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Author(s)	JESSICA BALL
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Assessing Students in Learning Groups

JESSICA BALL

Do we need to develop new practices to assess students when we use structured learning groups? Most teachers find that when they embrace the goals and methods of having students work in structured, task-focused learning groups, as in cooperative and collaborative learning, they must expand their repertoire of assessment strategies as well as their vision of the purposes of evaluation. At the same time, using structured group work does not create a totally new agenda for evaluation (Clarke, Wideman, & Eadie, 1990). Whether we are evaluating students' progress or products based on their independent work or work as members of a group, we are always concerned about validity, reliability, and fairness.

Basics of assessment in cooperative learning situations

The **why** of evaluation does not usually change when cooperative learning is used. **Formative evaluation** or continuous assessment is still important as feedback for identifying needs, measuring progress, and modifying our teaching objectives and methods to enhance learning outcomes. **Summative evaluation** is still important, including measuring and reporting on achievements and efforts.

The **when** of evaluation should continue to embrace the principle of ongoing and immediate feedback in order to provide informative feedback for improving learning and student interaction.

The **what** of evaluation should be expanded to include not only academic dimensions of learning but also social learning (e.g., how well does the student work in a group, how well does a students' group work).

The **who** of evaluation should involve a shift towards more active roles for students in formative and summative evaluation of academic and social learning.

The **how** of evaluation should continue to include the broad range of alternatives that are available when other methods of instruction are used. In addition, innovative methods that reflect the interactive dimensions of learning tasks and the shared ownership of group products should be used. Some approaches that have been used effectively are discussed below.

Choosing the assessment strategy

Our choice of assessment strategy will depend upon whether we are conducting a **formative** or **summative** evaluation. **Formative evaluation** is usually aimed at giving group members constructive, ongoing feedback about how they are doing with respect to their collaborative efforts and skills, and/or how well they are progressing with the group task. **Summative evaluation** is usually aimed at measuring the quality of performance of the group as a whole or of individual members (e.g., on a test, project, presentation, report, etc.) Summative evaluation may also seek to represent the amount and/or quality of effort or skill contributed by individual group members.

In addition to the usual criteria that a teacher considers when choosing among the many ways to assess students, teachers who use cooperative learning should ask questions, like those suggested below, about whether the strategy furthers cooperative learning processes and goals.

- (1) Does the strategy support and strengthen the basic elements of cooperative learning, including individual accountability, group interdependence, face-to-face interaction, social skill building, and group processing of teamwork (Johnson, Johnson, & Holubec, 1993). For example, evaluation based on the teacher's evaluation of the group's performance promotes reward interdependence. Face-to-face interaction and group processing of teamwork are promoted when group members

are asked to negotiate the dimensions along which their group process will be evaluated by the teacher and/or the students. Individual accountability is built into evaluation involving tests taken by individual members after they have studied in their group.

- (2) Does the strategy help students to become more skilled and successful with cooperative learning? For example, when students are involved in ongoing assessment of their own and others' contributions to group work, their awareness of their role, strengths, and weaknesses as group members is refined and their understanding of how groups work is expanded.
- (3) Does the strategy further the goal of involving students more fully in assessing social and academic learning in their groups? This question is addressed below.

A more active role for students in assessment

Approaches to assessing the effort and achievements of students in groups extend from traditional methods, such as teacher's observations and tests, to innovative, collaborative modes of assessment. In the latter, students may be invited to suggest dimensions or criteria for evaluation and may participate in evaluating each other and themselves.

Most students in Singapore are accustomed to, expect, and may initially prefer to be assessed using traditional, individual assignments and tests evaluated by the teacher. However, when cooperative learning is used, it is desirable to "wean" students away from these teacher-centred forms of assessment to more student-centred forms (Kohn, 1993). For example, students may be asked to make up questions for a test of material studied in groups (Collison, 1993; Wiggins, 1992), to reflect upon their own contributions towards their group's work, or to evaluate the amount or quality of work done by their group (Rolheiser-Bennett & Stevahn, 1992).

Evaluation based on group performance

Two common strategies which yield the same score for all group members are described below.

1. **Group scores on a single product.** The group produces a single product, such as a report, essay, worksheet, or problem set. The product is evaluated by group members, the whole class, and/or the teacher. All members receive the score awarded.
2. **Random selection of one member's work.** Group members all complete the work individually and then check each other's essay, report, or worksheet to ensure that they are correct. Group members are expected to ensure that all group members understand the material to be examined before taking the test. After the test, the teacher randomly selects one test to score. All members receive the resulting score.

How can a single shared group grade be fair? This question is raised by many teachers and students who are new to cooperative learning. Skepticism usually comes from experiences with groups in which there has been unequal distribution of labour within a group, absent group members, or uneven proficiency levels among group members.

Interestingly, a number of investigations of students' views of the fairness of various grading systems have shown that group grades may be perceived as unfair by students **before** they have had a chance to experience cooperative learning. However, once they have actually been in a well-structured cooperative learning group, they tend to perceive a single group grade as the fairest method of evaluation (Johnson et al., 1993). Further, some studies have found that student achievement is often higher when group, rather than individual, grades are given (Johnson & Johnson, 1989). Group reward has also been shown to promote more peer interaction and mutual helping than individual reward systems (Johnson, Johnson, & Stanne, 1986; Sharan & Sharan, 1976; Slavin, 1983).

There are certain steps that teachers can take to encourage positive views of group evaluation. For example:

- (1) *Make sure that students experience some success and enjoyment through cooperative learning, before introducing group evaluation.*
- (2) *Incorporate the basic elements of individual accountability and positive interdependence into group experiences (Johnson et al., 1993). Individual accountability, in particular, helps to prevent social loafing. Group interdependence helps to prevent one student from becoming too dominant. It is important for teachers to remember that if students are simply placed in groups where cooperation among members and contributions by individuals are left to chance, then collective evaluation is indeed likely to be unfair.*
- (3) *Monitor interaction when students work in groups. Help students learn to communicate their perceptions of problems in the way the group is working or the way that individuals are or are not contributing. Teach students strategies for giving helpful feedback and managing conflict so that they can deal successfully with difficulties (for activities to develop communication skills, see Farivar & Webb, 1991 and Swing & Peterson, 1982).*
- (4) *Ensure that assessment criteria and the means by which the assessment will be carried out are clearly understood by the students. Also, students can be involved in developing criteria for evaluating their group process and/or group product.*

Evaluation combining individual and group performance

When cooperative learning groups are composed of students who are heterogeneous with respect to their levels of proficiency, then task demands and evaluation criteria should be individualized. If students with varying levels of past achievement or at different stages of learning are evaluated according to different criteria, then all group members are appropriately challenged and group

members are not penalized by a slower learner or intimidated by a fast learner. Members of the same group can discuss, edit, check, and correct each other's work without necessarily working on the same materials at the same speed or being evaluated in the same way. Johnson et al. (1993) point out that when cooperative learning is implemented, in order to avoid undermining overall class collaborativeness, it is important to use a criterion-referenced evaluation system in determining final grades.

Several alternatives for giving individual grades that also reflect cooperation within student groups are suggested below.

1. **Dual grading of academic performance.** Students work together in cooperative learning groups and prepare each other for a test. They take the test individually and receive an individual grade (Slavin, 1990). They also receive another grade, based on the performance of all group members.

The second grade could be based on:

- Whether all group members achieved up to a pre-established criterion
- whether the group members' combined score showed a percentage improvement over the group's performance on all previous tests
- the total of all members' individual scores
- the average of all group members' scores

The second grade could be added to each member's score, or included as a weighted proportion of each member's score.

In addition, or alternatively, the second grade could be used to determine whether group members receive a nonacademic reward, such as free-time, extra recess time, recognition in a class newsletter, or opportunities to engage in a preferred learning activity.

2. **Concurrent grading of academic and collaborative skills.** Each group member takes an examination. Students' scores are used according to one of the alternatives suggested in No. 1 above. Concurrently, each student is assessed by the

teacher or by peers in terms of how often he or she performed specific collaborative skills (e.g., leadership, encouraging, contributing, etc.). Students should be told in advance what skills will be evaluated. The assessment could make use of tally sheets, checklists, rating scales, or a similar record-keeping system (see Johnson et al., 1993; Rolheiser-Bennett et al., 1992). A score for collaborative skills is given to individual students or to the group as a whole. This is added to each student's academic score to determine their overall mark.

Concluding remarks

Resolving issues of assessment that accompany the use of structured, task-focused learning groups is a growing process in which gradual transitions are made. Teachers often find that they gain a clearer sense of direction and valuable feedback when they communicate and collaborate with other teachers who are also using cooperative learning. Beyond sharing practical and effective techniques, this can also lead to agreement about consistent and rigorous assessment of cooperative learning across classrooms.

This paper has suggested only a few of the wide variety of strategies that can be used to extend the active role of students in cooperative learning groups to student-generated evaluation criteria and to self- and peer-evaluation. When we introduce some of these participatory approaches, we are helping to move our students and ourselves away from a dependence upon externally regulated sources of feedback and rewards (Kohn, 1993). By implementing assessment strategies that represent individual and collective performance, we elevate the status of group work to that of a mainstream educational activity that is expected to produce measurable learning for which every student is accountable.

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