Using group activities

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Introduction

In recent years, using groups in classrooms has become more commonplace in university classrooms throughout the world. This is a trend that particularly started in the US and Canada, and arose independently in various departments at different universities. Similar methods arose in primary and secondary education before that, due to the influence of the ideas of famous educators and psychologists, such as John Dewey and Lev Vygotsky, as well as what modern cognitive psychology has told us about how students learn.

Due to the diverse and independent origins of group activities, the various methods have similarities and come under different names, such as active learning, cooperative learning, interactive learning, problem based learning, and others. Problem based learning arose in Canadian medical schools in the 1960s; task based and communicative learning arose in foreign language education, starting in California in the 1960s; process based approaches with peer editing arose in English composition classrooms in the US in the 1970s; forms of cooperative learning were introduced into American engineering education in the 1980s and 1990s; and invention activities were developed in math courses in California, and more recently, extended to biology education in British Columbia.

A number of different types of group activities have been developed and can be found on the education literature. Some of these are very similar or overlapping, but with different names. This is because some of these were developed independently in different fields of study and in different locations by different educators. This can include group discussions and group problem solving activities such as these, which are described in detail in this manual.

• Having students form groups to review, summarize, or discuss concepts that you have talked about
• Having students work together to solve a problem
• Having students rehearse or role play a situation

1. Rationale

These methods arose as educators realized that traditional methods were not meeting the needs of students, and that not all students learned effectively or retained what they had learned. In fact, since the 1960s, cognitive and educational psychologists have told us that mechanical rote learning and memorization does not work. If students try to cram a lot of information into their minds by memorization, they are fighting against how the mind and brain work, and the brain will discard most of the information. The brain assimilates new information by forming connections among concepts and details. Information learned by rote will not form many connections, so much of it will be forgotten. Maybe students can remember rote information long enough to do well on an exam, even the final exam. But later, they will forget much of it – and many studies have demonstrated this effect. Also, information presented via textbooks and pure lectures are essentially a dump of information,
from the students’ point of view. For the professor, everything makes sense, because experts
can readily understand the concepts and how everything fits together; novices – the student –
cannot see such patterns and connections. So for them, it is an ocean of new information to
grapple with.

Forms of cooperative and interactive learning challenge studies to form deeper
connections and learn concepts meaningfully; details are learned within the framework of
concepts that impart meaningfulness to the details. This deeper learning happens because
students have to make connections between new information (concepts, details, or skills) and
what they already know, and connections among the new concepts and information that they
are learning. By having to figure things out, they are using more mental resources on the task,
which leads to better memory. By doing so in a social setting, they not only learn teamwork
skills that will be helpful in the workplace later. They are also using more memory modules –
not only their memory for concepts and details (what psychologists call semantic memory),
but also so-called episodic memory for events – hence, a more memorable learning
experience, and better retention of details. In groups, they can be more creative, and they can
help each other learn. Finally, the process of having to wrestle with and come to understand
concepts on their own leads to what psychologists call the generation effect. If students have
to “generate” their own understanding of the contents, rather than passively learning, then
they will understand the contents more deeply, and will remember them better, than if they
learn by passively absorbing contents in a lecture.

The use of group work and other interactive methods is increasingly common in
various levels of education, due to its advantages for student learning. Students can engage
with concepts and learn more deeply than in traditional, entirely lecture based classrooms,
because they have to wrestle with challenges together, come to understand concepts, and/or
learn how to apply what they have learned in a lecture. Students not only learn more deeply,
but they can retain their knowledge longer (not just to repeat information for an exam and
then forget later), and they can learn the teamwork skills needed for most careers. The
effectiveness of group work for classroom learning has been validated by numerous
quantitative and qualitative students in the education literature (education, educational
psychology, and studies in the learning of specific academic fields such as chemistry, math,
languages, and many others).

2. Types of activities

Group activities can include group discussions and group problem solving activities. A
separate handout is available on specific types of group activities. Most generally, activities
can include:

• Having students form groups to review, summarize, or discuss concepts that you have
talked about
• Having students work together to solve a problem
• Having students rehearse or role play a situation

When we speak of groups, we can think of the following kinds of groups:

• lecture-discussion (class group / full group)
• medium / larger groups (6+ students per group)
• small groups (say, 3-5 students per group)
• dyads (pairs)
2.1. Terminology

These are terms that you will often hear in connection with group activities. These concepts generally overlap a great deal, so this handout uses the terms ‘active / interactive / cooperative learning’ interchangeably. Group activities can be one type of active learning (along with interactive class discussions and other methods). Group activities are often designed as collaborative activities, though at times they could be competitive, such as debates, or when different groups are asked to compete with each other in performing a task.

Active learning. Classroom instruction with activities in which students do not passively listen to lectures, but are engaged in interactive learning activities, e.g., interactive discussions or exercises between student(s) and the instructor; group activities with other students; short writing assignments in which they respond to the lecture material or concepts; or tasks that model “real life” situations.

Cooperative (or collaborative) learning. As opposed to versus individual or competitive learning, students engage in collaborative group activities – discussion activities, tasks, or projects – where they collaborate to come up with a group response, something to present to the class, or a group project to turn in. This concept overlaps a good deal with active learning.

Competitive learning. Students, often in groups or teams, compete with each other, e.g., to develop the best model or project, or to engage in a large group debate of an issue. This may involve some incentive, such as a reward for the best group performance.

For specific types of activities, see the handout on types of group activities.

3. General advice

The most basic piece of advice that can be given for professors or students who are not accustomed to group work is this: Start small.

Start small first. Start with short pair discussions or pair activities (e.g., simple one-minute pair discussions), then go to shorter small group discussions (say, 3-4 students per group), then simple small group tasks, and later, more complex tasks or larger group activities. More on group dynamics and difficulties are discussed below.

The kinds of questions or tasks given to a group should not seek simple skills like memorization or knowledge recall. They should engage higher cognitive skills, and the most basic one might be comprehension – making sure they have understood what you have tried to teach them. But tasks should go beyond this to even higher skills. Comprehension is important, but it is even more important that students be able to do something with their comprehension, such as somehow applying, analyzing, synthesizing, critiquing, and evaluating in ways that reflect what they will do in their future studies, their careers, or their lives.

Remember to focus more on some of these types learning goals:

- Comprehension
- Application of concepts or skills
- Analyzing concepts
- Synthesizing concepts and information
- Critiquing or evaluating

When it comes to more complex tasks that go beyond just a few minutes of small group discussion in class, there are ways to make things more interesting. The tasks or
questions can be made easier or more challenging in terms of the authenticity of the problem, and the amount of information that you provide. The more the task is similar to (or based directly on) a real-world issue or problem (authenticity), the more complex or challenging it will be. But for lower level classes, a more simplified or artificial kind of task can be given. Also, you can choose to give them all the information and only the information that they need to solve it. More challenging tasks may require that they draw on and synthesis various things that they have learned in the course. Even more challenging tasks may require them to find information on their own outside of class. Some tasks can be made more challenging by creating context-rich questions – questions or problems are given with extraneous data; students must decide which data are useful and which data are to be excluded; students may also have to do their own research or finding extra information.

4. **Advantages of group activities**

4.1. **Guiding questions and considerations**
What are the advantages and disadvantages of the following class formats?

- **traditional lecture**
- **lecture-discussion format**
- **group activities (as part of a class with, say, lecture-discussion)**

Some of the common pros and cons are summarized below.

<table>
<thead>
<tr>
<th>lecture</th>
<th>Advantages</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Teacher has full control over class, contents and flow</td>
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<tr>
<td></td>
<td>Easier to prepare and deliver</td>
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<tr>
<td></td>
<td>Students are used to lectures and have been trained to expect them</td>
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<tr>
<td></td>
<td>Teachers feel like they are transmitting knowledge</td>
</tr>
<tr>
<td></td>
<td>Students feel like they are receiving knowledge</td>
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</table>

<table>
<thead>
<tr>
<th>lecture</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lectures constitute a very passive learning experience (especially with PPT)</td>
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<tr>
<td></td>
<td>Can easily be boring (especially with a lot of PPT)</td>
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<td></td>
<td>Lectures require the teacher to talk 50-90 minutes, which can be tiring for teachers and listeners</td>
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<td>Students’ attention spans are taxed (adults in class lectures have an attention span of about 10 minutes)</td>
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<td></td>
<td>Students may rely on lecture notes or PPT printouts, and not do the required readings</td>
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<td>Students use rote (mechanical) short term memory to learn the contents, but may forget after the exams</td>
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<td></td>
<td>Students are not challenged or required to think deeply, to interact with the concepts, or to apply the concepts</td>
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<tr>
<td></td>
<td>Students may get an information dump, and not understand how things really work, or connections among concepts or details</td>
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<tr>
<td></td>
<td>Thus, learning can easily be superficial.</td>
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</tbody>
</table>
### Advantages

- More interactive and interesting for students
- More variety
- Less taxing on attention spans
- Students can get their questions answered
- Students can learn from each others’ ideas, insights, and questions
- Teachers also learn from students’ ideas, insights, and questions
- Teachers can learn what difficulties the students are having
- Better learning and memory (more use of conceptual memory as well as memory for details)

### Disadvantages

- Teacher has less control over time, contents, flow, and discussions
- Students may be shy about speaking in before others or about speaking in English
- Male students may dominate the discussion, as females may be less likely to take part in competition for attention and holding the floor

### Advantages

- Can be even more interactive and interesting for students
- More variety – best est for attention span limits
- Students learn most from interactive discussion and exercises
- Students can learn more deeply, and can learn how to apply knowledge
- Better learning, memory of concepts (learning facts and concepts in social context and actions – using event-based memory plus conceptual memory)
- More introverted students get more of a chance to participate
- Females can participate more freely
- Students have a chance to formulate ideas and what they want to say, before discussion their thoughts in a whole-class discussion

### Disadvantages

- Teacher has even less control
- Poor group leaders can hinder the discussion or group effectiveness
- Students may be unfamiliar with doing group tasks, and may need instruction in how to do group tasks
- Participation may be unbalanced or unfair; some students may do too much of the work, and/or some may freeload and not do anything
- For group tasks that are to be graded (e.g., group projects), grading can be more complicated, especially if group members do not contribute equally to the work

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1 Hold the floor = to speak before a group of people (without being interrupted); having and using the right to speak for a time (in a group discussion, class, meeting, etc.). For example, in a class discussion, students and teachers take turns, and each person holds the floor for a certain amount of time, as others tacitly yield and allow the speaker to talk for a while, before a shift in turn-taking occurs and another person takes the floor.
4.2. Disadvantages?

Group activities, in conjunction with lecture or lecture-discussion components, have been shown to lead to more effective learning. There are apparent disadvantages, which can be dealt with. At first, teachers do not like giving up their full control. However, the benefits far outweigh this disadvantage. It would not be helpful for the students if the teacher has full control, but the students do not learn well. By giving up some (only some, not all) control, the teacher can actually better adapt his/her class to the students’ learning needs.

Students may be unfamiliar with such activities, or may not have had good experiences in previous courses with group activities. For this, it is important to explain the rationale for such activities, and set down clear ground rules for how the groups are to be conducted, especially for larger group activities and group projects that produced contents that will be graded. For teachers who are not used to using groups, again, it is important to start small. You can start with simple one-minute pair discussion activities – sometimes called think-pair-share, where you pose a question, and have students form pairs, and each student discusses the question with a partner. You then get their attention and have some pairs share their ideas, or call on some students to share. After you and the students get used to that, then try slightly more complex activities, such as discussion of more complex questions in small groups of 3-4 students for several minutes. Then you can try giving problem solving tasks, application questions (applying the lecture concept to solving a problem or applying the new knowledge to a real world problem, application, or implications). After that, you can try more complex group tasks and major projects (see the handout on types of group activities).

For issues of unequal participation and contributions from group members, please refer to the troubleshooting section below. For issues of grading, see the assessment section below.
Integrating group tasks into your class

Using such activities does not mean doing away with lectures. Rather, they complement the lectures. Preferably, though, lecture-discussion format would be better. Students have an attention span of ten minutes before their minds wander and hopefully come back to the lecture. But using a lecture-discussion format lessens this problem, as does using a variety of activities, such as lecture-discussion, visual aids, demonstrations (say, with real objects or live experiments), group activities, and follow-up discussion.

1. Structure

A lesson might have a structure like this.
1. Introduction – overview of the lesson contents and rationale (why the topic would be interesting or important)
2. Lecture-discussion period – say, 10-20 minutes
3. Group activity
4. Discussing results or findings of group activity
5. Another lecture-discussion period – discuss the next concept, or the next step of the concept
6. Group activity
7. Wrap-up discussion
8. Conclusion or summary of the lesson, what we have learned, or “take home” message

This example is for two medium-size group activities, say, a 5-10 minute problem-solving task for small groups of 3-4 students. One could also have more lecture-discussion periods, punctuated by simpler tasks such as pair discussions or small group discussions. Or on occasion, one could have a lecture-discussion period followed by a more complex group activity that takes 30+ minutes, followed by a discussion of the groups’ findings, and then wrap-up and conclusion.

During the group activities, the teacher walks around to monitor the groups, to make sure all members are participating, to answer questions, and to help those having difficulties. The instructor should set a time limit, and remind students of the time limit, for longer tasks. After finishing the task, the teacher will discuss the task with the whole class, and have groups share their findings and thoughts.

2. Ground rules

It is important to set some ground rules for students’ participation and behavior in group tasks, particularly for those lasting for several minutes or more, and especially for those in
which students are to produce contents that will be graded. You might want to consider the following issues in your ground rules.

1. All members should participate equally and contribute equally.
2. The discussion should stay focused on the assigned task or topic.
3. How students should organize groups, and the size and structure of groups; e.g., whether they should form groups with neighbors, or based on criteria that you set (or maybe you want to assign students to groups); and whether they should select a group leader.
4. How groups should select their leaders – otherwise, group leaders tend to emerge naturally as they start on a task; for smaller groups or simpler tasks, one clear leader may not emerge or may not be necessary.
5. Group leaders should act fairly, should not stifle the discussion, should not micro-manage the others, or impose his/her own way.
6. Group leaders should make sure everyone participates. Group leaders may inform the professor or teaching assistant if some members are not participating. Group leaders or members may tell the professor or assistant if leaders or members try to dominate unfairly.
7. Procedures: If they have not done group tasks before, then some advice can be given. For example, they may need to be told how to identify or analyze a problem (maybe walk them through an example first), how to develop and work through solutions, how to deal with differing opinions, how to report on their findings, or (if applicable) how to collaborate on a group project, presentation, or write-up of their findings.
8. Learning objectives or outcomes: For more complex tasks or projects, it may help to tell students the specific objectives – why they are doing the group task, and/or what they are supposed to accomplish.
9. For complex tasks, group members should decide on a fair division of labor.
10. The professor and/or teaching assistants will monitor the groups, and take note of those who do participate fairly or equally. Students might be given participation grades accordingly.

3. Some basic hints and considerations:

1. Define specific learning objectives for the task (e.g., a specific grammatical, pragmatic, or communicative skill; avoid vague goals like simple “learning communicative skills” or “learning to talk in English”).
2. Decide how you want students to form groups – groups with those sitting next to them, randomly assigned, or groups that you pre-assign based on factors like ability or social / personality styles (see below).
3. Decide on how large or small the groups should be for the activity. Sometimes pair work might be good for lower level students, for simple activities, or for more nervous or introverted students (less intimidating than larger groups).
4. Prepare the students for group work – explain how group tasks are done, if they’ve never experienced such class activities before.
5. Walk around while groups are working to check their progress, provide support, answer questions, and to make sure the students stay on task (and make sure they use English as much as possible).
6. You might assign group leaders if you find it helpful, or simply watch and see if group
leaders naturally emerge – often, a leader naturally emerges after a while.

7. The better students in a group, or a group leader can serve as a facilitator or helper for weaker students in the group.

Later sections will address group dynamics and dealing with problematic group members.
Group work and group dynamics

This section deals with group dynamics, and how to explain the importance of group work to your students. It will help to explain that the use of group work is increasingly common in various levels of education, to set ground rules, as discussed above, to be aware of group dynamics, and to be ready to deal with problems that could arise.

- Students form groups to review, summarize, or discuss concepts discussed in lectures, or further conceptual questions and extensions of such concepts
- Students work together to solve a problem
- Students rehearse or role play a situation

1. Advantages & disadvantages of group work

1.1. Advantages:
- Better information, opinions, & solutions generated
- Helpful for managing large classrooms
- Opportunities for practice & practical learning
- Members learn more about material or task
- More creativity
- Generation effect - better understanding & retention
- Better morale, sense of contribution & belonging
- Members demonstrate value & contribution to group; members learn teamwork

1.2. Disadvantages:
- Takes time & training to learn how to work in groups
- Blame for mistakes may be spread or passed to others; some may disengage to avoid blame or mistakes
- Group work takes time; results & benefits are not immediately apparent to all (people want quick answers / results)
- Groupthink: Overly familiar or homogenous groups may not seriously work on problem in detail, avoid conflicts that might be healthy or create good discussion, seek simplest solution (“path of least resistance”)
- Conflicts, different communication styles; different backgrounds or levels
- Students may not be familiar with independent work groups
2. Illustration: The V-formation²

The following illustration can be an effective way of explaining the value of group work to students.

1. As each goose flaps its wings, it creates an uplift for others behind. The V-formation leads to a 70% greater flying range than for flying alone.
   ➢ People who share a common direction & sense of purpose can achieve quicker & better results.

2. Whenever a goose flies out of formation, it quickly feels the drag and tries to get back into position.
   ➢ It's harder to do some things alone than together.

3. When the lead goose gets tired, it rotates back into the formation and another goose flies at the head.
   ➢ Shared leadership and interdependence give us each a chance to lead as well as a chance to rest.

4. The geese in formation honk from behind to encourage those in front to keep up their speed.
   ➢ Group members need to provide encouragement to each other, rather than discouragement.

5. When a goose gets sick or wounded and falls, two geese fall out and stay with it until it revives (or dies); then they catch up or join another flock.
   ➢ Stronger students can help weaker students.

3. Considerations for implementing small groups

The following are issues that you might want to consider, or that you need to be aware of, in implementing group activities, especially if this is something new for you.

3.1. Heterogeneous versus homogenous groups

One question that teachers may ask is whether students of similar abilities or backgrounds should be grouped together – homogenous groupings – or whether groups should be more diverse, with students of varying abilities or backgrounds. Usually, students form groups with their neighbors, which will likely be heterogeneous, and generally, those work well; this is the default option that most classes follow. If you decide to assign students to groups, and do so according to language skill level, then you have two options.

1. Homogenous groups: students of similar or same ability level (or gender, age, or other classification).

2. Heterogenous groups: students of different ability levels (highest thru lowest)

Whether you use homogenous or heterogenous groups may depend on the type of class, activity, or lesson objectives. For classes that you teach or would teach, which would you prefer? What would be the advantages and disadvantages of each? When would they be advantageous or disadvantageous? When would you prefer to use one or the other?

² From (Harris, 2002).
<table>
<thead>
<tr>
<th>Homogenous</th>
<th>Heterogenous</th>
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<tbody>
<tr>
<td><strong>Advantages</strong></td>
<td><strong>Disadvantages</strong></td>
</tr>
<tr>
<td>- Students may feel more comfortable with those of similar levels</td>
<td>- Stronger students can help weaker students, e.g., in explaining contents, concepts, or even English</td>
</tr>
<tr>
<td>- Those in the groups for stronger students can work more independently with little need of help from the instructor</td>
<td>- The stronger students will learn more when they are helping and explaining things to the weaker students (learning by teaching – they can understand the concepts better when they explain them to others), and the weaker students benefit from an explanation from a classmate in his/her own words (e.g., if they don't understand the professor’s explanation, or lack some background knowledge)</td>
</tr>
<tr>
<td>- While the groups are working, the instructor can spend more time with the weaker groups to help them</td>
<td>- Students learn from their differing backgrounds</td>
</tr>
<tr>
<td>- Stronger students can help weaker students, e.g., in explaining contents, concepts, or even English</td>
<td>- Active or stronger students can challenge and encourage weaker or less active students</td>
</tr>
<tr>
<td>- Students may feel uncomfortable if they realize they are in the group for weaker students</td>
<td>- Stronger students may dominate the discussion</td>
</tr>
<tr>
<td>- Those in the groups of stronger students may feel superior</td>
<td>- Stronger students may be given or may take on a disproportionately larger share of the work</td>
</tr>
<tr>
<td>- Weaker students may not get the benefit of interacting with stronger students</td>
<td>- Weaker students may not participate well, or may chose to freeload</td>
</tr>
<tr>
<td>- Weaker students might feel intimidated by stronger students</td>
<td>- Weaker students might feel intimidated by stronger students</td>
</tr>
</tbody>
</table>

We can sometimes speak of heterogeneity in terms of personalities. For example, you would not want a group of all introverts, as they all may be too quiet. A mixed group of introverts and extroverts is ideal, so that the extroverts can get the introverts involved. Extroverts contribute to the group dynamics, and introverts can be good at doing more of the intellectual labor. If you have a group of too many introverts, you may have to reassign some to other groups.

3.2. Seating arrangements

Group dynamics can be enhanced by having students move desks into a circle or semi-circle – thus, a classroom with individual, movable chairs is best. Otherwise, they can work around a table. The worst kind of room is one with unmovable chairs bolted to the floor, making some students sit uncomfortably to face others in a group. Such a setting may be better for pairs or small groups of 3-4 at most, unless students can move to an open area to work.

3.3. Group atmosphere

The following describes how the group atmosphere develops and contributes to the functioning of a healthy group. Occasionally, students who do not participate well or who have attitude problems can affect the group dynamics. Teachers need to be on the lookout for
such persons and be ready to deal with them, by addressing their behavior, having the group leader manage difficult persons, or reassigning a difficult student to a different group. A difficult student can be given a warning, singled out for a grade penalty, or placed next to or across from the group leader, so the leader can better manage him/her.

The group members can contribute to a positive or negative group atmosphere, and the attitudes of members can unconsciously affect the whole group; this is a phenomenon known as affect influence, or affect contagion in the case of a negative atmosphere. In addition to these affective influences, as explained below, the consensus forming process of group work can also provide more support, positive reinforcement to group members. Another quality of groups is how likely they are to take chances or consider risks. A healthy group will undertake a reasonable amount of risk – e.g., trying more creative analyses or solutions, ideally. Some groups, on the other hand, may be more conservative and less willing to take chances, leading to less creative or more superficial problem solving.

Group members, often unconsciously, imitate the affective expressions of other members, e.g., facial expressions, postures, and voice tone. This leads to affective convergence within the group, and over time, to consistent levels of affect or mood within the group setting (also known as the affective tone of a group), which influences the group atmosphere. Groups that develop a negative atmosphere engage in fewer positive or prosocial behaviors, and the members will be less satisfied with the group. Work groups that cultivate consistent positive affect among their members create an open, honest, and constructive group environment, a key element in group problem-solving success.

Affect management norms develop as group members reinforce each other’s affect and the whole group atmosphere; over time, a set of norms, or standard style and means of handling group interactions develop. These norms affect how members manage both positive and negative affect effectively, most notably, in handling conflicts, feedback, and evaluation. There is a direct relationship between affect management norms and affective outcomes, such as cohesion and satisfaction with the group, and work improvement processes.

For instance, at the individual level, positive affect promotes approach processes, resulting in increased motivation to take calculated risks that may bring potentially greater benefits, thus maximizing desired outcomes (promotion-focused frame). Negative affect promotes avoidance processes, resulting in increased motivation to accept low-cost, low-risk decisions, thus maintaining security and avoiding negative outcomes (prevention-focused frame).

At the group level the promotion-focused frame leads to more calculated risks with the expectation of greater benefits for the group, whereas the prevention-focused frame leads to decisions to engage in less risky, more conservative alternatives. Therefore, promotion-focused frames consider the problem and the solution in terms of maximizing positive outcomes, whereas prevention-focused frames consider the problem and the solution in terms of minimizing negative outcomes.

Positive affect leads to better cognitive functioning among the individuals, allowing them to synthesize information more effectively and to consider a wider variety of options before making a decision. This is a manifestation of the generation effect. The generation effect can occur when an individual figures out something on his/her own, or when individuals do so in a group activity. Thus, healthy groups experience more creativity and can develop more possible solutions than individuals working alone.

3.4. Group development and work processes
Groups tend to go through the following growth phases from when they first meet. These
four phases in the social dynamics are typical of a healthy group, and necessary for it to form and function well. If this does not happen, then you may need to intervene or reassign groups.

1. **Orientation**: Getting to know each other, breaking the ice; more tentative communication, more agreeing; people observing others.

2. **Role formation**: People start to settle into their social roles in the group; sometimes, conflicts emerge, especially as some jostle for a leadership position in the group.

3. **Emergence**: A group identity emerges; substantive discussion, problem solving, sharing of opinions occur; group cohesion develops (or polarization, in a dysfunctional group); members take on a teamwork mindset.

4. **Reinforcement & consensus**: Members share ideas, achieve a consensus on their task, and develop their “group product” or solutions; members provide support and feedback.

How work groups may conduct their work can be described in the following stages. Group members’ attitudes and affective states can affect how well the group performs at all of these stages. Again, if groups do not seem to be proceeding well according to these stages, you may need to intervene.

1. **Problem identification stage**

   Depending on group dynamics, this may be an opportunity to grow and achieve, or to seek safety and security. A more “serious” problem can motivate the group to devote more time and energy toward a solution than a “less serious” problem.

2. **Brainstorming stage**

   Better groups generate more ideas or more creative ideas, which can lead to a more multifaceted solution that accommodates more members’ viewpoints. Ideally, ideas are first generated, then later evaluated.

3. **Solution or recommendation stage**

   A single solution or multiple solutions are settled on; parts of the plan may be revised based on feedback from others. Members may choose their solution based on the following criteria: (1) cost, or the effort and resources needed; (2) potential benefits; (3) flexibility, or how well the solution meets different needs, or how well it accommodates different members’ ideas or preferences; and (4) elaboration, or how well the members can develop or implement their plan in detail, or how well they can explain it.

4. **Implementation stage**

   How well the members can carry out their plan depends on efficiency, the amount of time and effort required, and the quality of the final plan.

### 3.5. Personality dynamics and relationships

Good relationships – within groups, between teachers and students, etc. - are characterized by:

1. **Attunement**: sensing another person’s state of being and altering one’s behavior accordingly; sensitivity

2. **Relatedness**: sense of belonging

3. **Supportiveness**: affirming others and their abilities
4. Gentile discipline: For teachers, gently explaining reasons why types of thinking or behavior are right or wrong; or for explaining to group members. This is the opposite of power assertion.

Poor relationships are characterized by neglect, indifference, lack of support, or lack of involvement.

The work dynamic can be affected by people’s different social styles. Teachers and group members may need to make adaptations in how they interact with or explain things to them. Ideally, a group will have all of these, as all of these are ideal for a smoothly functioning group.

1. **Drivers** prefer taking charge, finishing tasks, solving problems (assertive, less responsive); communication style is oriented toward speaking & moving along quickly, taking charge; practical, independent, & decisive qualities; to an extreme, they become pushy, dominating, or harsh

2. **Analytics** are thinkers & specialists (less assertive, less responsive); slower, more terse style of speaking & acting; cautious, organized, industrious, precise; to an extreme, they become critical, indecisive, picky, or moralistic.

3. **Expressives** are social persons, intuitive (assertive, responsive); faster speaking, more animated, more emotional; try to involve everyone; impulsive, ambitious, enthusiastic, dramatic, friendly; to an extreme - manipulative, undisciplined, reactive, egotistical.

4. **Amiables** are relationship specialists (receptive, responsive); slower speaking style, focusing on people, terse; relate to others well, seek cooperation with others; unhurried, supportive, respectable, dependable; to an extreme - conforming, pliable, indecisive, dependent, unsure.

For the sake of expressives and amiables, provide clear explanations of the group activity; convey enthusiasm and support, support their intentions, provide discipline; be open and flexible. For drivers and analytics, provide clear explanation of intentions or procedures, provide support and discipline, show support for their ideas and principles (as appropriate), focus on facts, logic, principles, and deadlines.
Handling problems with group dynamics

Group dynamics may be affected by whether they are randomly assigned, informally organized, or assigned or determined by people’s roles, needs, or abilities. Group performance and cohesiveness can be affected by:

1. Commitment to group, and/or group identity;
2. Shared goals – specific goals, purpose, and action, with goals that are as specific as possible;
3. Group climate or atmosphere; and
4. Group communication patterns, and the amount of meaningful talk and activity.

Defining the objectives and rationale of the task (especially for group projects) will generally help to clarify and specify the group’s goals, and provide a common purpose and unity to the groups. Personality conflicts or communication problems can be dealt with by intervening and providing assistance to groups having difficulty, or as a last resort, by reassigning group members.

1. Specific problems

Consider how you would deal with the following issues.

• Lone wolves – those who do not want to work with others
• Social loafers – those who freeload off of others and do not contribute their fair share in the work
• Overly dominant leaders (e.g., the *hyeong* phenomenon – the leader says, “I’m *형*, and we’ll do whatever I say”)
• Personality conflicts among members
• Students not doing their required work or reading before class – especially if it is necessary for the group work in class.

1.1. Dealing with lone wolves

Some introverted and intelligent students may be lone wolves, who do not like groups because they end up having to do a disproportionate amount of the work. You can identify lone wolves by giving students a brief questionnaire like this (Byrnes & Byrnes, n.d.).
A. ______ I enjoy working in groups because my group members usually help me understand the material or tasks and therefore I can perform better.

B. ______ I question the value of group work for me, because I usually end up doing more than my fair share of the work.

C. ______ I have little or no experience working in groups.

D. ______ I have had different kinds of experience with group work besides the above options. [Please describe your experience here.]

After identifying your lone wolves (those who mark answer B), they can be placed into a separate group by themselves, where they can work more easily work productively together with those of similar academic level and working style.

1.2. Dealing with social loafers

Some students may not do their fair share of the work. Making class participation part of their overall grade might motivate them to work (say, 5-20% of their course grade, more often, 10%). You can also have each student privately fill out or write out brief evaluations of the group, indicating whether everyone did his/her fair share of the work and whether members participated equally.

Another suggestion involves incentivizing group leaders to get everyone involved (Weimer, n.d.). The group leaders can be given bonus points if their overall group score places in the top third of the class. The leader can also be allowed to assign bonus points to other members who perform well (or penalty points to the group loafers); this could also be done in conjunction with individual evaluations as mentioned above to see if the leaders are acting honestly and transparently.

1.3. Handling personality dynamics

Here are a few tips for the more common problems; for more, see below.

1. Nervous, shy, or poorly motivated students can be encouraged to participate more readily if they are placed across from / facing (i.e., in direct eye-contact) the group leader, or a sympathetic student, or an out-going, encouraging classmate.

2. A misbehaving, difficult, or overly impulsive student can be placed right next to the group leader, so the leader can keep him/her in check.

3. Usually it’s best to mix the students who are noticeably introverted and extroverted, so the extroverts can engage the introverts in discussion (if they don’t, make sure they include the introverts in the activity). A group with too many introverts won’t engage in much discussion, but the extroverts can be social and communicative facilitators.

1.4. Dealing with students not prepared or not reading the material

If students have not read the materials beforehand, you can give quizzes or pop quizzes at the beginning of class to motivate them to do so. You can also have them respond to the reading before class, via email or a short written assignment to be handed in at the beginning of class – e.g., asking them to answer a conceptual question about the reading, to summarize the main ideas, to explain what they had difficulty understanding, or discuss some aspect of the contents of the chapter. You can also use a technique called JTT, better known as a pre-class
quiz, which is not about previously learned material, but to have students think about an upcoming topic or assignment.

Just-in-time teaching (JTT) can be used by itself, or in conjunction with group activities, to make sure students have read the assigned readings or come prepared. JTT is an awkward name for an otherwise useful activity; this was originally developed as a way to get students to read their assigned readings before class. Before the class session, students are required to go online and answer questions related to assigned readings and concepts to be discussed in class. Students give their responses through courseware such as EKU, Moodle, or Whiteboard, say, one or two nights before class (hence the name “just in time”). The question could be a multiple choice question to a conceptual question, but to discourage copying answers, it is better to give a question that requires them to write several sentences in response.

The instructor sees their responses before class, and in class addresses problems or misconceptions they have. The instructor can then do a group activity in class related to the JTT exercise. This could be a group activity where they discuss the JTT question from the day before, or a follow-up question designed to further explore the concept being taught, or a more specific question to address their misunderstandings of the material.

1.5. Conflict management

Conflicts may be interpersonal, intrapersonal (inner conflicts, confusion about one’s goals, desires, etc.), between groups, or organizational in nature. Groups and individuals may attempt to manage conflicts according to these different conflict management styles. Again, if the leaders cannot resolve conflicts, you may have to intervene.

1. **Competitive:** Win-lose (zero-sum): one person has to lose for the other to win; uncooperative, assertive style, involving power, dominance, & submission. Okay for emergencies or for making one conform to ethical / moral principles; not good for when persuasion or a real consensus are needed.

2. **Compromise:** “Split the difference” for achieving the best possible solution; moderately cooperative & assertive; for negotiation & consensus making.

3. **Accommodation:** Giving up one’s goals to satisfy the relationship; cooperative & non-assertive; for when harmony or the good of the relationship are important, for less important issues, and when important ethical principles aren’t at stake; not good when your opinions or principles need to be heard.

4. **Avoidance:** Denying, postponing, withdrawing, side-stepping, mentally or physically, from a conflict; uncooperative & non-assertive; okay if you’re not right, or for non-important matters; indicates you no longer care or are involved.

5. **Collaboration:** Win-win strategy; everyone’s concerns & needs are considered; problem-solving environment; cooperative & assertive; good when people will commit time & energy to solve a problem; not good if two people cannot work together, or when the issue is trivial & not worthy of the time & effort.

1.6. Other detrimental factors

Attitudes or mindsets among group members such as these can adversely affect group interaction and effectiveness. These may require intervention from the teacher if the group cannot resolve them.

1. Stereotypes – e.g., toward other group members, toward the 2nd language or culture (i.e., English language or Western cultures).
2. “Time binding” - expecting a group (work group / social group) to stay the same over time; not being open to changes in group membership, dynamics, etc.

3. Ambiguity intolerance, or strong “need for closure” cognitive style. E.g., members want to hurry up to reach a conclusion, and do not want to consider further information, especially if they feel uncomfortable with uncertainty or ambiguity.

4. Selectivity toward new information (cognitive / schematic fixedness) – not being open minded to information that does not seem to fit with their preconceptions or decisions.

5. Authoritarian or manipulative style of leaders

6. Unwillingness to try new things, be creative, etc.

7. Mechanistic vs. open interaction style – Groups do things mechanically, without attempting original thought or creativity.

8. Differences in communication and interaction styles. This could be due to individual personality differences, or cultural differences among students.

9. Differences in backgrounds and perspectives of group members

10. Nonverbal communication signals that convey negative attitudes, or that contradict more positive verbal communication. Nonverbal signals can reinforce, substitute for, accentuate, contradict, or regulate verbal communication (e.g., eye gaze, gestures & facial expressions can signal conversational turn-taking, and giving up the floor or ending a conversational turn; or they can convey doubt or suspicion, especially if they are inconsistent with verbal communication).

11. Formation of separate social clusters within the group

12. Groupthink: excessive like-mindedness, “hive-mindedness” or over-connectedness among members, causing members to overlook problems, other ideas, outside information, etc.; group members do not want to challenge the leaders, challenge prevailing ideas, or present alternatives, when they should, and they simply accept what the leader or others believe
1. General considerations for questions and problems for group tasks

The kinds of questions or tasks given to a group should not seek simple skills like memorization or knowledge recall. They should engage higher cognitive skills, and the most basic one might be comprehension – making sure they have understood what you have tried to teach them. But tasks should go beyond this to even higher skills. Comprehension is important, but it is even more important that students be able to do something with their comprehension, such as somehow applying, analyzing, synthesizing, critiquing, and evaluating in ways that reflect what they will do in their future studies, their careers, or their lives. Remember to focus more on some of these types of learning goals:

- Comprehension
- Application of concepts or skills
- Analyzing concepts
- Synthesizing concepts and information
- Critiquing or evaluating

When it comes to more complex tasks that go beyond just a few minutes of small group discussion in class, there are ways to make things more interesting. The tasks or questions can be made easier or more challenging in terms of the authenticity of the problem, and the amount of information that you provide. The more the task is similar to (or based directly on) a real-world issue or problem (authenticity), the more complex or challenging it will be. But for lower level classes, a more simplified or artificial kind of task can be given. Also, you can choose to give them all the information and only the information that they need to solve it. More challenging tasks may require that they draw on and synthesis various things that they have learned in the course. Even more challenging tasks may require them to find information on their own outside of class. Some tasks can be made more challenging by creating context-rich questions – questions or problems are given with extraneous data; students must decide which data are useful and which data are to be excluded; students may also have to do their own research or finding extra information.

- context-rich questions – questions or problems are given with extraneous data; students must decide which data are useful and which data are to be excluded; students may also have to do their own research or finding extra information.

It is important to ask meaningful, well-constructed questions that will provoke discussion. Some question types are cognitively simpler, and others are more challenging and
complex. A traditional kind of question is the so-called knowledge display question: the instructor asks students to repeat or restate information that has already been explained or learned; the student simply displays what s/he has memorized, such as a factual question (who discovered background cosmic radiation?), or repeating basic concepts (how did Einstein explain the relationship between energy and mass at near-light speeds?). This kind of question requires little original thinking (unless perhaps you are probing a complex or difficult concept), so in modern teaching, we prefer to avoid display questions.

For group activities, the following will be more useful for promoting discussion and getting students to think – to meaningfully engage and interact with the material, and thus, learn meaningfully. Also, open-ended questions – those with multiple valid answers will often be more effective in helping students explore key concepts in class (however, in some subjects, close-ended questions are necessary, e.g., a correct diagnosis of a patient’s condition in medical problem based learning). See also the handout entitled, “Using questions and leading discussion”.

1. Application questions that help students apply concepts, principles or generalizations in different contexts – e.g., “How could we apply this model to the Korean educational system?”

2. Analytical questions that encourage students to pull apart different elements of the material they have been learning about to draw comparisons and contrasts, identify causes and effects; reason through explanations or arguments; etc. – e.g., “What are the key differences between Model A and Model B?” “Explain the different parts of this theory and how they fit together”

3. Synthesis questions that require students to integrate the elements of the material in new and different ways – e.g., “How could you combine elements of these two models and implement them in company X” or “Explain the differences and similarities between Model 1 and Model 2.” “Compare the use of metaphor between these two authors.”

4. Evaluation questions that require students to make informed judgments, using some combination of knowledge, comprehension, application, analysis and/or synthesis – e.g., “Which method of teaching is more effective in your opinion and why?” “Which of the interactive methods for engaging students during lecture sessions do you think might work best together in a lecture on art appreciation?”

5. Problem-solving questions that challenge students to use their creativity, as well as the knowledge they have gained – e.g., “How would you go about designing a new course in your subject area that involves all of the levels of cognitive functioning in Bloom’s taxonomy?” “What is the best way to design a skyscraper in Turkey to withstand a possible 8+ magnitude earthquake?”

You can refer to another pedagogical handout on question types, which gives more details and examples of questions, for lecture-discussion, exams, or group activities.

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3 This classification is based on the famous Bloom taxonomy of questions or educational tasks in educational psychology.
Assessing and grading group work

Assessment refers to evaluating students’ performance, including grading their work. Assessing group work can be more complicated, and several factors have to be considered that differ from grading individual assignments. However, grading group assignments can take less time than many individual assignments, especially for a large class (e.g., in a class of 70, grading 14 assignments can be easier than grading 70 assignments). For assessment, the following need to be considered.

1. Lesson and assessment objectives
2. Whole-group versus individual scoring
3. Participation
4. Grading criteria and rubrics

A rubric is a grading scheme with grading criteria, which are especially useful for more complex, difficult, or open-ended assignments.

1. **Lesson and assessment objectives**

When it comes to grading group projects or assessing students’ group work and participation, one should have clear pedagogical goals in mind. Assessments and assessment criteria should emphasize conceptual knowledge and application of knowledge, not simply recalling facts and details. In the famous Bloom taxonomy of types of contents and learning, assessment should emphasize more than knowledge recall. Knowledge recall has some role in learning, but comprehension of concepts is more important. It is even more important that students be able to do something with their comprehension, such as somehow applying, analyzing, synthesizing, critiquing, and evaluating in ways that reflect what they will do in their future studies, their careers, or their lives. Remember to focus more on some of these types learning goals. That is, comprehension would be the starting point in assessment; the goals of tasks and grading should then go beyond comprehension to application, analysis (e.g., understanding why and how things work), synthesizing different kinds of information, and students’ ability to evaluate and critique.

1. Comprehension
2. Application of concepts or skills
3. Analyzing concepts
4. Synthesizing concepts and information (putting different concepts and/or details together in new ways, e.g., as in developing creative new ideas, insights, or applications)
5. Critiquing or evaluating (e.g., comparing and critiquing different theories, models, or procedures in the field)
When giving the assignment, make your objectives clear to students, and make it clear how they will be graded. For your own sake, spell out your specific objective in creating the assignment – what do you want them to learn, or what do you want them to be able to do? Consider what or how they should be able to apply concepts, or the skills they should demonstrate, or the kind of analysis, synthesis, creativity, critiquing, or evaluation that they should be able to accomplish. It may help to communicate your objective(s) to the students in giving the assignment, as well as your grading criteria. For criteria, a rubric may be helpful, even if it is only a simple set of a few criteria.

2. Whole-group versus individual scoring

One question is whether to give all members in a group the same grade for their project (or paper, presentation, or other task), which makes for the easiest grading; or to give individual scores based on the amount of each person’s participation or contribution. The latter seems fair if participation is not equal among the group members, but much more difficult for the teacher to do. If you think it better or fairer to do individualized scoring, you have a couple of options.

- Collect feedback from group members or leaders about the type and quality of participation among the members (see below).
- Give all members a single score, based on their performance or the quality of their project. For certain individuals, you may deduct points for poor participation.
- Determine a whole-group score based on your evaluation of the project, and then give bonuses or demerits based on the quality of their participation.
- Give one score for all group members, based on their performance or the quality of their project. Assign a separate grade for participation and individual contributions, based on feedback collected and/or members’ behavior that you have observed.

3. Participation

You may want to encourage students to participate equally and fairly in their group tasks. There are several ways to do this, such as one or a combination of the following.

- As students do their group work, take note of who participates well and who does not (however, this will be too difficult for larger classes, unless you have teaching assistants to help you do this).
- Have group leaders evaluate the participation of all the group members and fill out a brief report for you.
- Have group members evaluate each others’ participation and turn in a brief form. Such a form would ask each person to rate his/her own participation in the group, say, on a scale of 1-5; then it would ask him/her to identify any members who participated unequally (too little or too much) or did not do a fair share of the work. Or have him/her rate his/her fellow students’ participation on a scale of 1-5. It would be easiest to do all this through an online form, such as a form in Google Documents, which can be emailed to all the students (using the form utility in the Google spreadsheet).
- As above, but have each group write a one-paragraph evaluation, in which the group members as a whole collaborate on a write-up, explaining their work process and who contributed what to the task.
• As above, but have each group member write a self-evaluation and group evaluation, in which they describe their group and individual working processes, what s/he contributed, how s/he participated, how well others participated and how they contributed, and whether s/he or others unfairly contributed too much or too little.

• Give other kinds of bonuses or demerits to group members that you see participating well or poorly (or about whom you learn from the aforementioned feedback methods on group participation). Or you can give some kind of warning to students who do not participation well. For those who consistently do not participate well, you can lower their score on the group project (e.g., give everyone in the group a grade of 92 for their work, but deduct points for an individual who did not participate well.

• Use a grading rubric that includes criteria for fair and equal participation of group members. You can design a grading rubric so that participation constitutes a certain percentage of the overall grade (or a separate grade), e.g., 10-20% of the project grade.

• Assign participation grades to everyone, as a separate grade component in the course. This is commonly done in language learning classes, where 5-15% of a student’s final grade is a participation grade, based on how well s/he participated in class activities.

4. Grading criteria and rubrics

The grading criteria should be fair and transparent, and helpful feedback should be provided on their performance. Rubrics, even very simple ones, can be helpful ways of providing fairly detailed feedback, without spending too much time grading. A rubric is basically a set of criteria for assessing performance on an assignment, and usually the grader assigns points for performance on each criterion, and then calculates a grade by summing the points for each item. These are basic characteristics of well designed rubrics:

1. Measure a stated objective – make your criteria clear and specific
2. Sufficient explanations for each scale dimension
3. Performance is arranged in levels and given a degree or rank for who well the student has met that standard

You can have a rubric with the criteria for an A/A+ performance in each category, and grade each item on a scale of 1-5 or 1-10, the sum all the points and convert them to a 100-point scale. For example, here is part of a sample rubric for group presentations. You can underline or highlight the criteria on which they did notably well or poorly, write in other comments, score each category, then add up all the other categories.
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Comments</th>
<th>Score</th>
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<tbody>
<tr>
<td><strong>Organization</strong></td>
<td>The presentation is organized to create a logical argument and so that topics that need to be discussed together are presented together.</td>
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<tr>
<td><strong>Context</strong></td>
<td>The presenter discusses the main historical issues raised by the film and how other film scholars and historians have dealt with these issues, both with regard to this film and in general. The presenter explains where s/he stands on these issues, which theories s/he finds most useful, and why.</td>
<td></td>
</tr>
<tr>
<td><strong>Evidence, support</strong></td>
<td>The presenter includes sufficient, detailed examples from the film and other sources to support her/his analyses.</td>
<td></td>
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<tr>
<td><strong>Analysis</strong></td>
<td>The presenter uses her/his evidence to support a consistent, coherent analysis of how the film does or does not contribute to our understanding of the time period.</td>
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</tbody>
</table>

You can also have criteria for different levels of performance, like this.

<table>
<thead>
<tr>
<th></th>
<th>Poor – 1</th>
<th>Satisfactory – 2</th>
<th>Good – 3</th>
<th>Excellent – 4</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contents</strong></td>
<td>Student does not have grasp of material; information included does not support thesis in any way; near absence of supporting materials</td>
<td>There is a great deal of information that is not clearly connected to the subject of the presentation; very little use of supporting materials</td>
<td>Sufficient information that relates to subject of presentation; many good points made, but there is an uneven balance; a variety of supporting materials</td>
<td>An abundance of material clearly related to subject of presentation; points are clearly made and all evidence supports subject; a variety of supporting materials</td>
<td></td>
</tr>
</tbody>
</table>

To be effective, they should be:

1. Content focused – defining what the content is and stressing which content has more and less importance.
2. Clear and transparent, so that students can easily understand what is expected of them.
3. Practical – enabling students to self-assess and build an understanding of areas of comprehension and areas in need of improvement
4. Fair – helping teachers consistently apply valid and reliable assessment, avoiding the pitfalls of possible biases, particularly those associated with gender, race, culture, and ability.

You can have both content-focused criteria regarding the quality of the group’s final product (e.g., a paper, presentation, or other project), and also, if you like, specific criteria for how well members participate and contribute to the group. For example, if you have ten criteria, each criterion would be worth 10% of the grade. If eight of those criteria are content-based and two refer to group participation, then the quality of the final product constitutes 80% of the grade, and 20% is based on participation. Also, e.g., you could have 70% content-based, 20% participation-based, and 10% for the quality of the English used in their presentation or paper.
The following is a sample rubric for group participation and contributions (from Shadle, 2010). For more on rubrics and assessment, see the other handout on assessment.

<table>
<thead>
<tr>
<th>grade</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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</thead>
<tbody>
<tr>
<td></td>
<td><strong>Attendance</strong></td>
<td><strong>Discussion skills and active listening</strong></td>
<td><strong>Contribution and participation</strong></td>
<td><strong>On-task behavior &amp; time management</strong></td>
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<td></td>
<td>Attendance is marked by habitual absence.</td>
<td>Inconsiderate of others’ ideas.</td>
<td>Rarely provides useful ideas/questions to the group.</td>
<td>Consistently distracts group work with off-task behavior.</td>
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<td>More than two class sessions are missed during the semester.</td>
<td>Pay attention to the group discussion.</td>
<td>Sometimes provides useful ideas/questions when participating in the group and in classroom discussion.</td>
<td>Exhibits on-task behavior some on the time, but is often found to be off-task.</td>
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<td></td>
<td>Only one or two class sessions are missed during the semester.</td>
<td>Body and/or verbal responses indicate active listening.</td>
<td>Usually provides useful ideas/questions when participating in the group and in classroom discussion.</td>
<td>Exhibits on-task behavior most of the time.</td>
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<td></td>
<td>Student attends all class sessions</td>
<td>Shows respect for and actively encourage the views of others.</td>
<td>Routinely provides useful ideas/questions when participating in the group and in classroom discussion.</td>
<td>Is always on-task and focused on the group working to complete the day’s work.</td>
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<td>Consistently attends all class sessions.</td>
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**On-task behavior & time management**

|       | Consistently distracts group work with off-task behavior.         | Exhibits on-task behavior some on the time, but is often found to be off-task. | Exhibits on-task behavior most of the time.                        | Is always on-task and focused on the group working to complete the day’s work. |

**Group effectiveness**

|       | Discourages progress or is dismissive of how well the group is working | Participates marginally in group evaluation. | Participates in group evaluation. | Encourages group members to evaluate how well they are working together. |

**Roles within the group**

|       | Does not engage in the performance of appropriate roles             | When assigned a role, performs only the minimal tasks associated with that role. Tries, but needs improvement in all roles | Performs some roles very well and needs improvement in others.      | Effectively and enthusiastically performs multiple roles within the group. |

28
Common types of group activities

1. Overview

Here are some activities for pairs or small to medium groups (2-5 persons, generally).

**Buzz groups.** Groups of 3-6 students are given a task to complete in a short time period (e.g., 5-10 minutes). A buzz group (so named for the buzzing sound of students talking) usually discusses an assigned topic or is given a problem to solve. Afterward, the groups often present their results to the whole class. For such a short activity, the task, question, and/or instructions need to be specific and clearly defined.

**Peer instruction.** Students are given a question, often a conceptual question with multiple choice answers (sometimes called a ConcepTest, or conceptual test). The students first think about the question individually and chose an answer. Then they get into groups, and each student has to convince the others that his/her choice is the best – the students in effect “teach” each other – until the group comes to a consensus on the correct answer. Then various groups share their ideas with the whole class in a whole-class discussion.

**Think-pair-share.** The teacher gives students a question or problem to think about, often an open-ended question. Each student first thinks about the question silently and individually for a moment or a few moments. Then students get into pairs, triads (groups of three), or small groups, to compare their ideas or notes to find the best answer. Then the teacher may call on some groups to share their findings. Teachers may randomly assign students or have students change groups each time. Instructions to students might look like this:

1. Think about your answer individually for 2 minutes.
2. Pair with a partner and discuss your answers. [Or: Pair with a partner to discuss your answers, and decide on the best one.]
3. Share your answer or your partner's answer if the instructor calls on you.

**Pair reading**. Students are given a reading selection or are asked to read an excerpt of their readings (e.g., a handout, an article, a textbook excerpt). They get together in pairs and read the selection silently, and then explain it to each other. Student A summarizes and explains the first paragraph, and student B asks any questions that s/he might have; then student B summarizes A’s explanation. The student B summarizes and explains the second paragraph, and so on.

**Case study.** Students are given detailed information about a case example involving specific individuals or entities, such as a business case study, a legal case study, or a case study in

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4 From Panitz (2010).
education, child development, history, philosophy, ethics, political science, medicine, or other areas. Students attempt to organize information, and then describe or explain the situation, e.g., finding causes and effects, finding underlying principles, generating hypotheses, or suggesting a diagnosis. For some case studies, students may be required to find extra information on their own outside of class. The following variations are possible.

- **Illustrative case studies.** One or two case examples are presented to simply show students what an unfamiliar type of situation is like, e.g., to illustrate the symptoms and indications of an otherwise unfamiliar medical condition.

- **Exploratory or pilot case studies.** These are designed to identify questions or factors to prepare for a larger scale study or investigation.

- **Cumulative case studies.** From several or multiple cases, students can better make generalizations.

- **Critical instance case studies.** One or more unique situations are presented in order to challenge an existing theory or universal assertion, or simply to examine a unique situation, its unique causes and effects, without necessarily any interest in generalizability.

Case studies may be particularly useful in medicine, social sciences, education, and in areas where qualitative research is used.\(^5\)

**Concept map task.** In groups, students create concept maps, in order to better understand or analyze concepts. For example, they might draw a graphical representation of the components of a theory or model, features and properties of an item, or causal factors of an event. Or students might create flow charts, Venn diagrams, or other diagrams.\(^6\) A variation of the concept map is the argument map (see next section), in which students create a graphical representation of arguments for and/or against an assertion or a conclusion.

![Concept map for seasons](http://cmap.ihmc.us/Publications/ResearchPapers/TheoryCmaps/TheoryUnderlyingConceptMaps.htm)

5 A case study may often not be generalizable to general theories or principles, depending on the field of study and type of case study, so generalizability may be an issue that needs to be addressed for beginning students in a field.

6 If a graphic file is desired, concept maps can be created in free, open source programs like Dia or Freemind; better quality, commercially available programs like SmartDraw can produce a wide variety of more professional quality diagrams and concept maps.

Other methods of graphical brainstorming: A simple flow chart and a Venn diagram.

**Group quizzes.** Students are allowed to collaborate together in groups on a quiz, with one quiz and one quiz grade per group. The question(s) could be more complex or open-ended than in a regular exam, so students will engage in more critical thinking and teamwork skills. Group quizzes can be effective ways of getting otherwise reluctant students to engage in group activities. It may be necessary to enforce a set time to discuss the questions in groups before filling out or writing anything. Scoring can often be easier than for individual quizzes. Quiz questions should engage critical thinking and conceptual understanding of the material, not memorization of facts.

2. Other types and variations

**Think-write-pair-share.** A variation on think-pair-share, in which students first write down their thoughts on the question or task before sharing with others. This ensures that all students come up with ideas and participate.

**Timed-pair-share.** A variation on think-pair-share. In their sharing groups or pairs, each student has a certain amount of time to talk; e.g., after 2 minutes, call time and ask another person to share in each group.

8 From [http://ecrp.uiuc.edu/v8n2/ birbili.html](http://ecrp.uiuc.edu/v8n2/ birbili.html).

Outlines. Similar to the concept map task, students in groups develop an outline for conceptual relationships for material being learned, or as a planning activity, e.g., for a group writing assignment.

Argument map. Like the concept map activity, students create graphical representations of reasons for/against a conclusion or assertion. For some, this may be more clear than a classical syllogism. Notice that in the argument map below, the two arguments are joined by a common line to the conclusion, showing that both premises are necessary together for the conclusion (if there were a single line from each premise to the conclusion, this would mean that either premise by itself could warrant the conclusion).

![Classical Syllogism and Argument Map](image)

There are different ways of drawing argument maps, including counter-arguments with ‘but’ or ‘however’; for example.10

Circle of learning. A small to medium group (six or less students) take on roles in a learning task, such as a group dialogue activity.

Group investigation method: Students take on different tasks and discuss their issue in a group; somewhat similar to a jigsaw activity (to be discussed later). The results of each group’s work may be presented to the class.

Group exam. In groups, students do an open-ended essay exam question, with each person in the group taking a role to write about one aspect of the issue. Their writings are then combined into one essay answer. For example, in an education class, based on what they have learned in the course, students might be asked to make recommendations for a specific school system regarding a particular issue (e.g., should grade schools in City X adopt an English immersion program?).

Learning cell: dyads of students create and ask each other questions to discuss or debate.

Student teams: small groups of students tutor each other, and maybe participate in a quiz competition (say, in the style of a game show or a trivia game).

Problem solving activity. In groups, students work on a conceptual problem involving application of their knowledge and understanding, application of concepts that they have learned, as well as analysis, synthesis, and/or critiquing or evaluating something. This could be an open-ended problem (with multiple possible solutions), or close-ended (one correct answer). The task is usually based on or similar to real-world problems, or somehow realistic, and thus, potentially applicable to situations that the students may encounter in practicing their academic disciplines (e.g., in their future careers). As a result, it is more practical, interesting, and motivating for students.

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Task-based learning (TBL) or task-based learning and teaching (TBLT). This was developed in the field of language teaching, and is similar to other group activities in other areas. Students create and perform role plays, or act out situations or tasks where they have to practice the language forms that they have learned (e.g., ordering in a restaurant, asking for directions, buying things, etc.). This involves real social interaction, and is one type of communicative language teaching (CLT), which emphasizes realistic use and practice of the language instead of mere textbook learning and memorization.

Facilitated peer group: Students divide into groups, and the teacher participates in the groups as a facilitator and as a peer or group member. The group may discuss assigned readings, do a peer review of student writing, or do a group investigation. The results of each group’s work may be presented to the class.

Debate. Within a small group, or between two small groups, students debate an issue. Students might first brainstorm debating points. Students could chose the sides, or could be assigned positions to debate. Moot court. In law classes, students argue mock law cases, and argue for views or conclusions that may not be their own views, for the sake of practice.

Dictogloss. This is a technique that developed in the field of language teaching as an alternative to dictation exercises. Instead of writing down verbatim what a teacher says (which usually has little educational value in a language class), students take notes on a text that the teacher reads. Students then form groups, and in groups they reconstruct what the teacher said, producing a written or oral paraphrase of the text. This focuses on the contents or ideas of the text, and using language forms freely.

**Dictogloss instructions**

1. Find an interesting text.
2. Pre-teach new vocabulary.
3. Divide students into group.
4. Dictation: Read the text once, slowly, then again at a more normal speaking rate. Students take notes as you read.
5. Reconstruction: Students work in pairs or groups (or individually), compare notes, and create their own version of the text.
6. Editing: Students then check and revise their text for accuracy, spelling, punctuation, grammar, and word choice.
7. Comparison: Different groups (or different individuals, if done individually) compare their texts, and/or compare their texts with the original, and discuss their differences. [optional]

Drama / skit. Students dramatize a hypothetical situation or an historical event, or create their own short skit or play to illustrate a concept. Role play. Students dramatize a realistic or hypothetical event. For example, to help understand sexism, a role reversal could be used, where females role-play as men, and males role-play as females who come at the receiving end of sexist remarks or behavior.

Peer editing or peer review. Students evaluate drafts of their writing assignments. Students bring drafts of a writing assignment, and in pairs or small groups, students exchange papers and offer each other feedback, critique, and suggestions on each others’ papers.
**Formulate-share-listen-create.** A variation on think-pair-share. Students compare their answers, and together they are to create a new answer that incorporates the best aspects of their various ideas. This is useful for more complex problems.

**Values clarification exercise.** In groups, students introspect and discuss their ethical beliefs and values. They may objectively and neutrally the differences in beliefs among group members. This could be beliefs regarding a social issue, their beliefs about what things are most important in their lives, how and why they would handle a moral dilemma, the sources of their values (e.g., parents, friends, religion), or such. An online search can provide various ideas for types of prompts and questions.

3. **More complex group activities**

These are activities that are used for more conceptually complex or abstract problems, and thus are often used with smaller groups of at least 4-5 persons, or larger groups of 6 or more students.

3.1. **Problem-based learning**

Problem-based learning (PBL) begins with a problem prepared by the instructor that generally cannot be easily solved without data collection and mastery of subordinate skills. Students search for resources, and/or faculty guide students to information and resources. Instructors help students learn to frame the right questions, formulate problems in clear and organized language explore alternatives, and make effective decisions. The theory is that by solving problems students learn to generate procedures that they can use again should they encounter another, similar situation. Some of the characteristics that make PBL ideal for active learning include the following:

- Students experience learning in a collaborative and supportive environment.
- Instructors enhance student motivation by providing real life problems.
- Students seek useful and relevant knowledge to apply toward job skills and employment.
- Students identify, analyze, and resolve problems using knowledge from previous experiences and courses, rather than simply recalling it.
- Students are self-directed in their learning.

The activity: Plan and develop a solution

- Students confront a given problem in groups, organize prior knowledge, and attempt to identify the nature of the problem.
- Next, they pose questions about what they do not understand and then design a plan to solve the problem and identify the resources they need.
- Students must gather prior knowledge as well as information that they may not have understood in the past as they work to solve the problem.
- Solutions may be demonstrated to the class.

These can be made easier or more challenging, depending on the type and amount of information given (e.g., a mixture of relevant and extraneous information), and type of desired outcome (e.g., the best solution is a less common or unusual one).
PBL developed out of Canadian medical schools to address students’ needs for more in-depth learning and retention of concepts. PBL activities generally involve a patient case study or analysis of data from a current patient. In such cases, there is one correct answer, e.g., the correct diagnosis, indications, prognosis, or course of treatment. Thus, PBL is not usually open-ended, unlike most other group activities.

Medical students are given information about a 65 year old patient who experiences involuntary leg movements, especially when sleeping, as well as itching and twitching in the legs and arms in the evening and nighttime. Sometimes the symptoms can be mitigated by moving around or spending time in hot sauna baths. Students are also given results of lab tests on blood and other fluids; among other things, they indicate an iron deficiency. Students work in groups and search for information on their own to find the most likely diagnosis. In this case, the correct diagnosis is restless legs syndrome. As a follow-up activity, students could be asked to chose the best course of treatment.

3.2. Jigsaw

A larger group (say, 6+ students) takes on a complex, open-ended task, in which team members take on different roles, subdividing the labor. Each focuses on a different aspect, collects further information and ideas, and then they come together to work out their solution.

In an advanced Korean language class for Korean-Americans, students in groups learn how to hunt for a rental apartment in Seoul. They collect information on the Internet, talk to various people, and try to identify potentially good places to live. They contact and converse with realtors, or they role-play consultation sessions with realtors. Each person in each group has specific tasks and types of information to collect, e.g., each one investigates a particular region of Seoul.

In an alternate and more complex version of the jigsaw, group members can mix. For example, for teams A, B, C, and D, 1-2 members of each team focus on research issue or aspect X, another 1-2 members work on aspect Y, another 1-2 work on Z, and so on. At some point, the X members across teams A-D meet together to discuss their findings, as do the Y members and Z members. Then the rejoin their original teams A-D to work on the groups’ solutions.

In an introductory course on educational policy, students are asked to evaluate and make recommendations for improving high school education in a school system in a nearby city. Students are divided in three different teams (teams 1, 2 and 3) consisting of 6-7 persons each. Each team has the following role assignments: two persons (As) to investigate curricula, one person to look into teachers’ working conditions (B), one person to look at the school administration (C), 1-2 persons to look at academic performance and assessments (D’s), and one person to look at students’ perceptions (E). They meet as teams several times as they gather information and do research, coming back to discuss their findings as a team. However, sometimes those with the same roles also meet to discuss their findings and ideas (all the A’s meet together, all the B’s meet together, etc.). Then they meet again in their original teams to create final reports of their findings and recommendations.
3.3. Project assignments

Students work over a longer term to create a project, e.g., a detailed report, essay, product design, engineering design, investigative research project, creating a computer program, etc. This is similar to teams assignments described above. This can even be a major project over many weeks or a whole semester.

In a course on social justice research by Prof. David Batstone at the University of San Francisco, students collect evidence on possible sites of human trafficking and slavery – forced labor and forced prostitution – in the San Francisco area. They conduct surveillance of suspicious locations, and collect evidence that can be used by law enforcement. Their findings have been used by the police and FBI to arrest traffickers.

Students in one professor’s classes at the University of Chicago Law School investigated inmates sentenced to death, finding evidence that they were innocent and wrongly convicted. A number of those awaiting the death penalty were found to be innocent, and released. Eventually, the governor of Illinois commuted all death sentences in the state to life in prison, as these cases showed the Illinois death penalty system to be fundamentally flawed.

3.4. Panel discussions

Students form panels to discuss a certain topic – assigned topics or topics of interest to them. In jigsaw style, the team members discuss how to divide the labor and how they want to address the issues. Each person looks for information and develops ideas for a particular aspect of the issue. Then each team leads the whole class in a panel discussion.

3.5. Debates

Debates could be done in smaller groups, or the whole class can be involved.

For example, for a debate on a current political issue, students chose sides, divide into two large teams (or maybe three, if three different opinions are possible). Within each large team, students look for information, develop arguments, and rehearse them. Then the two large teams come together, with the students on the two teams facing each other in a large circle, to engage in a whole-class debate moderated by the instructor.

3.6. Discovery learning

Students are given data or information, and are asked (perhaps with guidance from the instructor) to find a principle or concept on their own. The instructor does not tell them directly, but allows the students to discover it inductively. In math and physics, these are sometimes called invention activities, as they have to “invent” the concept themselves (however, this term overlaps with another kind of invention activity – see below).
Students are given data about the performance reliability of several similar machines. They are to determine which machine performs more reliably (not just accurately), and have to develop some way to measure and compare reliability. They know about averages, which indicate accuracy, but that is not the same as reliability. This leads them to infer and discover the mathematical principle of standard deviation or variance, which is a measure of reliability.

3.7. Challenge based learning, inquiry based learning

Similar to problem solving activities or PBL, with but with an open-ended problem or task, perhaps with more self-discovery and less guidance from the teacher. This is similar to or the same as discovery learning.

3.8. Invention activities

Some in math and science education speak of invention activities in which students must “invent” or discover for themselves a mathematical or scientific principle – i.e., discovery activities. Recently in biology education, another kind of invention activity has emerged, in which students must invent something that does not seem directly related to the concept to be taught, but is a clever analogy for the target concept that the instructor will later introduce.

Students are told to work on the following problem in groups. They are asked to design zoo cage exhibits that will hold and display squirrels and mice. One cage, called exhibit A, consists of two compartments with a partition that allows the mice to pass freely between the two rooms, but not the squirrels. Exhibit B allows the squirrels to pass back and forth, but not the mice. In groups, students must come up with several clever ways of creating cages to satisfy these criteria. After comparing the various groups’ findings, the instructor then introduces the concepts of ion channels and/or selective cell membrane permeability, which allow certain chemicals to pass through cell membranes, but not others. The zoo cages are analogies for the various means that ion channels do what they do, and the professor makes use of the connections between the lecture explanation and the analogy activity to explain the cell biology concepts.

3.9. Team based learning

Students work in teams on a task or project; this overlaps with several types of group activities discussed above.

3.10. “Olympics”

Students form groups of, say, four person each. The professor gives all groups a set of problems, and there should be more problems than the number of person per group, so that group members cannot simply divide the problems among themselves. They must all work on each problem together. This is a competition to see who can solve as as many problems as soon as possible. After a time limit, the professor can compare some of the solutions to the problems, and award points or bonuses to the best or better groups. The main point is for students to collaborate on each problem.

11 From Panitz (2010).
References and further reading

1. Educational research


2. Other pedagogical materials