How to Create and Facilitate Successful Group Work and Discussion Experiences for Your Class

Physics Department
August 12, 2014
Taimi Olsen, Ph.D.
Ferlin McGaskey, Ph.D.
Tennessee Teaching and Learning Center
Agenda

• Review benefits of group work

• Best practices for developing and planning group work

• Best practices for forming and facilitating groups
What does group work mean to you?

- Take a moment to write down a representation of what you think about when you think of the term group work.
- Pair up and share what you created. Note the differences and similarities.
- After sharing with your partner, form a group with another pair of students.
- Each person shares their partner’s idea of group work.
Group work debrief

• What is group work?
• What do you believe are the benefits and obstacles of group work?
• What did we just do? How was it organized? Why did we do this?
How do we create an environment where we yield the greatest benefit from group interaction?

**Questions to ask yourself as the instructor:**

1. Does group work serve to help me meet the student learning outcome?

2. What type of work will be best for the task/activity?

3. What guidelines or instructions do students need to work effectively?

4. What will be the visible result and will all students be held accountable (formally or informally?)
Bloom’s Revised Taxonomy for Student Learning.

- Remembering
- Understanding
- Applying
- Analyzing
- Evaluating
- Creating
Student Learning Outcomes for a session

Try it: Write down one student learning outcome for a class session.

By the end of class, students will be able to {VERB from LIST} _________.

These are much more focused than a course outcome (in which they may analyze or apply basics concepts of physics.)
Types of Groups: which would you use?

Casual
- Held for one class session, small size (2, 3, or 4). Product due at end of class. Roles may be assigned. Low stakes grade. Less control of group construction. Monitor by walking around!

Cooperative
- Groups are very structured using a variety of criteria (strengths, diversity, interests). Group make-up is 4 people. Roles assigned and rotated. Groups may be changed a few times. Product at a moderate stake grade and clearly defined. Some training and assessment used.

Teams
- Teams are larger (5-6) and have more complex projects with higher stakes. Teams are trained in collaborative work. Contract-based, peer and self reviewed. Involves course re-design; group projects are best managed **during** class time.
Group Work

Tenets of Cooperative Learning

- Heterogeneous groups
- Structure
- Relevance
- Positive interdependence
- Individual accountability
- Attention to group skills
- Social dynamics monitored

Millis, B (2010)

Learning Outcomes

- What are your options for active learning?
- Consider higher cognitive levels: what is required of the students?
- What is needed? Good group composition, stability for students, or scaffolding (steps) towards a large assignment?
Learning Activities

• Individually, write down types of individual, group, and class activities that you have done...in a class in any subject.

• Pair-Share

• Think about how your experiences will influence your teaching!
Managing groups: instructor role

- Determine types of groups and create activity
- Talk with students about group interaction guidelines
- Consider the space of the room and your position
- Actively observe and interact with groups
- Ask engaging questions!
Asking questions

1. Allow time to think – tolerate some silence (use the 30 second rule)
2. Have students jot down their responses
3. Take advantage of competing views (agree/disagree poll)
4. Have students keep a log of important questions in their notes
5. Ask the class “Why is this a good question to pose?” in order to generate critical thinking.
Questions that constrain

- **Simple yes-no**
  - “Is...”
  - “Does...”
  - Do you have any questions?
- **Elliptical**
  - “What do you think about...”
  - (too vague)
- **Leading**
  - “Don’t you think that...”
  - (conveys expected answer)
- **Intimidating**
  - “Why wouldn’t you think that...”
Questions that enhance learning

• Analysis
  ▫ “Why...”
  ▫ How would you explain...”
  ▫ What is the importance of...”
  ▫ What is your interpretation/meaning of...”

• Compare and contrast
  ▫ “What is the difference between...”
  ▫ “What is the similarity between...”

• Cause and Effect
  ▫ “What are the causes/results of...”
  ▫ What connection is there between...”

• Clarification
  ▫ “What is meant by...”
  ▫ “Would you define...”
  ▫ “Could you give us an example...”

• Deep questioning
Try it

• In groups of five, four people will role-play students doing the recitation.

The person that is the TA actively interacts and fields at least two questions.

*Debrief*