

Running head: ASSESSMENT IN THE COLLABORATIVE CLASSROOM

Assessment in the Collaborative Classroom

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### Abstract

This paper examines the assessment of student achievement in the collaborative classroom. The challenges of cooperative learning will be addressed and analyzed. Tools for assessment in a collaborative classroom will be examined. An in-depth analysis of assessment techniques, the assessment time line, and assigning grades will show evidence that a combination of group and individual grades secured through a continuous assessment is the ideal format to use in congruence with cooperative learning.

### Assessment in the Collaborative Classroom

Research has shown us that cooperative learning can be very effective if facilitated appropriately in the classroom. A collaborative classroom environment often promotes a higher level of learning and achievement. However, not all groups reach the level of cohesion at which there is positive interdependence. Educators must be careful not to sacrifice individual accountability through group grading. The challenge then becomes how do we fairly assess student achievement in a collaborative classroom?

Collaborative Learning is a philosophy of working together, building together, learning together, changing together, and improving together according to Wiersema (2000). It is important to first evaluate what is the desired outcome of the collaborative classroom. Allen (1998) demonstrates that there are many purposes for examining students' work and the common principles they share involve collaboration, moving beyond grading of work to understanding student learning, and evaluating instructional practice. Establishing a list of criteria that is available to the students prior to their group interaction will dramatically increase the probability of students meeting their teacher's goals. It is critical that students participate in developing or minimally acknowledging their group goals beyond simple task completion. The assessment criteria may include listening, equitable participation, conflict resolution, appropriate behavior, and critical thinking.

*Challenges of Cooperative Learning*

It would be absurd to assume that all students will be open to any or all instruction on collaboration because of their past canons. Gergits and Schramer (1994) report that most students have been trained to see learning as an uncompromisingly individual process in which independence is demanded and rewarded. Introducing cooperative learning into a classroom where individuality is highly regarded creates confusion.

Collaborative Learning is based on several basic principles that all must be considered during assessment: positive interdependence, individual accountability, considerable face-to face interaction, effective group process skills, equal participation, and simultaneous interaction (Kagan, n.d.; Johnson, 1989). Positive interdependence occurs when the success of the individual and the success of the team are positively correlated. This correlation appears in the form of evaluations and grades. There must be methods in place to assess individual contributions to ensure each member's participation and accountability. To incite equal participation allocation and division of labor could be used. Johnson (1989) suggests that group process skills are never “mastered” and therefore students need to continually reflect on their interactions and evaluate their cooperative work.

If we conceive the methods and goals of the collaboration process to be task and success oriented then we will be overlooking our students' daily progress in cooperative learning. Collaboration goes beyond task completion and teamwork. Gergits and

Schramer (1994) state that collaboration involves a process in which individual participants redefine themselves as a group.

### *Assigning Grades*

Support is strong for group grading; where all students in the group receive the same grade despite their individual contributions (e.g., Gergits & Schramer, 1994; Garfield, 1993). The problem with this approach is that one or two members typically do most of the work and allow the others to slide by with minimal contribution.

In addition to the group grade some teachers also provide an assessment tool that has no influence on grades but serves as a vehicle to vent frustration, analyze experiences, and help future students. Based on observation, Gergits and Schramer (1994) claim that this type of assessment tool is best applied at the end of the project in the form of a questionnaire or a written assessment memo. The main theme in the memos is their resistance to and accommodation of conflict. In this study students revealed their gradual adjustment to the process that required them to set aside their individual goals.

Assessment means more than just assigning grades. In a collaborative classroom, assessment means evaluating whether the students learned what was intended, the effectiveness of learning strategies, the usefulness of materials used in a task, and whether future learning is needed and how to realize that learning (Tinzmann & Jones, 1990). Assessment provides educators with data for improving their teaching methods and for guiding and motivating students to have an active role in their own learning. An extremely high value is placed on our assessment and that is what drives student learning throughout the course (Field-tested Learning Assessment Guide, n.d.). If our choice of

assessment technique is what drives student learning, we can imagine how detrimental it would be to misalign assessment techniques. The techniques we choose could send the wrong message to our students about what we want them to take from the course.

In 1994, Sparapani examined what teachers in collaborative classrooms were actually doing we saw that there was usually a combination of group and individual grades assigned, or individual grades assigned with some extrinsic reward for the group. Cramer (1994) purports that a combination of individual and group grades can achieve the goals of collaboration without sacrificing individual accountability. Two types of assessment are integral to the collaborative learning classroom: assessment during process and assessment of product.

Conflict can be seen as opportunity once student groups reach interdependence. It is an absolute necessity if groups are going to avoid 'group-think' restrictions. Group-think is the accumulative knowledge and thought process shared by the entire group. The danger of group-think is the loss of individuality (Heuer, n.d.) and the loss of opportunity to learn from each member's unique thoughts and perceptions. Most group-think individuals have a loss of responsibility (Group-think, n.d.) and rely on the group for decision making and creative idea generation. To avoid conflict students relinquish the generation of creative original ideas and settle for basic standard solutions that do not truly satisfy anyone. If students cannot make it through the first stage of group development and get beyond their hesitation and conflict avoidance they will sacrifice their opportunity to be academically challenged.

Students need to understand that they are linked together in a way that ensures that they all succeed together. Each student may have a different role, but that role must be crucial to the group process. Another factor to consider is the designation of roles within the group. Throughout the course of group development roles are naturally assumed. However there is also the option of assigning specific roles such as ‘encourager’, ‘checker’, ‘summarizer’, ‘elaborator’, ‘recorder’, etc. Assigned roles may be beneficial for the teacher during assessment of the group (Joubert, n.d.). By having designated roles, teachers can specifically evaluate each individual's contribution in accordance to their previously established criteria. The danger with assigning roles becomes locking students roles that are unnatural and uncomfortable. This may provoke negative attitudes and defensiveness associated with group work. Group work is most effective when it is sequenced and structured, student learning prepared in stages, and group skills have been taught and practiced according to Farivar (1994).

#### *Assessment Techniques*

Wiersema (2000) proposes two effective techniques of Collaborative Learning; Group/peer evaluation and In-class peer evaluation. The Group/peer evaluation technique utilizes the portfolio format in which a group would hand in two types of reports: a team report, written collaboratively, and individual team member reports written alone and viewed only by the teacher. Both types of reports should include a letter grade and a full justification for that grade. When grading the individual team members the following elements could be included: participation, punctuality, respect, honesty, ideas, creativity,

and commitment preparation. Another effective form of assessment would be the In-class peer evaluation technique. If there is a group presentation in front of the class the teacher can ask a handful of students that are not presenting to do the evaluation. It is essential that standards are set clearly before this type of assessment. A spreadsheet with specific elements like fluency, information, confidence, teamwork, etc. and an area for justification would be a good way to encourage unbiased grading. Another idea would be to require students to organize their information gathering or at least keep track of what each group member has found.

The Group/peer evaluation technique would work for almost any type of group assignment while the In-class peer evaluation technique would work best for live group presentations. These methods are proven effective assessment techniques according to Wiersema (2000) that can be built upon to fit the goals and schema of each different classroom. For example, if one of the goals was to promote class involvement, the In-class peer evaluation could be extended from a handful of peers to the entire class. If one of the goals was to increase individual student drive and avoid group think, the weight of the individual grade could be more significant than that of the group grade i.e. (70% individual – 30 % group vs. 50% individual – 50% group). The assessment technique must be congruent with the course goals.

#### *Assessment Time Line*

Assessment performed during the group process will depict a more accurate picture of contribution and reflection. Periodic evaluations will also enable the group to

redirect their actions if they can specifically determine the areas that need improvement. This could be very beneficial in keeping group members on track and keeping the whole group focused on the task at hand. Enerson (1997) suggests that the evaluation taking place during the process can be structured around two points: effectiveness and efficiency. One type of evaluation format would be a questionnaire that focuses on method i.e. (we are using the scientific approach v. shooting from the hip; we are being cooperative v. divisive, etc.) and on process (everyone is making equally significant contributions v. a few people are not contributing at all). The key to assessment during the process is recognizing areas that are strong and areas that need improvement and then generating solutions for facilitating goal reorientation.

Another alternative to just using end-of-process evaluation would be Continuous Assessment. If assessment is continuous students will be able to reflect on their experiences and do an in-depth evaluation of the group process. This type of reflection at every step of the process will allow them to make immediate changes and dramatically increase their group efficiency. Some of the formative and summative types of assessments suggested by T.R.A.C.S (BSCS, n.d.) were journals, observations, interviews with students, self-reflection, checking understanding exercises, and lesson evaluations

#### *Assessment Tools*

Recently software programs have been developed to address the challenge of organizing and assessing cooperative learning. One example is 'Zebu', a software tool designed for constructing online collaborative learning projects. In this particular

program project pages give the teacher a record of student thoughts as well as their finished assignments. Every project template includes questions to answer and feedback sections in which students review their classmates' material and respond with constructive comments. The teacher can use these sections to gauge individual progress, judge mastery, and provide direct feedback to students. Jackson (1999) states that this process of giving and receiving critiques has a strong motivational effect.

Portfolios represent one of the many tools available for allowing the student to demonstrate knowledge. For the teacher using portfolios the primary goal is to examine student work and use those observations to influence instruction. King and Campbell (1998) report that teachers that have used portfolios in their classrooms have experienced many valuable assets such as looking at student work through a different "lens", using student work to plan next steps for instruction, gaining a better understanding of the prior experiences of their students, diagnosing student capabilities, using portfolios as a means for teachers to assess instruction as well as student growth, and realizing the effect of student reflection on learning.

It is important for the teacher to clearly explain the objectives and task goals within the context of the overall course goals. Often students can even participate in helping establish the goals and objectives. If students have an active role in setting up these goals they will be more likely to appreciate the value and take ownership in their education.

### Conclusion

For cooperative learning the most inclusive and effective assessment tools incorporate evaluation of the process and of the outcome or product. When evaluating the process group participation, shared responsibility, quality of interaction, and roles within the group should be considered. To evaluate the outcome or product one should look at the organization, content accuracy, research, creativity, and presentation mechanics.

Assessment in the collaborative classroom should be flexible and change in response to course goals and student progress. Cooperative learning allows students to take an active role in learning, develop their interpersonal relations, and develop critical reflective thinking skills. Providing a collaborative classroom enables teachers to discover students' strengths, build respect for students' work, and increase the effectiveness of their pedagogy. A combination of individual and group grades should be given to reflect contribution and achievement throughout the entire collaborative process.

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