Facilitating Small Group Discussions

Carol Schmidhauser and Sydella Blatch
Stevenson University
cschmidhauser@stevenson.edu  sblatch@stevenson.edu
About how much of your instruction time takes place as group work in a typical course?

A. 0-10%
B. 11-30%
C. 31-60%
D. 61-80%
E. 81-100%

Tell us your letter and we will seat you accordingly.
Today, in groups, you can develop a group activity to use while considering...

1. Potential benefits and challenges of group work/discussions
2. Cultural considerations
3. How to start? - What are your goals? Constraints?
4. Four types of group activities
   - Cooperative, Collaborative, Problem-based learning and Team-based learning
5. Group Composition
6. Managing the group experience
7. Teaching team skills
8. Assessment of the process
Questions to discuss... (10 minutes)

1. Why you do use group work (benefits/positives)?
2. Why don’t you use more group work (barriers/challenges)?

Group Structure:

Leader - keep discussion on task, make sure everyone gets the chance to speak, etc.

Scribe/Timekeeper - Record notes, keep pace of discussion

Dissenter/Devil’s Advocate - Express opposing, different, or unpopular views

Speaker/Reporter - Shares Top benefit and Top challenge with the whole group
Why use small group projects/discussion?

Can help students explore a topic more deeply

Tackle more complex, authentic problems than can alone

Share different (diverse) perspectives (Cabrera et al., 2002)

Share different skill sets

Practice listening to others

Practice being respectful

Perform better on higher-level open-ended questions (Linton et al., 2014)
Why use small group projects/discussion?

Receive social support and encouragement to take risks

Develop new or practice old approaches to resolving differences

Develop their own voice and perspectives in relation to peers

Challenge assumptions

Develop stronger communication skills

Increased course satisfaction and student retention (Tinto, Goodsell, and Russo, 1993)
Barriers: What students think about group work:

Scott et. al 2008: Percent of student that felt group work was negative because of
- Communication Problems - 14%
- Timing, Scheduling Issues - 39%
- Personality Clash, Conflicting Ideas, Disagreements - 47%
- Lack of Participation, Slackers, Flakes, Unequal Work - 73%

Students do not always participate equally, especially when credit for correct answers is given, may be anxious about participating, and may not see any value in peer discussions (Eddy Sl et. al 2015).
Barriers: What faculty think...

1. There may be pressure from the group to conform to the majority opinion. (Beebe and Masterson 2003)

2. An individual may dominate the discussion. (Beebe and Masterson 2003)

3. Some members may rely too heavily on others to do the work. (Freeman & Greenacre, 2011).

4. It takes more time to work in a group than to work alone. (Beebe and Masterson 2003)

5. Time needed to develop thoughtful group activities (compared to lectures etc).

6. Loss of time in class to learn content.

Cultural differences:

In some cultures or groups

- greater value in interdependence and collaboration than on individual performance
- different expectations for how groups *should* function.
- certain forms of collaboration are acceptable which might be construed as cheating to others
- mixing of gender/gender-identity can be uncomfortable
- students may be more likely to take on certain group roles/behaviors or perceive group-members actions differently based on gender/gender-identity or race/ethnicity/culture (Eddy S. L. et. al 2015)
- formal English may be easier to follow then colloquial English
Cultural differences:

In some cultures, teachers are the experts and being quiet is a sign of respect.

- Students don’t ask questions - perceived in US as not having done the work or confused
- Do not believe they can learn anything from peers
- Disrespectful to challenge the teacher
- May not have skills necessary for group work

Rules for discussions may be different,

- Ok to talk loudly or animatedly and to interrupt - perceived in US as disruptive or rude
- Ok to only speak when called upon
- Considered polite to be quiet for a few minutes after someone speaks
Where to start?...(5 minutes)

1. Think to yourself, what are your goals for the course/activity?

- Johnson, Johnson and Smith (1991) suggest that group tasks should be integral to and complement the course objectives.
- Critical thinking? Team work? Communication? - group work should support these objectives
- Course objective(s) that students may particularly struggle with perhaps
- Lecture and/or lab?
Where to start?...(5 minutes to yourself)

2. Constraints

- Time - In class: best. If out of class, how can your students work together with busy schedules?
- Class size?
  - Large classes - Wright and Lawson (2005) found that students felt class was smaller and more personal
- Physical space constraints, room organization, etc.

After 5 minutes, share your stickiest point with your group (another 5 minutes).
Four Types of Group Work/Activities

Cooperative

Collaborative

PBL (Problem-based learning)

TBL (Team-based learning)
Cooperative Learning (Peer Instruction)

- students **co-laboring** to accomplish a learning task. (Davidson and Major, 2014)

- mainly used in the sciences, mathematics, and engineering

- oldest form of group work

- based on work of John Dewey

Examples: think pair share (with or without clickers) & jigsaw
Cooperative Learning (Peer Instruction)

Purpose:

- Generate ideas
- Gauge student understanding (Davidson, 1970, 1971)
- Increase student confidence in their answers (Davidson and Major, 2014)
- Practice listening skills
- All students participate
- Develop thinking skills (Johnson et al., 2014)
Cooperative Learning (Peer Instruction)

Characteristics

1. Task suitable for a group (more on this later)
2. Student to student interaction in a small group (usually 4 people)
3. Interdependence structured to foster cooperation
4. Individual responsibility and accountability
5. Cooperative, mutually helpful behavior among students

(Davidson & Worsham, 1992; Davidson, 1994, 2002)
Collaborative Learning

- To labor with each other to get to the same goal but may not be on the same task
- Does not require interdependence but together will discover, dissect, and produce knowledge
- Mainly in the humanities and social sciences

Examples: learning communities, paired courses or clusters and putting on a play

Assassin activity - students given list of neurotoxins and their target - must choose best choice and justify
Collaborative Learning

Characteristics:

- Two or more students working with each other to make meaning of or produce a product of a faculty given project/topic.

Purpose:

- Generate well vetted ideas
- Develop research skills
- Develop decision making skills
- Student responsibility for learning
- Build knowledge together
Problem-Based Learning (PBL)

- Real world complex problems are the stimulus for students to learn course concepts, research skills and metacognitive skills.
- Used extensively in the health professions

Purpose:

- Think critically
- Find, evaluate, and use appropriate resources
- Demonstrate effective communication skills - verbal and written
- Analyze and solve complex problems
- Self direction
- Self regulation
Problem-Based Learning (PBL)

Characteristics:

- Small groups work together to “solve” a real-world problem
- Not all information is present
- Interdisciplinary
- Authentic and motivating
- Self-directed learning - content and skills needed
- Collaborative
- Reflective
Problem-Based Learning (PBL)

Example: A pair of twins marries another pair of twins and both couples are about to have their first child. Sarah is worried that her baby will look exactly like her sister’s baby born the previous week (which had a face “only a mother could love”).

Questions to ponder:

Will Sarah’s child look just like his or her "double cousin," Ken, Jr.? Why or why not?

Assuming that Sarah is right and the children will look identical, will they also have similar personalities, behavior, and attitudes?

What is the maximum percent of the two childrens' genetic composition that could consist of identical genes (allelic versions)? The minimum percentage?
Team-Based Learning (TBL)

Semester long group but activity lengths may vary

Four foundational practices are essential for implementing TBL:

1. strategically forming permanent teams;
2. ensuring student familiarity with course content by utilizing a Readiness Assurance Process;
3. Developing students’ critical-thinking skills by using carefully-designed, in-class activities and assignments; and
4. creating and administering a peer assessment and feedback system.
Team-Based Learning (TBL)

Semester long group but activity lengths may vary

- Develop team interaction skills
- Develop problem solving and decision making skills
- Foster relationships
Team-Based Learning (TBL)

Example:

A 74 year old female has come to your office suffering from hyperventilation, malaise, dizziness, and muscle pains. She was diagnosed with Type 2 diabetes at the age of 50 and has managed her disease successfully with diet, exercise, and hypoglycemic agents. She was initially put on a hypoglycemic agent called an oral sulfonylurea (chlorpropamide), but recently was switched to metformin which is better tolerated in the elderly. Her blood pH is 7.2 and her serum lactate is 10X normal levels. Her creatinine clearance and serum creatinine concentrations indicate diminished renal function.
This patient has a blood pH of 7.2 because:
A. ketones from excess fat mobilization are making her blood acidic.
B. increased glycolysis and reduced TCA cycle activity leading to excess lactate formation.
C. hypoxia resulting from inhibition of electron transport is creating excess carbon dioxide.
D. increased blood sugar increases glycolysis and lactate production in red blood cells.
Cooperative, Collaborative, PBL or TBL…
(10 minute group discussion)

Are any of your group activities cooperative, collaborative, PBL, TBL or a blend of these?

How can you flesh out the activities to be so?

Here is an example of a case study that could be used for different types of group activity (depending on how you present)

http://sciencecases.lib.buffalo.edu/cs/files/chemical_eric.pdf
Composing Groups

Size? - most studies suggest between 3-7 students per group, 4-5 in particular.

- Too-small not enough creativity; too-large some members do not participate
- But when a short amount of time is available, smaller groups are needed (Cooper 1990; Johnson Johnson & Smith 1991)

Keeping the same groups throughout the term or changing them?

- keep them if building team skills is a learning outcome
Heterogenous vs. Homogenous Groups?

Evidence in favor of using both homogenous and heterogenous groups

- Major, GPA, past experiences, courses completed, are often used.
- Based on initial reasoning ability - (Jensen and Lawson 2011)
  - Low reasoners, better in homogenous
  - Medium and High perform the same in homogenous and heterogenous
- Based on pre-assigned expertise areas, heterogenous groups helpful (Buchs et al 2015)
- Whichever is used - be transparent in how you assign
Managing group work (experience)?

1. Inclusive environment
2. Make sure assignments are clearly mapped to course objectives and promote small group interaction
3. Make explicit skills to be gained working in the group
4. Create interdependence
5. Teach team skills
   a. Listening
   b. How to give/receive constructive criticism
   c. Handling disagreements
6. Monitor group process
How to create inclusive environment

- self reflection on previous experiences - good and bad experiences
- provide opportunity for introductions and ice-breakers
  - Strange fact
  - Cats or dogs?
  - Favorite...food, band, vacation spot, bone, etc.
- explore/outline their expectations of each other, possibly a contract
  - How they will contact each other
  - What they will grade each other on
  - What they will do if......
- develop assessment criteria - process and/or product
Conditions that promote small group interaction

- challenging problem

- relevant to course objectives, content, and student interests

- high-level content processing tasks (i.e. developing models or evaluating arguments) (Young and Talanquer, 2014)

- analysis of empirical, uncertain data (Young and Talanquer, 2014)
Does NOT make a good group activity

- Low level cognitive processing tasks such as:
  - sharing information,
  - providing definitions,
  - clarifying procedures
Creating interdependence

If collaboration is goal, make sure to structure assignment/work so that they must rely on one another:

1. Problem difficult enough need to rely on each other’s knowledge and skills
2. Create shared goals that can only be met by working together i.e. competition
3. Limit resources - i.e. money or time
Teach team skills:

To work successfully in groups, students need to learn how to work with others to do things they might only know how to do individually, for example to...

- assess the nature and difficulty of a task
- break the task down into steps or stages
- plan a strategy
- manage time
Teach team skills:

Students also need to know how to handle issues that only arise in groups, for example, to:

- explain their ideas to others
- listen to alternative ideas and perspectives
- reach consensus
- delegate responsibilities
- coordinate efforts
- resolve conflicts
- integrate the contributions of multiple team members
How to teach team skills:

1. Talk about importance of team skills in and out of workplace.
2. Discuss and reinforce conflict resolution.
3. Talk about common pitfalls of group work or particular assignment.
4. Foster metacognitive skills - their own strengths and weaknesses (repeatedly)
5. Incorporate summative group process assessments
Constructive Group Behaviors

Cooperating: Is interested in the views and perspectives of the other group members and is willing to adapt for the good of the group.

Clarifying: Makes issues clear for the group by listening, summarizing and focusing discussions.

Inspiring: Enlivens the group, encourages participation and progress.

Harmonizing: Encourages group cohesion and collaboration. For example, uses humor as a relief after a particularly difficult discussion.

Risk Taking: Is willing to risk possible personal loss or embarrassment for the group or project success.

Process Checking: Questions the group on process issues such as agenda, time frames, discussion topics, decision methods, use of information, etc.

Destructive Group Behaviors

**Dominating:** Takes much of meeting time expressing self views and opinions. Tries to take control by use of power, time, etc.

**Rushing:** Encourages the group to move on before task is complete. Gets "tired" of listening to others and working as a group.

**Withdrawing:** Removes self from discussions or decision-making. Refuses to participate.

**Discounting:** Disregards or minimizes group or individual ideas or suggestions. Severe discounting behavior includes insults, which are often in the form of jokes.

**Digressing:** Rambles, tells stories, and takes group away from primary purpose.

**Blocking:** Impedes group progress by obstructing all ideas and suggestions. "That will never work because..."

Composing and managing groups for your project… (5 minutes)

How might your groups be determined?

What kinds of tools/structures might you use to manage groups and strive for an inclusive environment?
Assessment of the Product

Product Assessments

● You may want to assess products generated from the group as well as each individual
● But, it is not enough to assess only the work produced (e.g. exam, paper, presentation)!
Assessment of the Process

Process Assessments

● Formative, during the group activity, to help with conflicts, imbalance and other issues
● Should also be factored into the students’ grades
  ○ Each student rates themself and other group members on various aspects of the project and professionalism, group behavior etc.
  ○ Googling “group evaluation” will yield many examples of rubrics with these qualities
References


Scott, W., Taylor, A., Lemus, D., and Oh, J. (2008, April). Navigating Conflict in Student Teams. Symposium conducted at Faculty Development Series, California State University Northridge, California.