

# Collective Effort Classroom Assessment Technique

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Excerpted from  
*New Directions in Teaching & Learning*  
Fall, 1999



## Purpose

The purpose of the Collective Effort Classroom Assessment Technique (**CECAT**) is to promote the healthy development of student groups. It is designed for student groups that will work together for an extended period of time, i.e., a half of a semester or longer. It can be used with cooperative learning groups, project groups, committees, applied problem solving teams or case study teams. The CECAT is based on research and theory on group performance and human motivation. If used as recommended, it should help students avoid the detrimental consequences of social loafing (i.e., free riding) while stimulating them to perform highly both as individuals and as a group.

## Suggestions for Using the CECAT

Overall, to set a productive context for using the CECAT, we recommend that instructors heed the practice-based wisdom of those who have used groups, especially the wisdom that is consistent with research and theory on group performance. For example, because tasks make groups, it is a good idea to let the work pick the workers and not allow students to form their own groups. Hackman (1986) found that groups perform best when they are composed of members who have both a desire *and* the requisite skills and knowledge to do the group's work. If group members have the desire but not the skill or knowledge, they should learn these things *before* they join a group (Michaelson & Black, 1994). Also, we strongly urge instructors to grant a high value to group work by giving it sufficient weight in their grading systems and by providing ample in-class time for their students to meet. However, grades should not cause conflict within groups. Conflict can be avoided if a) the goals of each group are clear, b) evaluation standards for the group and its members are clear, and c) the instructor grades the *quality* of each group's product, while its members evaluate, but not grade, one another on the *making* of their group's product.

Because the CECAT is prescriptive as well as diagnostic, we recommend that instructors use it (e.g. the summative version) in the planning of a course to assess the way they intend to use groups. Changes made before a course begins may be easier to implement than after it is in motion. And to help students learn about working in groups, we urge instructors to administer the CECAT three times: a) the early version, soon after groups are formed, when they are merely discussing and planning their work, b) the midway version, when the groups have actually begun doing their work, and c) the summative version, after the groups have made their final presentations or submitted their final products and grades have been assigned. A more detailed recipe for using the CECAT follows.

### **After the student groups have met a couple of times:**

1. Describe and explain the process of using the CECAT, and ask your students whether or not they want to go through this process.
2. If your students want to go through the process, have them complete the "early" version of the CECAT by themselves; they should identify the group they are in, but not reveal their own names.

3. For each group, the instructor, should calculate the average total score and the average rating assigned to each item. Letting students see the raw data might compromise their sense of privacy.
4. Then, have the groups meet in class and distribute copies of the results to them. Keep these results confidential and within groups.
5. Ask the groups to discuss the results privately. Have them consider the finding that average total scores of 80 and above have been associated with successful, satisfying group experiences while scores of 60 and below have been associated with mediocre performances and unpleasant group experiences and that mean single item ratings of less than 3.0 are diagnostic of specific addressable weaknesses and, conversely, ratings equal to or greater than 4.0 may point to strengths that should be maintained.
6. Finally, visit each group to listen to their plans to correct their weaknesses and build upon their strengths. At this point, if it is necessary, you may want to intervene to modify the tasks of the groups or the composition of the groups.

**After the groups have worked as intact units for several weeks:**

7. Ask your students to complete the “midway” version of the CECAT.
8. Repeat steps 3, 4, and 5 above.
9. Ask each group to submit a written summary of their discussion of the results and what they plan to do to cope with the problems that the CECAT has identified. Remind them that they are on their own and that you want them to try to solve their problems by themselves *before* they consult with you.

**After the groups have completed their work and grades have been assigned:**

10. Ask your students to complete the “summative” version of the CECAT.
11. Note what seems to have worked and not worked with the group assignments.

## **Some Time Saving Advice & Suggestions**

If you are pinched for time, consider using only the “early” and “midway” assessments. Another way to save time is to administer an abbreviated version of the CECAT. The first 10 items comprise an empirically useful subset; these items are the ones most strongly associated with superior group performance. You can also save time by having the teams form reciprocal arrangements with other teams to calculate each other’s results leaving you out of the loop. For example, one member from each team might be asked to tabulate the raw data for a companion team and confidentially share the results with them. If you have students who can not or do not wish to work in groups, these students might be asked to serve as “group process assessors.” After some training, they would be expected to calculate results for the groups and write prescriptive summary reports for them.

## **CECAT Items Sorted by Their Social Functions**

### **Group Composition**

- I am contributing a lot of things to the group's work such as knowledge, skill, effort, time, and other essentials.
- I am proud to be a member of my group and I respect all the people I am working with.
- Most of the members of the group highly value working in a collective with others.
- The group I am working in is just the right size.

### **Task Characteristics**

- The group's task is intrinsically interesting.
- The task of the group is challenging
- The task of the group requires all of us to meet and work side-by-side, face-to-face, most of the time

### **Processes & Procedures**

- My contribution to the group's work is unique, no one else is doing exactly what I'm doing.
- Other members of my group know exactly what I am doing and can easily monitor my progress.
- The performance of myself as an individual is directly affecting how well the group as a whole performs.

### **Individual & Group Motivation**

- What the group is trying to achieve is valuable and important to other members of the group.
- What the group is trying to achieve is valuable and important to me.
- All the members of the group are working equally hard.
- The effort I have exerted thus far has been instrumental in helping me obtain outcomes I want to achieve as an individual.

### **Performance Evaluation**

- Performance standards for the group have been set to allow us to evaluate the overall performance of the entire group as we are working.
- Performance standards for individuals have been set to allow each person to evaluate his or her contribution to the group.
- My performance is being (or will be) evaluated by the instructor and/or other members of my group.

### **General Conditions & Outcomes**

- My group is performing excellently.
- As our work progresses, the group is becoming more cohesive.
- I am exerting a lot of effort to help the group achieve its goals. .



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## An Early Assessment of Group Work

Please indicate your level of agreement with each of the following statements using a five-point agree-disagree rating scale, where 1= strongly disagree, 2= disagree, 3= uncertain, 4= agree, and 5= strongly agree (the higher the number, the more you agree).

1.  My group will perform excellently.
2.  All the members of the group will work equally hard.
3.  As our work progresses, the group should become more cohesive.
4.  I want to feel proud of my group and I desire to work with people I highly respect.
5.  Most of the members of the group appear to value working in a collective with others.
6.  What the group will try to achieve is valuable and important to other members of the group.
7.  What the group will try to achieve is valuable and important to me.
8.  The group's task is intrinsically interesting.
9.  Other members of my group will not only know what I am doing, they will easily *see* what I am doing to monitor my work.
10.  Performance standards for the group will be set to allow us to evaluate the overall performance of the entire group as we work.
11.  The group I will be working in is just the right size.
12.  Performance standards for individuals will be set to allow each person to evaluate his or her contribution while he or she works for the group.
13.  The effort I exert will be instrumental in helping me obtain outcomes I want to achieve as an individual.
14.  My performance will be evaluated by the instructor and/or other members of my group.
15.  The task of the group will require all of us to meet and work side-by-side, face-to-face, most of the time.
16.  I will exert a lot of effort to help the group achieve its goals.
17.  I have a lot of things to contribute to the group's work such as knowledge, skill, effort, time, and other essentials.
18.  The performance of myself as an individual will directly affect how well the group as a whole will perform.
19.  My contribution to the group's work is unique, no one else will be doing exactly what I'm doing.
20.  The task of the group will be challenging.

TOTAL SCORE



## A Midway Assessment of Group Work

*Please indicate your level of agreement with each of the following statements using a five-point agree-disagree rating scale, where 1= strongly disagree, 2= disagree, 3= uncertain, 4= agree, and 5= strongly agree (the higher the number, the more you agree).*

1. \_\_\_\_\_ My group is performing excellently.
2. \_\_\_\_\_ All the members of the group are working equally hard.
3. \_\_\_\_\_ As our work progresses, the group is becoming more cohesive.
4. \_\_\_\_\_ I am proud to be a member of the group and I highly respect most of the people I am working with.
5. \_\_\_\_\_ Most of the members of the group highly value working in a collective with others.
6. \_\_\_\_\_ What the group is trying to achieve is valuable and important to other members of the group.
7. \_\_\_\_\_ What the group is trying to achieve is valuable and important to me.
8. \_\_\_\_\_ The group's task is intrinsically interesting.
9. \_\_\_\_\_ Other members of my group not only know what I am doing, they can easily *see* what I am doing and monitor my work.
10. \_\_\_\_\_ Performance standards for the group have been set to allow us to evaluate the overall performance of the entire group as we are working.
11. \_\_\_\_\_ The group I am working in is just the right size.
12. \_\_\_\_\_ Performance standards for individuals have been set to allow each person to evaluate his or her contribution to the group.
13. \_\_\_\_\_ The effort I have exerted thus far has been instrumental in helping me obtain outcomes I want to achieve as an individual.
14. \_\_\_\_\_ My performance is being (or will be) evaluated by the instructor and/or other members of my group.
15. \_\_\_\_\_ The task of the group requires all of us to meet and work side-by-side, face-to-face, most of the time.
16. \_\_\_\_\_ I am exerting a lot of effort to help the group achieve its goals.
17. \_\_\_\_\_ I am contributing a lot of things to the group's work such as knowledge, skill, effort, time, and other essentials.
18. \_\_\_\_\_ The performance of myself as an individual is directly affecting how well the group as a whole performs.
19. \_\_\_\_\_ My contribution to the group's work is unique, no one else is doing exactly what I'm doing.
20. \_\_\_\_\_ The task of the group is challenging.

\_\_\_\_\_ TOTAL SCORE

## A Summative Assessment of Group Work

*Please indicate your level of agreement with each of the following statements using a five-point agree-disagree rating scale, where 1= strongly disagree, 2= disagree, 3= uncertain, 4= agree, and 5= strongly agree (the higher the number, the more you agree).*

1. \_\_\_\_\_ My group performed excellently.
2. \_\_\_\_\_ All the members of the group worked equally hard.
3. \_\_\_\_\_ As our work progressed, the group became more cohesive.
4. \_\_\_\_\_ I was proud to be a member of the group and I highly respected most of the people I worked with.
5. \_\_\_\_\_ Most of the members of the group highly valued working in a collective with others.
6. \_\_\_\_\_ What the group achieved (or tried to achieve) was considered important and valuable to other members of the group.
7. \_\_\_\_\_ What the group achieved (or tried to achieve) was valuable and important to me.
8. \_\_\_\_\_ The group's task was intrinsically interesting.
9. \_\_\_\_\_ Other members of my group not only knew what I was doing, they could easily see what I was doing and monitor my work.
10. \_\_\_\_\_ Performance standards for the group were set in advance to allow us to evaluate the overall performance of the entire group as we worked.
11. \_\_\_\_\_ The group I worked in was just the right size.
12. \_\_\_\_\_ Performance standards for individuals were set in advance to allow each person to evaluate his or her contribution while he or she worked for the group.
13. \_\_\_\_\_ The effort I exerted was instrumental in helping me obtain the outcomes I wanted to achieve as an individual.
14. \_\_\_\_\_ My performance was evaluated by the instructor and/or other members of my group.
15. \_\_\_\_\_ The task of the group required us to meet and work side-by-side most of the time; we did not work alone then combine our efforts only at the end.
16. \_\_\_\_\_ I exerted a lot of effort to help the group achieve its goals.
17. \_\_\_\_\_ I had a lot of things to contribute to the group's work such as knowledge, skill, effort, time, and other essentials.
18. \_\_\_\_\_ The performance of myself as an individual directly affected how well the group as a whole performed.
19. \_\_\_\_\_ My contribution to the group's work was unique, no one else did exactly what I did.
20. \_\_\_\_\_ The task of the group was challenging.

\_\_\_\_\_ TOTAL SCORE

