Assessing Students in Team-Based Learning

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Teaching Strategies for Cooperative Learning Workshop

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Session Objectives

• Participants will be able to describe key elements of:
  – Interdependence and Accountability for High Performance Teamwork
  – Strategies for Individual and Team Assessment
  – Trade offs between meaningful and manageable assessment

• Participants will begin applying key elements to the design on a course, class session or learning module
Cooperative Learning and Assessing Student Learning

1. Use a criterion-referenced system for all assessment and evaluation
2. Use a wide variety of assessment formats
   - performance-based assessment
   - authentic assessment
   - total quality learning
3. Conduct assessment and evaluation in the context of learning teams
4. Directly involve students in assessing each other’s level of learning
5. Assess, assess, assess, assess, and assess!

### Evaluation Methods

<table>
<thead>
<tr>
<th>Evaluation Methods</th>
<th>Engineering Faculty</th>
<th>All Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grading &quot;on the curve&quot;</td>
<td>43%**</td>
<td>22%</td>
</tr>
<tr>
<td>Research/ Term papers</td>
<td>19</td>
<td>33</td>
</tr>
<tr>
<td>Multiple choice exams</td>
<td>10*</td>
<td>32</td>
</tr>
<tr>
<td>Essay exams</td>
<td>21</td>
<td>43</td>
</tr>
<tr>
<td>Student presentations</td>
<td>15</td>
<td>27</td>
</tr>
</tbody>
</table>

*Percent of those using the technique in all or most classes
**Highest of all fields
*Lowest of all fields

## UCLA-HERI Faculty Survey

The American College Teacher: National Norms for 2007-2008

<table>
<thead>
<tr>
<th>Methods Used in “All” or “Most”</th>
<th>All – 2005</th>
<th>All – 2008</th>
<th>Assistant - 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperative Learning</td>
<td>48</td>
<td>59</td>
<td>66</td>
</tr>
<tr>
<td>Group Projects</td>
<td>33</td>
<td>36</td>
<td>61</td>
</tr>
<tr>
<td>Grading on a curve</td>
<td>19</td>
<td>17</td>
<td>14</td>
</tr>
<tr>
<td>Term/research papers</td>
<td>35</td>
<td>44</td>
<td>47</td>
</tr>
</tbody>
</table>

http://www.heri.ucla.edu/index.php

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Normal Distribution = Failure

*It is not a symbol of rigor to have grades fall into a 'normal' distribution; rather, it is a symbol of failure – failure to teach well, to test well, and to have any influence at all of the intellectual lives of students* – Milton, et al. 1986, p 225[1]

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Bloom’s Distribution

If we are effective in our instruction, the distribution of achievement should be very different from the normal curve. In fact, we may even insist that our educational efforts have been unsuccessful to the extent that the distribution of achievement approximates the normal distribution. (p. 52)


Types of Assessment

1. Diagnostic Assessment
   Conducted at the beginning of an instructional unit, course, semester. . . to determine the present level of knowledge, skill, interest. . . of a student, group or class.

2. Formative Assessment
   Conducted periodically throughout the instructional unit. . . to monitor progress and provide feedback toward learning goals.

3. Summative Assessment
   Conducted at the end of an instructional unit or semester to judge the quality and quantity of student achievement and/or the success of the instructional unit.
Minute Paper
(Classroom Assessment Technique)

- What was the most useful or meaningful thing you learned during this session?
- What question(s) remain uppermost in your mind as we end this session?
- What was the “muddiest” point in this session?
- Give an example or application
- Explain in your own words . . .


Session Summary
(Minute Paper)

Reflect on the session:

1. Most interesting, valuable, useful thing you learned.
2. Things that helped you learn.
3. Question, comments, suggestions.
4. Pace: Too slow 1 . . . 5 Too fast
5. Relevance: Little 1 . . . 5 Lots
6. Instructional Format: Ugh 1 . . . 5 Ah
HKUST – Assessing Students in TBL – Session 1 (5/17/11)

Q4 – Pace: Too slow 1 . . . 5 Too fast (2.9)
Q5 – Relevance: Little 1 . . . 5 Lots (3.9)
Q6 – Format: Ugh 1 . . . 5 Ah (3.7)

MOT 8221 – Spring 2011 – Session 1 (3/25/11)

Q4 – Pace: Too slow 1 . . . 5 Too fast (2.9)
Q5 – Relevance: Little 1 . . . 5 Lots (3.9)
Q6 – Format: Ugh 1 . . . 5 Ah (3.7)
Assessment Formats

1. Performance-Based Assessment
   Students demonstrate what they know and can do by performing a procedure or skill

2. Authentic Assessment
   Students demonstrate a procedure of skill in "real life" context (See “approximations of practice”)

3. Total Quality Learning
   Continuous assessment of the process of learning (and teamwork) to improve it

Making Assessments Meaningful

1. To be meaningful, assessment has to have a purpose that is significant

2. Assessments are meaningful when students are involved in conducting the assessment.

3. Meaningful assessments provide a direction and road map for future efforts to learn.
Making Assessments Manageable
-- Involve Students --

Myths About Team-Based Assessment

1. If you assess student learning, you have to give students grades.
2. Faculty must read every student paper and provide feedback.
3. Students are not capable of meaningful involvement in assessment.
4. Involving students in assessment takes valuable time away from learning and lowers their achievement.
5. Assessment is a faculty responsibility, not to be done by students.
6. Individual assessment is lost in team-based approaches to assessment.

Team Charter

- Team name, membership, and roles
- Team Mission Statement
- Anticipated results (goals)
- Specific tactical objectives
- **Ground rules/Guiding principles for team participation**
- Shared expectations/aspirations
Code of Cooperation

• EVERY member is responsible for the team's progress and success.
• Attend all team meetings and be on time.
• Come prepared.
• Carry out assignments on schedule.
• Listen to and show respect for the contributions of other members; be an active listener.
• CONSTRUCTIVELY criticize ideas, not persons.
• Resolve conflicts constructively,
• Pay attention, avoid disruptive behavior.
• Avoid disruptive side conversations.
• Only one person speaks at a time.
• Everyone participates, no one dominates.
• Be succinct, avoid long anecdotes and examples.
• No rank in the room.
• Respect those not present.
• Ask questions when you do not understand.
• Attend to your personal comfort needs at any time but minimize team disruption.
• HAVE FUN!!

Adapted from Boeing Aircraft Group Team Member Training Manual

Ten Commandments: An Affective Code of Cooperation

• Help each other be right, not wrong.
• Look for ways to make new ideas work, not for reasons they won't.
• If in doubt, check it out! Don't make negative assumptions about each other.
• Help each other win, and take pride in each other's victories.
• Speak positively about each other and about your organization at every opportunity.
• Maintain a positive mental attitude no matter what the circumstances.
• Act with initiative and courage, as if it all depends on you.
• Do everything with enthusiasm; it's contagious.
• Whatever you want; give it away.
• Don't lose faith.
• Have fun

Ford Motor Company
Group Ground Rules Contract Form

(Adapted from a form developed by Dr. Deborah Allen, University of Delaware)

Project groups are an effective aid to learning, but to work best they require that all group members clearly understand their responsibilities to one another. These project group ground rules describe the general responsibilities of every member to the group.

You can adopt additional ground rules if your group believes they are needed. Your signature on this contract form signifies your commitment to adhere to these rules and expectations.

All group members agree to:

1. Come to class and team meetings on time.
2. Come to class and team meetings with assignments and other necessary preparations done.

Additional ground rules:

1. 
2. 

If a member of the project team repeatedly fails to meet these ground rules, other members of the group are expected to take the following actions:

Step 1: (Fill in this step with your group)

If not resolved:
Step 2: Bring the issue to the attention of the teaching team.

If not resolved:
Step 3: Meet as a group with the teaching team.

The teaching team reserves the right to make the final decisions to resolve difficulties that arise within the groups. Before this becomes necessary, the team should try to find a fair and equitable solution to the problem.

Member’s Signature:   Group Number:______________

1.____________________________  2.____________________________

Assessment at the Course Level

• Knowledge Survey
• Classroom Assessment (minute paper)
• Mid-Term Review
• Student Management Team
• Peer Review
A student management team will be used in this course to operationalize Total Quality Management principles. The attributes of student management teams are described below, and the operation of the team is based on shared responsibility:

Students, in conjunction with their instructor, are responsible for the success of any course. As student managers, your special responsibility is to monitor this course through your own experience, to receive comments from other students, to work as a team with your instructor on a regular basis, and to make recommendations to the instructor about how this course can be improved. (Nuhfer, 1990-1995).
Attributes of Student Management Teams

• 3 - 4 students plus teaching team.
• Students have a managerial role and assume responsibility for the success of the class.
• Students meet weekly; professor attends every other week. Meetings generally last about one hour.
• Meet away from classroom and professor's office.
• Maintain log or journal of suggestions, actions and progress.
• May focus on the professor or on the content.
• Utilize group dynamics approach of TQM.

Chapter 8: Student Management Teams: The Heretic’s Path to Teaching Success by Edward B. Nuhfer

SGID: Small Group Instructional Diagnosis

A consensus approach to student feedback

What is an SGID?
Small Group Instructional Diagnosis, SGID, is a technique that uses guided discussion and assessment to generate clear, prioritized, and confidential student feedback on classroom instruction. The tool can be used after any class, including the final exam, to help instructors improve their teaching. SGID’s focus requires students to discuss how the course was going and whether changes should be implemented.

First, students work in small groups to agree upon answers to the questions:

- How is the instructor in the course that helped you learn best this term? What did they do?
- How could their teaching be improved?

Next, groups share their ideas with the class, the instructor engages in a dialogue to address concerns, and the class discusses the results of the SGID. A brief discussion of the group process and the role of student voice in shaping instruction follows. The instructor uses the SGID feedback to schedule upcoming class times, assignments, or activities.

Why request an SGID?
For course improvement, request an SGID in the third or fourth week of the semester.

By finding out early in the semester what fellow students, the SGID helps me identify issues and concerns which are common to the entire class without having to wait until the end of the semester. I get from individual students or worry that I might be being unfairly influenced by a small minority.

Students have commented to me that they thought the process was useful because it allowed them to voice their concerns and also to hear other students’ reactions to the class.

"The consensus
Reflection and Next Steps

• What is the most useful/valuable thing you have learned in today’s workshop?
• What is one thing you will implement?
• What questions do you still have?

Resources