Toward Successful Cooperative Learning
Enhancing small-group work

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Center for Faculty Innovation
Why and why not?
Learning is…

**AREA OF INQUIRY**
- Retrieval
- Application
- Factual knowledge
- Context

**CHANGE**
- Knowledge
- Abilities
- Attitudes
- Feedback

**METACOGNITION**
- Progress
- Practice
GOOD

Retrieval practice
Interleaving
Spacing
Elaboration

BAD

Passive observation
Rereading texts
Intuitive judgments
Massed practice
Learning styles

Deliberative effort
Pre-learning
Growth mindset
Metacognition
The good, the bad, and the ugly...
Successful cooperative learning

- Positive interdependence
- Accountability
- Face-to-face interactions
- Team-work skills
- Group processing and reflection
Building interdependence

- Are multiple perspectives necessary?
- Does it support learning outcomes?
- Is divide-and-conquer impossible?
- Do they have necessary skills and resources?
Group formation

Selection
- Self
- Random
- Assigned

Skills
- Diverse/heterogeneous
- Similar/homogeneous

Representation
- Distributed
- Grouped
Stages of Group Dynamics

- expectations
- goals
- trust

Forming
Stages of Group Dynamics

- Forming
  - expectations
  - goals
  - trust

- Storming
  - power/control
  - communication
  - reacting

Successful Group Learning
Fall 2018 • Dr. Michael S. Kirkpatrick
Stages of Group Dynamics

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  - roles
  - problem-solving
  - consensus

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  - roles
  - problem-solving
  - consensus

- **Performing**
  - identity
  - satisfaction
  - care

**Terms:**
- roles
- problem-solving
- consensus
- identity
- satisfaction
- care
Establishing norms

TEAM EXPECTATIONS AGREEMENT†

On a single sheet of paper, put your names and list the rules and expectations you agree as a team to adopt. You can deal with any or all aspects of the responsibilities outlined above—preparation for and attendance at group meetings, making sure everyone understands all the solutions, communicating frankly but with respect when conflicts arise, etc. Each team member should sign the sheet, indicating acceptance of these expectations and intention to fulfill them. Turn one copy into the professor, and keep a remaining copy or copies for yourselves.

Establishing norms

**TEAM EXPECTATIONS AGREEMENT**†

On a single sheet of paper, put your names and list the rules and expectations you agree as a team to adopt. You can deal with any or all aspects of the responsibilities outlined above—preparation for and attendance at group meetings, making sure everyone understands all the solutions, communicating frankly but with respect when conflicts arise, etc. Each team member should sign the sheet, indicating acceptance of these expectations and intention to fulfill them. Turn one copy into the professor, and keep a remaining copy or copies for yourselves.

![Table of Group Norm Headings](image)

<table>
<thead>
<tr>
<th>Individual to Individual Behavior</th>
<th>Individual to Group Behavior</th>
<th>Group to Individual Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Examples</strong></td>
<td><strong>Examples</strong></td>
<td><strong>Examples</strong></td>
</tr>
<tr>
<td>No put downs</td>
<td>Be on time to meetings</td>
<td>No scapegoats</td>
</tr>
<tr>
<td>Give praise</td>
<td>Be prepared</td>
<td>Bring everyone into the Group</td>
</tr>
</tbody>
</table>

Team-player Styles

 Contributor

 Focus on the immediate task
Team-player Styles

**Contributor**
Focus on the immediate task

**Collaborator**
Emphasize the overall purpose of team
Team-player Styles

**Contributor**
- Focus on the immediate task

**Collaborator**
- Emphasize the overall purpose of team

**Communicator**
- Positive interpersonal relations, processes
Team-player Styles

Contributor
Focus on the immediate task

Collaborator
Emphasize the overall purpose of team

Communicator
Positive interpersonal relations, processes

Challenger
Ask tough questions and pushes for risks
## Group formation

### The Parker Team Player Survey

1. During team meetings, I usually
   - a. provide the team with technical data or information.
   - b. keep the team focused on our mission or goals.
   - c. make sure everyone is involved in the discussion.
   - d. raise questions about our goals or methods.

2. In relating to the team leader, I
   - a. suggest that our work be goal directed.
   - b. try to help him or her build a positive team climate.
   - c. am willing to disagree with him or her when necessary.
   - d. offer advice based on my area of expertise.

3. Under stress, I sometimes
   - a. overuse humor and other tension-reducing devices.

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Interpersonal skills

- Active listening
- Conflict resolution
- Constructive criticism
- Consensus vs. compromise
- Label behaviors, not people
- Testing for mastery
Stages of Skill Development

Awareness of need
Stages of Skill Development

- Comprehension of what skill is
- Awareness of need
Stages of Skill Development

- Awareness of need
- Comprehension of what skill is
- Awkward feelings applying skill
Stages of Skill Development

- Mechanical use of skill
- Awkward feelings applying skill
- Comprehension of what skill is
- Awareness of need
Stages of Skill Development

1. Awareness of need
2. Comprehension of what skill is
3. Awkward feelings applying skill
4. Mechanical use of skill
5. Automatic use of skill
Common roles

- Leader/manager/organizer
- Recorder
- Materials manager/technician
- Skeptic/questioner

- Reflector
- Time keeper
- Reader
- Reporter
- Checker
Peer Evaluations

Who... specific evaluators

What... quantitative vs. qualitative

When... early or late?

Why... judge or improve?

How... impact on grades
# Early Group Evaluation

## Evaluation of Progress Toward Effective Team Functioning†

Your Team Name:________________________________________

<table>
<thead>
<tr>
<th>Symptoms of Internal Meeting Problems</th>
<th>Usually</th>
<th>Sometimes</th>
<th>Hardly Ever</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team meetings generally begin 5-15 minutes late</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Members often arrive late, leave early, or never even show up for the meetings.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No agenda exists—members simply have a vague notion of what they want to accomplish.</td>
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<tr>
<td>One or two members monopolize discussion throughout the meeting.</td>
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<td></td>
</tr>
<tr>
<td>Members have not read the assignment, performed the necessary background research, or done what they were expected to do. Consequently, individuals are poorly prepared for the meeting.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Team Member Evaluation Form**

The following evaluation of your team members is a tool to help improve your experience with group work. Its purpose is to determine those who have been active and cooperative members as well as to identify those who did not participate. Be consistent when evaluating each group member’s performance by using the guidelines below.

1 – never 2 – rarely 3 – sometimes 4 – usually 5 – always

Name of student being evaluated:_________________________________________________________

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has the student attended team meetings?</td>
<td></td>
<td></td>
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<tr>
<td>Has the student made a serious effort at assigned work before the team meetings?</td>
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<tr>
<td>Has the student made a serious effort to fulfill his/her team role responsibilities on assignments?</td>
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</tr>
<tr>
<td>Has the student notified a teammate if he/she would not be able to attend a meeting or fulfill a responsibility?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on your responses to these questions, assign an overall rating on the following scale:

- Excellent
- Very good
- Satisfactory
- Ordinary
- Marginal
- Deficient
- Unsatisfactory
- Superficial
- No show

† Adapted from a form reprinted in B. J. Millis and P. G. Cottell, Jr., Cooperative Learning in Higher Education Faculty, Oryx, Phoenix, 1998.
### Summative Evaluation

- **Excellent:** Consistently carried more than his/her fair share of the workload.
- **Very good:** Consistently did what he/she was supposed to do, very well prepared and cooperative.
- **Satisfactory:** Usually did what he/she was supposed to do, acceptably prepared and cooperative.
- **Ordinary:** Often did what he/she was supposed to do, minimally prepared and cooperative.
- **Marginal:** Sometimes failed to show up or complete assignments, rarely prepared.
- **Deficient:** Often failed to show up or complete assignments, rarely prepared.
- **Unsatisfactory:** Consistently failed to show up or complete assignments, unprepared.
- **Superficial:** Practically no participation.
- **No show:** No participation at all.

*These ratings should reflect each individual’s level of participation and effort and sense of responsibility, not his or her academic ability.*

<table>
<thead>
<tr>
<th>Name of team member</th>
<th>Rating</th>
<th>Commentary (DO NOT LEAVE BLANK!)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>
## Summative Evaluation

1. Determine group project grade.
2. Convert individual verbal ratings from the Peer Rating form to numbers, as follows:
   - Excellent = 100
   - Very good = 87.5
   - Satisfactory = 75
   - Ordinary = 62.5
   - Marginal = 50
   - Deficient = 37.5
   - Unsatisfactory = 25
   - Superficial = 12.5
   - No show = 0
3. On a spreadsheet, enter numerical ratings received by team members in rows.
4. Average individual marks, calculate overall team average, calculate adjustment factors as individual average divided by team average. If an adjustment factor is greater than 1.05, reset it to 1.05.
5. Individual project grade = (team grade) x (adjustment factor).

<table>
<thead>
<tr>
<th>Team project grade</th>
<th>80</th>
<th>Indiv. Proj. Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td></td>
<td>Betty</td>
</tr>
<tr>
<td>Vote 1</td>
<td>87.5</td>
<td>84.4</td>
</tr>
<tr>
<td>Vote 2</td>
<td>87.5</td>
<td></td>
</tr>
<tr>
<td>Vote 3</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>Vote 4</td>
<td>87.5</td>
<td></td>
</tr>
<tr>
<td>Indiv. Avg.</td>
<td>87.5</td>
<td></td>
</tr>
<tr>
<td>Team Avg.</td>
<td>82</td>
<td></td>
</tr>
<tr>
<td>Adj. Fctr.</td>
<td>1.02</td>
<td></td>
</tr>
<tr>
<td>Proj. Grade</td>
<td>82</td>
<td></td>
</tr>
<tr>
<td>Carlos</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vote 1</td>
<td>87.5</td>
<td></td>
</tr>
<tr>
<td>Vote 2</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Vote 3</td>
<td>87.5</td>
<td></td>
</tr>
<tr>
<td>Vote 4</td>
<td>87.5</td>
<td></td>
</tr>
<tr>
<td>Indiv. Avg.</td>
<td>90.6</td>
<td></td>
</tr>
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<td>82</td>
<td></td>
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<td></td>
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<td>Proj. Grade</td>
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<td></td>
</tr>
<tr>
<td>John</td>
<td></td>
<td></td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
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<tr>
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<td>82</td>
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</tr>
<tr>
<td>Adj. Fctr.</td>
<td>0.80</td>
<td></td>
</tr>
<tr>
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<td>64</td>
<td></td>
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<tr>
<td>Angela</td>
<td></td>
<td></td>
</tr>
<tr>
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<td>87.5</td>
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## Hitchhikers and couch potatoes

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<td>Ordinary</td>
<td>Not good at problem solving, but she tries hard and gets extra help from the professor.</td>
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<tr>
<td>Henry</td>
<td>Marginal</td>
<td>Irritating. He’s a nice guy, but he doesn’t put in the effort. He’ll sheepishly hand over partially worked homework problems and confess to spending the weekend watching TV.</td>
</tr>
<tr>
<td>Jack</td>
<td>Unsatisfactory</td>
<td>When we tried to set up meetings, he was too busy. He rarely turns in his part of the homework and it’s normally wrong. He never answers phone messages, then denies getting them. He never responds to email and misses every meeting, so we just stopped inviting him. He constantly complains about his 50-hour work weeks, heavy school load, bad textbooks, and terrible teachers. He blames everybody else for his problems.</td>
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</tr>
<tr>
<td>self</td>
<td>Excellent</td>
<td>I pretty much did all of the work myself. I showed up at the first few meetings and nobody else had a clue what was going on. After that, I just started doing everything, so our meetings were just me explaining stuff to them.</td>
</tr>
</tbody>
</table>
Peer evaluation

- Use formative for early problem solving
- Quantitative must be measurable
- Complement quantitative with qualitative
- Summative must include self-evaluation
- Be aware of group dynamics
The good, the bad, and the ugly...