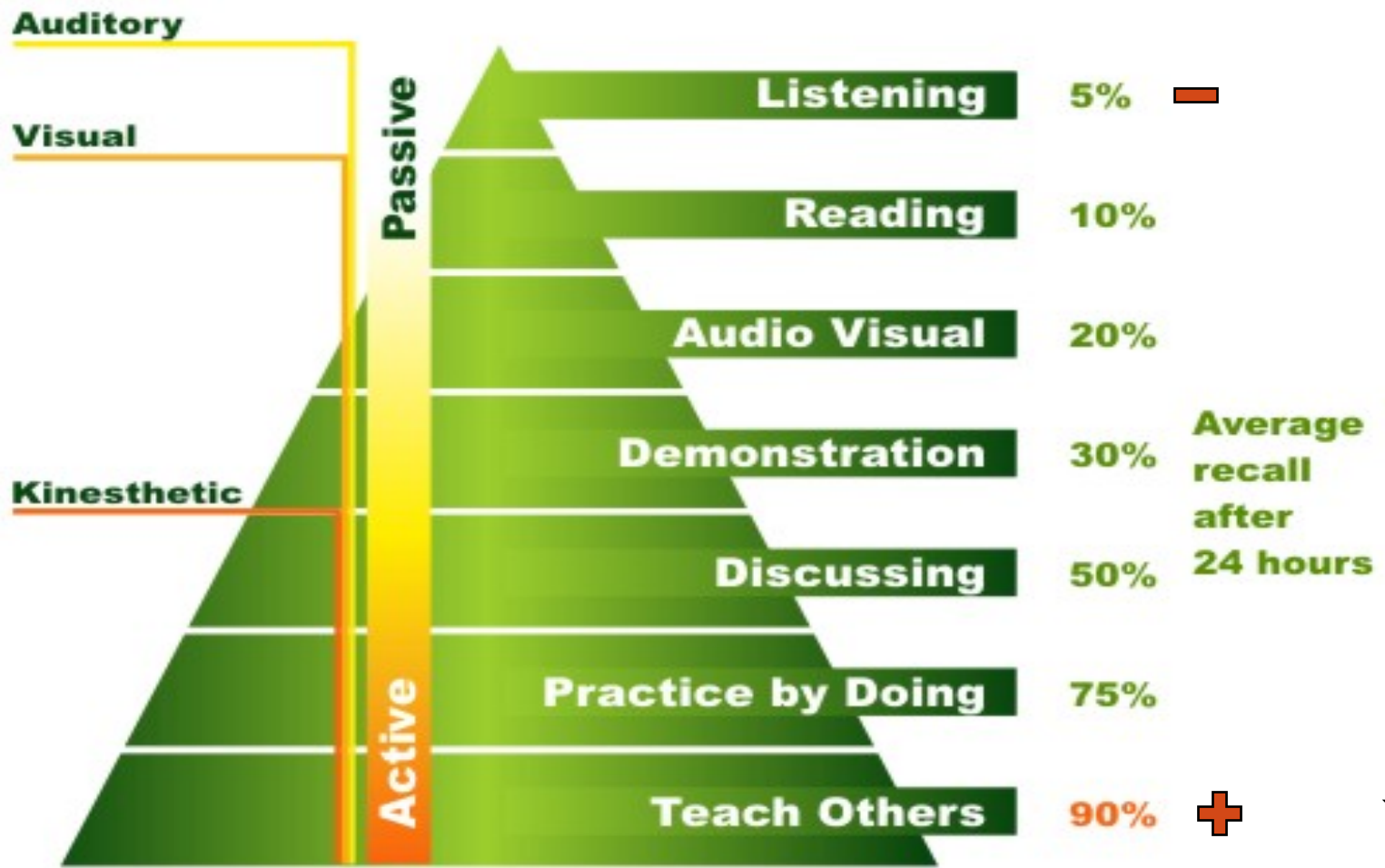
( 10 minutes)

## Average Retention Rates



\*Adapted from National Training Laboratories. Bethel, Maine

# WHY USE COOPERATIVE LEARNING?



**The Learning Pyramid**

# COOPERATIVE LEARNING CHALLENGES

## Conflict within a group

- One or a few students may not work well with others in the group.

## Time management

- Groups may finish their activities at different times.

## Lesson suitability

- Not all lessons are ideal for group work.

## Grading challenge

- Some students may not do the work assigned to them, or certain students may do all the tasks that sabotage a cooperative learning environment.

## Class management

- Cooperative learning activities may create noises in class which need to be managed.



# FACILITATOR'S ROLE

**Making preinstructional decisions.**



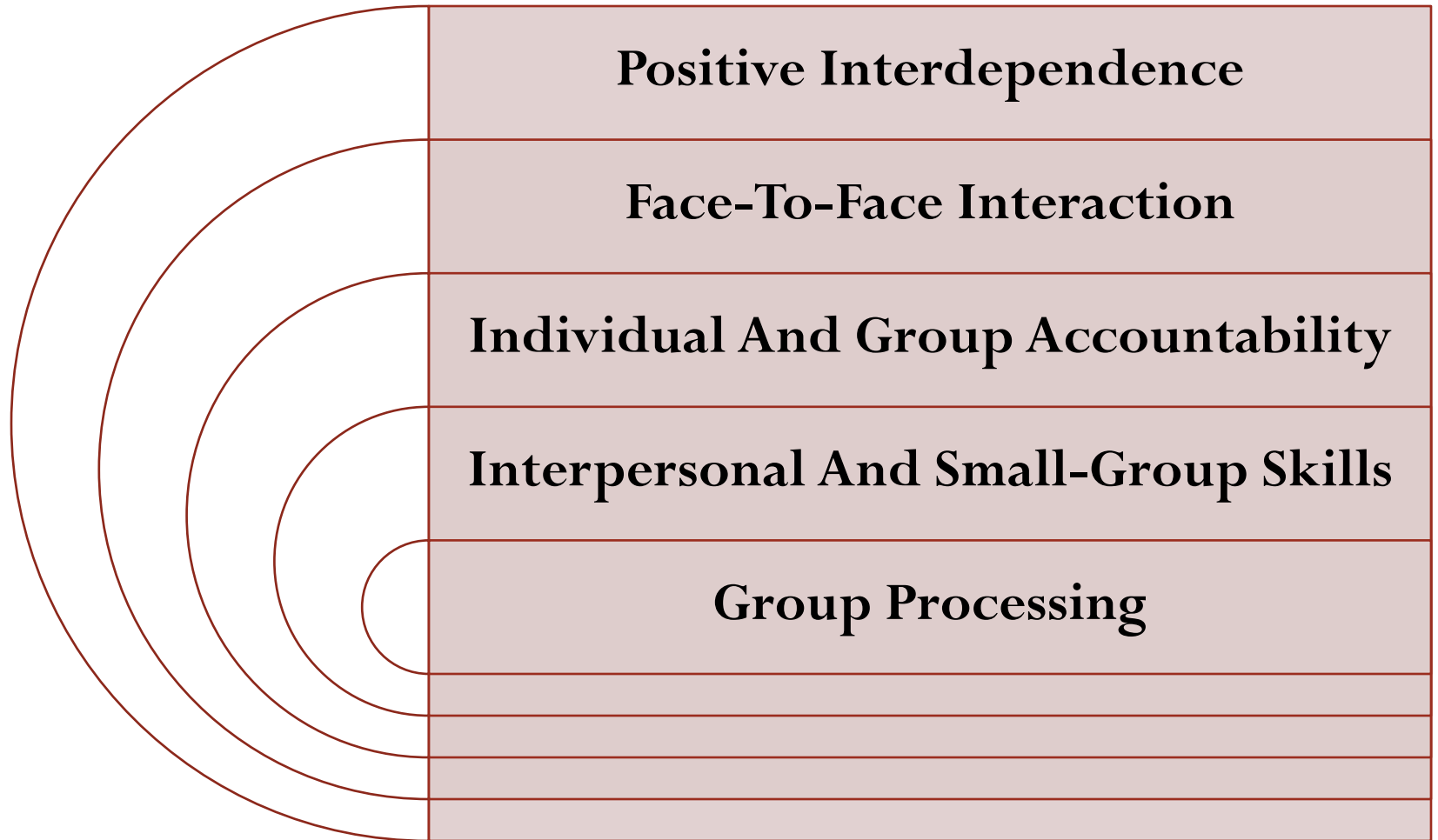
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graph TD; A[Making preinstructional decisions.] --> B[Explaining the instructional task and cooperative structure.]; B --> C[Monitoring students' learning]; C --> D[Assessing students' learning];
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**Explaining the instructional task and cooperative structure.**

**Monitoring students' learning**

**Assessing students' learning**

# BASIC ELEMENTS OF COOPERATIVE LEARNING



# POSITIVE INTERDEPENDENCE

Each person in this world is unique and they can contribute to each other.

Contribution of ideas, suggestion, role from each person in a group can attributes to better achievement.

*“Positive interdependence is linking students together so one cannot succeed unless all group members succeed. Group members have to know that they sink or swim together.”*(Johnson, Johnson, & Holubec, 1998, p. 4:7).



# POSITIVE INTERDEPENDENCE

## Product goal interdependence

- to solve a task/lab/etc. and come out with result/solution/etc.

## Reward interdependence

- each members in group share their marks base on group performance. (average)

## Resource interdependence

- each member in group contribute their on resources and share together among the members based on task given

## Role interdependence

- each student in group is assigned with different role (leader, time keeper, editor, etc)

## Task or sequence interdependence

- each student have their different task to complete a goal (collecting data, calculation, write report)

# FACE-TO-FACE INTERACTION

- Promoting success of group members by praising, encouraging, supporting, or assisting each other.
- Students explain to one another what they have or are learning and assist one another with understanding and completion of assignments
- This includes orally explaining how to solve problems, discussing the nature of the concepts being learned, teaching one's knowledge to classmates, and connecting present with past learning.



# INDIVIDUAL & GROUP ACCOUNTABILITY

- Students must feel that they are each accountable for helping to complete a task and for mastering material.
- students take individual quizzes; each student is responsible for a specific portion of a task; each must be able to summarize other's ideas; any student may be called on at random to answer for the team.



# INTERPERSONAL & SMALL-GROUP SKILLS

- Cooperative learning groups set the stage for students to learn social skills. These skills help to build stronger cooperation among group members.
- These include skills for working together effectively (staying on task, summarizing, recording ideas) as well as group maintenance skills (encouraging each other). Ways to foster skill development include teacher modeling, brainstorming characteristics of "good" skills, direct practice, process observing, and reflection.



# GROUP PROCESSING

- Group processing is an assessment of how groups are functioning to achieve their goals or tasks. By reviewing group behavior the students and the facilitator get a chance to discuss special needs or problems within the group.
- Processing can be individual, team-wide, or at the whole collaborative class level.
- Examples include:
  - How well did I listen?
  - Did we take turns and include everyone?
  - How could we have coached each other better?
  - How can the class function more smoothly?





# SOME CLASS ACTIVITIES TO PROMOTE CL

- Jigsaw
- Think-Pair-Share
- Three-Step Interview
- Brainstorm
- Three-Minute Review
- Numbered Heads Together
- Team Pair Solo
- Circle The Sage
- Partners
- Pairs Check
- Send a Problem

# Jigsaw

## Cooperative Learning Activity

# Jigsaw

- Divide students into 5- or 6-person jigsaw groups. The groups should be diverse in terms of gender, ethnicity, race, and ability.
- Appoint one student from each group as the leader. Initially, this person should be the most mature student in the group.

## Jigsaw (cont)

- Divide the day's lesson into 5-6 segments. (material from “Interactive Lecture Formats”, first 6 activities in the handout)
- 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.

## Jigsaw (cont)

- Form temporary "expert groups" 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.

## Jigsaw (cont)

- 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. Eventually, it's best for the group leader to handle this task. Leaders can be trained by whispering an instruction on how to intervene, until the leader gets the hang of it.

## Jigsaw (cont)

- 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

# CL (Jigsaw) using iPad

*eLearning- Blended*





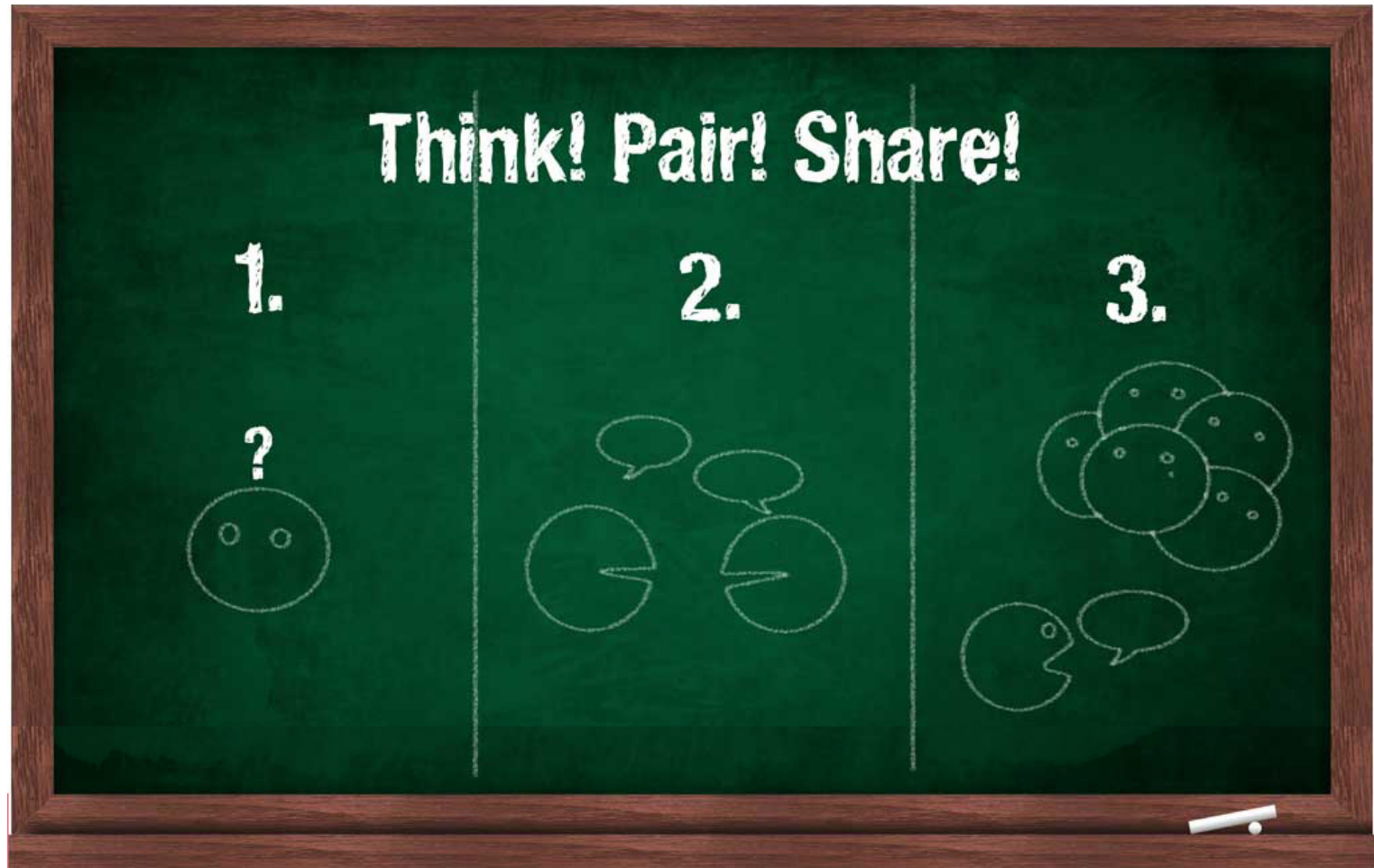
# Think-Pair-Share

- This is a four-step discussion strategy that incorporates wait time and aspects of cooperative learning. Students (and teachers) learn to:
- **LISTEN** while a question is posed
- **THINK** (without raising hands) of a response
- **PAIR** with a neighbor to discuss response
- **SHARE** their responses with the whole class.
- Time limits and transaction cues help discussion move smoothly.

## Think-Pair-Share (Cont.)

- Student are able to rehearse responses mentally and verbally, and all students have an opportunity to talk. Both students and teachers have increased opportunities to think and became involved in group discussion.

# Think-Pair-Share (Cont.)



# XTVT 4 – Think-Pare-Share

Face your friend beside you...

Without referring to any source, just base on your own opinion or experience, answer to this question:

**“How to make UTeM famous and be one of the chosen university for people who want to further their study?”**

( 5 minutes)

# Three-Step Interview

- This involved structured group activity with students.
- Using interviews/listening techniques that have been modeled, one student interviews another about an announced topic.
- Time is up, students switch roles as interviewer and interviewee.
- Pairs then join to groups of four.
- Students take turns introducing their pair partners and sharing what the pair partners had to say.
- This structure can be used as a team builder, and also for opinion questions, predicting, evaluation, sharing book report, etc.

# Round Robin Brainstorming

- Can be used for brainstorming, reviewing, or practicing while also serving as a team builder.

## Sequential form:

- Students sit in teams of 3 or more, with one piece of paper and one pencil.
- The teacher asks a question which has multiple answers.
- Students take turns writing one answer on the paper.
- Then, passing the paper and pencil clockwise to the next person.
- When time is called, teams with the most correct answers are recognized.
- Teams reflect on their strategies and consider ways correct answers are recognized.

# Round Robin Brainstorming (Cont.)

## Simultaneous Teams:

- Each student starts a piece of paper, writes one answer and pass it.
- So, several paper are moving at once.

## **Round Robin Brainstorming**



### **Directions:**

1. Teacher presents a problem or a topic to the whole group or small groups
2. A recorder(s) is selected to write down the answers of the group(s)
3. Students in turn share orally in a round-robin fashion.
4. Teacher directs the students when to stop using a signal.

### **Purposes:**

1. This is a teambuilding activity.
2. Students are able to express ideas and opinions in a small setting.
3. There is equal participation.
- 4.

### **Ideas for Application:**

1. Creating a story
2. Express ideas on a story that was read.
3. Sum up key points of whole class discussion, a story that was read or a presentation.
4. Brainstorming.
5. Collection of ideas.



# Three-Minute Review

- Teachers stop any time during a lecture or discussion and give teams three minutes to review what has been said, ask clarifying questions or answer questions.

# Numbered Heads Together

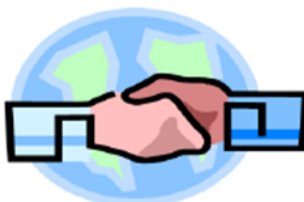
- This structure is useful for quickly reviewing objective material in a fun way.
- A team of four is established. Each member is given numbers of 1, 2, 3, 4.
- Instruct them to review their work together and for each one to be prepared to answer any question asked of them.
- Allow them to have a few moments to discuss and review.
- Ask the students a series of questions about the work that just reviewed and discussed.
- Call out a number. The students with that number should raise their hands and answer for the regroup.

# Team Pair Solo

- Students do problems first as a team, then with a partner, and finally on their own.
- It is designed to motivate students to tackle and succeed at problems which initially are beyond their ability.
- It is based on a simple motion of mediated learning. Students can do more things with help (mediation) than they can do alone.
- By allowing them to work on problems they could not do alone, first as a team and then with a partner, they progress to a point they can do alone that which at first they could do only with help.

# TEAM PAIR SOLO

**What is it?**  
Students solve problems first as a team, then as a pair, finally alone.



## Examples in use:

**Science:** gather and process information (team), generate and analyse ideas (pairs), present results using media (solo)

**Humanities:** list analytical questions to guide investigations (team), gather information in response to research questions (pairs), present results (solo)

## Literacy

**Reading:** engage in reading activities or recognise the use of literary devices (team), interpret, make inferences or draw conclusions (pair), and construct a personal response to texts (solo)

**Writing:** brainstorm adjectives together around a theme (team), discuss which ones best suit the purpose and why (pair) use them in your own work (solo)

## Variations for emergent ELL:

This strategy is inherently scaffolded because students progress from interdependence to independence

**Maths:** interpret information from word problems (team), identify problem (pair), generate solutions (solo)

Promoting more **intake**: once complete, reverse the process: Solo shares work with Pair. Pairs report back to team. Team discusses impact.

# Circle The Sage

- First the teacher polls the class to see which students have a special knowledge to share.
- Those students (the sages) stand and spread out in the room.
- The teacher then has the rest of the classmates each surround a sage, with in two members of the same team going to the same sage.
- The sage explains what they know while the classmates listen, ask questions, and take notes.

## Circle The Sage (Cont.)

- All students then turn to their teams.
- Each in turn, explains what they learned. Because each one has gone to a different sage, they compare notes.
- If there is disagreement, they stand up as a team.
- Finally, the disagreements are aired and resolved.

# Partners

- The class is divided into teams of four.
- Partners move to one side of the room. Half of each team is given an assignment to master to be able to teach the other half.
- Partners work to learn and can consult with other partners working on the same material.
- Teams go back with each set of partners teaching the other set. Partners quiz and tutor teammates. Team reviews how well they learned and taught and how they might improve the process.

# Pairs Check

- This is a way to structure pair work on mastery-oriented worksheets.
- Students work in teams of four with two sets of partners.
- The worksheet is set up with problems represented in pairs. The first person in each partnership does the first problem with the pair partner serving change roles.
- After each pair of problems, teams of four check each others' work and, if agree, give a team cheer or handshake.
- In this way students stay on task, working together toward mastery.



# Send a Problem

- Each student on a team writes a review problem on a flash card.
- Teams reach consensus on answers and write them on the backs of the cards.
- Each group's tack of questions passes to another group, which attempts to answer them and checks to see if they agree with the sending group.
- If not, they write their answer as an alternative.
- Stacks of cards can be sent to third and fourth group.
- Stacks of cards are finally retuned to the senders, who may discuss the alternative answers.

# What's Next?

1. Plan your cooperative learning activities that you can do for your class. Decide which topics and how you are going to do it.
2. Try to record every L&T activities – as proof for apply for AAU, job promotion, writing research papers.

## XTVT 5 – Lesson Reflection

- Face your friend beside you...
- **What do you learn from today's CL slot?**
- Record a short video, around 30 seconds when you friend answer/respond to the question.
- Then swap role
- Upload the short videos into padlet group folio.

( 5 minutes)

Thank you ...





RTRL Promotional Video



## Rethinking Teaching: Redesigning Learning

Status: Self-paced

Duration: 25 Weeks

Students: 2647



Join the course





A  
T  
C  
G



## **DNA of the 21st Century University Educators**

A = ATTRIBUTES of Learners/Learning

T = Transform TEACHING

C = CENTURY-IZE Curriculum

G = Go GREEN, DiGital & GLOBAL

**(C) Mohamed Amin Embi (2015)**

**A = ATTRIBUTES**

**Understanding ATTRIBUTES of  
21st Century Learner & Learning**



# GENERATION Z: CONNECTED FROM BIRTH.

Born mid-1990s to 2010.







***If we teach today's students as we taught yesterday's, we rob them of tomorrow.***

***If a child can't learn the way we teach, maybe we should teach the way they learn.***





[www.newmediamusings.com](http://www.newmediamusings.com)

# Is learning simply about gaining knowledge...?



**... or making  
connections?**

# Design Cooperative Learning Activity



# CL Activity 1: Best Summary

- Each participant is given one Interactive Lecture Format (ILF).
- Write a summary for the ILF assigned to you.
- Collect the summaries and redistribute summaries from one group to the next one.
- Each group will identify the best summary collaboratively – present it

## Activity 4: Guess the SCL Teaching Method used in this video

