

# Active and Collaborative Learning

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# Participant Learning Outcomes:

By the end of this session, participants will be able to:

- List characteristics and importance of active and collaborative learning
- Describe eight active and collaborative learning techniques
- Find potential solutions for common problems

# Characteristics of Active and Collaborative Learning

- ▶ Shifting responsibility to students and having the classroom vibrate with lively work is attractive, but is educationally meaningless if students are not achieving intended instructional goals.
- ▶ The focus is on **intentional** group activities
- ▶ Teachers select from a range of pre-structured activities or by creating their own activities and assignments.

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- ▶ Collaborative learning is **co-laboring**, i.e. all participants in the group must engage actively in working together toward the stated objectives.
  - ▶ Students must increase their knowledge or deepen their understanding of course curriculum.

# What is Active and Collaborative Learning?

- Collaborative learning, then, is two or more students laboring together and sharing the workload equitably as they progress toward intended learning outcomes.
- “Collaborative learning is an umbrella term for a variety of educational approaches involving joint intellectual effort by students”. Smith and MacGregor (1992)

# Common Problems and Potential Solutions

- ▶ Resistance to group work
- ▶ Poor interpersonal skills
- ▶ Off-Task behavior
- ▶ Groups that don't get along
- ▶ Groups in which several or no students want to assume leadership
- ▶ Different ability levels

***If teachers design an effective learning environment and construct good tasks, many of these problems can be avoided***

# Collaborative Learning Techniques are of two major types:

## 1. Discussion CoLTs:

*“A good give-and-take discussion can produce unmatched learning experiences as students articulate their ideas, respond to their classmates’ point, and develop skills in evaluating the evidence of their own and other’s position” Davis, 1993.*

Examples:

**Round Robin, Think-Pair-Share, Buzz Groups, Talking Chips, Three-Step Interview, ....**

# Round Robin

- ▶ Designed to encourage students to share their thoughts/ideas at the introduction of topic/subject
- ▶ Provide topic
- ▶ Ask each student to share what comes to mind. Example: If the group is starting group work, ask them to share their thoughts about it. Prompt them to discuss positives, negatives, etc.
- ▶ Instructor can fill in the gaps and tie their points to material
- ▶ A variation: have each student jot down a brief comment or response to a question.
- ▶ Collect them, find relevant examples that illustrate topic. Can use for discussion or explain topic



# Think-Pair-Share

- ▶ Designed to encourage students to share their **PREDICTION** and/or **UNDERSTANDING**.
- ▶ Provide a set of questions/topic
- ▶ Ask each student to write down what comes to mind individually. Example: At the end of covering an organ system, ask them a set of questions where they need to predict the outcome if it is malfunctioning (eg. endocrine system). Prompt them to discuss the different aspects, etc.
- ▶ Have students pair up and discuss their responses.
  - ▶ This helps them *develop skills in evaluating the evidence of their own and other's position.*
- ▶ Go over the questions/topics with whole the class.

# Buzz Groups

- ▶ Explain a concept.
- ▶ Put up topics/questions.
- ▶ Form groups of 4 and assign them to go to the white board.
- ▶ Time them to discuss and write down their responses on the board.
- ▶ They stop when the buzzer goes off.
  - ▶ Everyone looks at the different responses on the board and compares
- ▶ The whole class discusses afterwards.

# Collaborative Learning Techniques are of two major types:

## 2. Reciprocal Learning Techniques

*“ What is the most effective method of teaching?....Students teaching other students”*

*McKeachie et al., 2002*

**Examples:**

**Jigsaw, Fish Bowl, Note-taking Pairs,  
Learning Cell, Role Play, .....**

# Jigsaw

- ▶ I covered the components of a speech outline
- ▶ I handed out slips of paper that represented each component
- ▶ Students had to work together as a team to organize them correctly
- ▶ They presented their outline to the class
- ▶ This activity gets them off their feet, has them negotiating with each other to determine the correct arrangement, has them clarify the terminology, provides checks and balances with each other

# Fish Bowl

- ▶ Designed to encourage students to share their **UNDERSTANDING**.
- ▶ I explained a concept.
- ▶ Projected a summary slide with key points.
- ▶ Formed inner concentric (2 'smart' students, the 'fish') and outer eccentric (4 students) circles.
- ▶ The inner circle students take turns in discussing and explaining the concept that was presented earlier in class.
- ▶ The outer circle students listen and ask questions AND
- ▶ TAKE NOTES

# Note-Taking

- Usually Note-Taking is done in pairs, 'Note-Taking Pairs', where two students take notes while the instructor is presenting a specific concept.
- Then they summarize the main points to each other by taking turns.
- I did some modification: I combined 'Fish Bowl' with 'Note-Taking'
- I had my outer circle students do 'Note-Taking' while they were listening to the inner circles in 'Fish Bowl'.
- They were given few minutes to think it over and discuss their note among each other.

# Quick & Dirty Active Techniques

**Sit Down Game** – Works well to review material, or stimulate them when they're looking tired.

- ▶ Ask all students to stand up. They can sit down when they've given a suitable answer to a question prompt.
- ▶ Example: Name a country in the world
- ▶ Example: Name a part of the body

**Thumbs Up/Thumbs Down** – Great when you're looking for a quick response.

- ▶ Students indicate agreement/disagreement or predict something using a thumbs up/thumbs down response.
- ▶ Example: Should companies require employees to work from home once a week to save energy?

## Endnote: Theoretical, Pedagogical Rationale for Collaborative Learning

- Students learn by integrating new information into their existing understandings (Paulo Freire, 1970; Nash, 1997)
- Students learn through imitating others (Albert Bandura's, 1977)
- Students learn through interacting with others (Palinscar et al.,1989; Topping, 1996)
- Students learn when they seek understanding (Ramsden, 1992)



## Endnote: Evidence that collaborative learning promotes and improves learning

- CL correlates positively with cognitive outcomes (Springer et al., 1999; Romero, 2009).
- CL correlates positively with student engagement, attitudes, persistence and personal development (Austin, 1993; Light, 2001; Springer et al., 1998).
- CL is good educational practice (Chickering & Gamson, 1987; Ambrose et al., 2010; Barkley, 2004).
- CL is beneficial for a wide range of students (Annis, 1983; McKeachie et al., 1986).
- CL is valued by both students and teachers (McKeachie et al., 1986; Fiechtner and Davis, 1992).