Collaborative Peer Evaluation: Best Practices for Group Member Assessments

Lisa E. Gueldenzoph
North Carolina Agricultural and Technical State University, Greensboro

Gary L. May
Clayton College and State University, Morrow, Georgia

As collaborative or team-based projects become more popular in both secondary and post-secondary classrooms, instructors are looking for ways for group members to effectively evaluate one another. Constructing effective evaluation tools can be a daunting task. As shown by a review of literature, best practices include (1) building a foundation in the classroom that supports collaborative evaluation, (2) creating effective evaluation tools by articulating specific criteria and ensuring honest student participation, (3) implementing formative feedback during the collaborative experience, (4) formulating summative feedback at the conclusion of the experience, and (5) assessing the collaborative evaluation process.

Keywords: Peer evaluation, assessment, collaboration

COLLABORATIVE SKILL is a prerequisite for most business jobs today. A quick glance at the classified advertisements confirms that companies seek employees who work well in group environments, who are able to take leadership positions, and who can be effective team players. For these reasons, collaborative learning has evolved in both secondary and post-secondary classrooms. This evolution is supported by post-modernistic and constructivist learning theories, which suggest that the role of the instructor should shift from the "sage on the stage" to the "guide on the side." Thus, instructional strategies are moving away from "lecture and learn" and toward "collaborate and create." This shift is based on the principle that effective learning requires students to be actively involved in social learning contexts, i.e., group projects. However, one of the instructional hazards of group projects is evaluation.

9

How should students be assessed for their participation in group projects? One potentially effective method is peer evaluation.

Peer evaluation is defined by Pond and Ul-Haq (1997) as "an assessment methodology that allows students to provide input into the assessment procedure through evaluating each others' performance in out-of-class learning activities, with control of the final grade remaining with the teacher" (p. 331). In theory, peer evaluation appears to be an effective method of collaborative assessment. However, as with many instructional endeavors, putting theory into practice can be complex. This article reviews the literature on peer evaluation to identify some of the best practices.

Several researchers have provided both theoretical and practical applications for the effective use of collaborative learning (Crews & North, 2000; Gardner & Korth, 1998; Gueldenzoph & Wilson, 1997; Monteith & Shelton, 1996; Smith, 1998; Wilson & Gueldenzoph, 1998). Additional authors have provided valuable research and procedures on the assessment and evaluation of group projects (Levi & Cadiz, 1998; Smith, 1998; Webb, 1993). However, many faculty also value the evaluative input of the student group members themselves (Beatty & Haas, 1996; Sherrard & Raafat, 1994). Few studies have focused specifically on the peer evaluation process in business communication courses. However, one important study was conducted by Chalupa, Chen, & Sormunen-Jones (2000) who tested the reliability and validity of their self-created group member rating form and found it to be very effective. Practitioners seeking to validate their own self-created assessments would be wise to use Chalupa et al's approach.

Using intra-group peer evaluation forms similar to the one in Appendix A, students are able to evaluate the participation of fellow group members. But creating an effective peer evaluation form can be a difficult task. Specific criteria should match the objectives of the particular course or group project. A comprehensive review of related literature resulted in a list of several best practices in creating such forms. Specifically, before implementing peer evaluations, instructors should consider how they will build a solid foundation for incorporating peer evaluations into their

classrooms as well as how evaluation tools will be created to artic-ulate criteria, ensure honest student participation, and implement both formative and summative feedback processes. Finally, meth-ods of assessing the evaluation process need to be addressed.

Build the Foundation

Critics may question why students should evaluate their peers. Is it not the instructor's responsibility to provide instruction, assign learning activities, and assess students' performance of those activ-ities? But when the learning activities take the form of group proj-ects that often require substantial out-of-class collaboration, how does the instructor know who did the work? Who better to evalu-ate students' performance in group activities than the group mem-bers with whom the student works (Johnson, 1993)? Additionally, students must be prepared to both give and receive constructive feedback in the workplace. Using peer evaluations helps students relate to and practice for real-life experiences. Before peer evalua-tion tools can be effectively used in the classroom, the instructor should build the foundation. Students must be provided a clear understanding about the who, what, when, why, and how of the collaborative experience as well as the assessment process.

- Exactly who (which students) will evaluate them?
- What does the evaluation include?
- When during the group project will the evaluation be done?
- Why are their peers evaluating them?
- How will their peers' evaluation affect their grades?

   Without answers to these questions, students will not be able to evaluate each other effectively nor will they feel like the evalua-tion process is a fair assessment. This foundation is crucial to the success of the peer evaluation process. Building upon this founda-tion, instructors must then create effective evaluation tools that specifically articulate the evaluation criteria.

Create Effective Tools

Johnson (1993) suggests that the students themselves should develop their own peer review criteria. After understanding the

activity and the goal of the group, students may take more respon-
sibility for their actions if they are given the duty of defining how
they will ultimately be assessed. Smith (1998) suggests that when
establishing a formal collaborative experience, faculty should cau-
tiously configure five basic elements of cooperative learning: (1)
positive interdependence (ability to work well on an assigned task
and share their work with other group members), (2) individual
and group accountability, (3) face-to-face interaction, (4) team-
work skills, and (5) group processing.

   If the students are not given ample instruction on effective
group collaboration, they may not perform well cooperatively
(Webb, 1993). Yet the group process as described by these criteria
can be very subjective. How is interdependence quantified? And if
it can be quantified, will different group members evaluate the
same person's accountability equally? The answers to these ques-
tions are murky at best. However, rather than copying generic
evaluation forms from varied sources, instructors should tailor
their evaluation tools to the specific purpose, goal, and criteria of
the collaborative experience. These factors can be accomplished
by carefully articulating the evaluation criteria.

Articulate Evaluation Criteria

In order for peer evaluations to be effective, they must be clearly
articulated, and the assessment items must be measurable (Webb,
1993). For example, the statement *"Was the student an effective
group member?"* is not quantifiable. Students posed with this ques-
tion would most likely answer it based on whether or not they
liked the group member. A better question would be to ask *"Did
the group member complete his/her assigned tasks on time?"* and to
provide a response scale ranging from "all the time" to "never."
However, Mellon (1984) suggested that qualitative assessments
also should be taken into consideration when using peer evalua-
tions. The use of either unstructured interviews or open-ended
essay questions such as *"Describe the group member's ability to com-
plete assigned tasks"* allows peer evaluators not only to assess their
group member's work but also to support their evaluation with

evidence. As another example of qualitative assessment, Rafiq and Fullerton (1996) found student journals to be a valuable source of self-evaluation.

A comprehensive review of several recent peer evaluation studies (Beebe, 1995; Conway, 1993; Crews & North, 2000; Johnson, 1993; Keaten & Richardson, 1993) indicates the following criteria were typically used for peer evaluations:

- Commitment to the group (attendance at both in-class and out-of-class group meetings)
- Ability to deal constructively with conflicts that arise (communicates with the team)
- Active participation in decision-making process (devotes time to the project)
- Accountability for assigned tasks (do they do what they are supposed to do and is it quality work?)
- Assumption of initiative or leadership role (actual participation and interest in the process)

Again, it is important to emphasize that peer evaluation tools should be tailored to the specific collaborative project and focus on the purpose, goals, and criteria of the learning experience. For example, in a business communication class, an individual component of the larger group experience may be to write an article summary for the group. Including a statement on the evaluation tool such as *"Was the group member's article summary written well?"* or *"Did the group member's article summary benefit the group's goal?"* may provide more specific assessment results than a generic question that identifies the group member's *"contributions"* to the group. Tailoring the evaluation to the specific project can be very effective.

Ensure Participation

Once effective peer evaluation tools are created, it is important to ensure that they are used appropriately. Even a perfect tool can result in skewed results if students give each other high scores regardless of their participation level. One of the greatest fears of both instructors and motivated students alike is the social loafer,

the student who looks forward to group work because it is a free ride (Levi & Cadiz, 1998). Of course, if the loafer becomes a considerable obstacle to the group, the other team members may share their concerns with the instructor. But often, students either do not wish to criticize each other on evaluation forms, or they give each other positive evaluations to ensure their own good grades (Lejk, 1996). This situation requires the instructor, as the "guide-on-the-side," to be aware of group dynamics and prompt lazy students to become active participants in the group experience. Sometimes the social loafers are not lazy, but rather, the other group members may intimidate them. One approach to overcoming this problem is to require each group member to be responsible for a different part of the project.

Incorporating specific types of evaluation tools can also increase students' honest participation in evaluation assessments. For example, in a research study conducted by Levi and Cadiz (1998), university students used behaviorally anchored scales to evaluate each other's performance in group projects. The researchers defined their scale as a method of assessing students' performance that prompts the evaluation of a student's actual participation rather than unrelated factors such as whether or not they liked the group member. The researchers found that when the evaluative criteria included only questions relating to the group's common goal, students provided accurate assessments (Levi & Cadiz, 1998).

Use Formative Evaluation

If peer evaluations are left until the end of the group project (summative evaluation), students are not able to re-direct the group toward a more successful approach during the group experience. Therefore, peer evaluations should be formative as well as summative. Because a group project typically involves a series of steps or tasks that are performed, the group dynamic changes throughout the progression of the group experience. With each group meeting, members define individual roles and assign the responsibility of various tasks, and the group's product takes shape.

With each step in this process, the members may experience conflict, negotiate differences, and redefine their goals.

Because the process is so subjective, Crews and North (2000) suggest that formative evaluation should be conducted throughout the collaborative experience. By receiving continual feedback on their performance, group members can modify behavior as necessary to assure their end product (and their grade) is representative of their efforts. Feedback is a vital element in the group dynamic. In this respect, formative evaluation can be an influential element for the group. If feedback is not provided during the group process, the group is doomed to struggle with their problems without the necessary tools to resolve conflicts. To help students provide each other with feedback, a formative evaluation should ask the group members to answer such questions as:

• How effective is the team?
• How can the team improve?
• What needs to change to meet the team's goal? (Crews & North, 2000, p. 1)

Depending on the length of the group project, these questions may be re-assessed throughout the project's duration. Continual reflection upon the team's effectiveness will help the group clearly articulate their goals and work through problems as they arise. Periodic formative evaluation, especially during lengthy group projects, can facilitate the group's productivity as well as lay a foundation for effective summative evaluations.

Use Comprehensive Summative Evaluation

Traditionally, the instructor evaluates the group's final product, like an oral report or written document. But without the input from the individual group members, the instructor can evaluate only the product, not the process that was used to create that product. Crews and North (2000) indicate that a combination of product evaluation by the instructor, peer evaluation by the group members, and self-evaluation by each student is necessary to obtain a comprehensive summative evaluation. In one study (Freeman, 1995) a comparison of the students' peer evaluations of

other groups' presentations and the instructor's evaluations demonstrated no significant difference in average scores of students' work. However, this study did not incorporate intra-group peer evaluations.

Assess the Evaluation Process

After completion of the collaborative experience and the peer evaluation, feedback from students about the effectiveness of the evaluation process and tool(s) can be very helpful. This feedback helps determine if students perceived it as fair and equitable. Research studies (Greenan, 1997; Keaten & Richardson, 1993; McDowell, 1995; Strachan & Wilcox, 1996) indicate that students find peer evaluations to be a fair assessment tool for group projects, and they often find completing peer evaluations to be an effective learning activity in itself (Orsmond, 1996), especially when they conduct both peer and self-evaluations (Brown, 1996). Keaten and Richardson (1993) found that even those students who did not favor group projects as learning activities indicated that peer assessment was a valid means of determining student achievement. However, in one particular study of college business students, the students indicated that, although they enjoyed working in groups, they were not comfortable with either the self or peer evaluations (Humphreys & Greenan, 1997). It was not clear whether the students were provided with the evaluation criteria prior to the group activity, but researchers did conclude that peer evaluations are important to prepare students for the feedback they will be expected to give and receive in the workplace.

Appendix B provides a checklist that summarizes best practices to be considered when one uses peer evaluations.

References

Beatty, J. R., & Haas, R. W. (1996). Using peer evaluations to assess individual performance in group class projects. *Journal of Marketing Education, 18*(2), 17-28.

Beebe, S. (1995). *The competent group communicator: Assessing essential competencies of small group problem solving.* Paper presented at the Annual Meeting of the Speech Communication Association (81st, San Antonio, TX, November 18-21).

Brown, S. (1996). Assessing individual performance on group projects. *Focus on Learning Problems in Mathematics, 18*(4), 1-7.

Chalupa, M. R., Chen, C. S., & Sormunen-Jones, C. (2000). Reliability and validity of the group member rating form. *The Delta Pi Epsilon Journal, 42*(4), 235-245.

Crews, T. B., & North, A. B. (2000). Team evaluation (Part 2 of 2). *Instructional Strategies, 16*(2), 1-4.

Conway, R. (1993). Peer assessment of an individual's contribution to a group project. *Assessment and Evaluation in Higher Education, 18*(1), 45-56.

Freeman, M. (1995). Peer assessment by groups of group work. *Assessment & Evaluation in Higher Education, 20*(3), 289-300.

Gardner, B. S., & Korth, S. J. (1998). A framework for learning to work in teams. *Journal of Education for Business, 74*(1), 28-33.

Greenan, K., Humphreys, P., & McIlveen, H. (1997). Developing transferable personal skills: Part of the graduate toolkit. *Education + Training, 39*(2), 71-78.

Gueldenzoph, L. E., & Wilson, K. S. (1997). Teaching collaboration in a technology-based environment. *Instructional Strategies: An Applied Research Series, 13*(4), 1-6.

Humphreys, P., & Greenan, K. (1997). Developing work-based transferable skills in a university environment. *Journal of European Industrial Training, 2*(2), 63-69.

Johnson, K. F. (1993). *Team peer evaluations: A student-generated quantitative measurement of group membership performance.* Paper presented at the Annual Meeting of the Association for Education in Journalism and Mass Communication (76th, Kansas City, MO, August 11-14).

Keaten, J., & Richardson, M. E. (1993). *A field investigation of peer assessment as part of the student group grading process.* Paper presented at the Annual Meeting of the Western State Communication Association (Albuquerque, NM, February 12-16).

Lejk, M. (1996). A survey of methods of deriving individual grades from group assessments. *Assessment & Evaluation in Higher Education, 21*(3), 267-280.

Levi, D., & Cadiz, D. (1998). *Evaluating team work on student projects: The use of behaviorally anchored scales to evaluate student performance.* ERIC Document Reproduction Service, ED 424250.

McDowell, L. (1995). The impact of innovative assessment on student learning. *Innovations in Education and Training International, 32*(4), 302-313.

Mellon, C. A. (1984). Group consensus evaluation: A procedure for gathering qualitative data. *Journal of Instructional Development, 7*(1), 18-22.

Monteith, M., & Shelton, K. (1996). Co-operation and independence: Two sides to learning. *Adults Learning, 7*(9), 239-240.

Orsmond, P. (1996). The importance of marking criteria in the use of peer assessment. *Assessment & Evaluation in Higher Education, 21*(3), 239-250.

Pond, K., & Ul-Haq, R. (1997). Learning to assess students using peer review. *Studies in Educational Evaluation, 23*(4), 331-348.

Rafiq, Y., & Fullerton, H. (1996). Peer assessment of group projects in civil engineering. *Assessment & Evaluation in Higher Education, 21*(1), 69-81.

Sherrard, W. R., & Raafat, F. (1994). An empirical study of peer bias in evaluations: Students rating students. *Journal of Education for Business, 70*(1), 43-48.

Smith, K. A. (1998). Grading cooperative projects. *New Directions for Teaching and Learning, Summer, 74,* 59-67.

Strachan, I. B.,& Wilcox, S. (1996). Peer and self assessment of group work: Developing an effective response to increased enrollment in a third year course in microclimatology. *Journal of Geography in Higher Education, 20*(3), 343-353.

Webb, N. M. (1993). *Group collaboration in assessment: Competing objectives, processes, and outcomes. Project 2.1: Designs for assessing individual and group problem solving. Effects of group characteristics on groups and individual performance.* National Center for Research on Evaluation, Standards, and Student Testing, Los Angeles, CA,ERIC Documentation Reproduction Services, ED 376215.

Wilson, K. S., & Gueldenzoph, L. E. (1998). Collaborative communication methodology for a technological world, *1998 NJBEA Observer,* New Jersey Business Education Association, 1-10.

Address correspondence to Lisa E. Gueldenzoph, 316 Merrick Hall, Department of Business Education, North Carolina A&T State University, Greensboro NC 27411 (e-mail: lguelden@ncat.edu).

Appendix A
Sample Peer Evaluation Form

BUSINESS COMMUNICATION: GROUP PRESENTATIONS
Peer Evaluation Form

Group Member's Name:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Attended every group meeting (both in and out of class).	5	4	3	2	1
2. Contributed greatly to the construction of the report.	5	4	3	2	1
3. Did his/her homework; brought data to the group as assigned.	5	4	3	2	1
4. Participated in the organization of the report's content/layout.	5	4	3	2	1
5. Shared his/her perspectives/opinions during group discussions.	5	4	3	2	1
6. Assisted in the editing/proofing/revising of the manuscript.	5	4	3	2	1
7. Helped resolve group conflicts that arose.	5	4	3	2	1
8. Took a leadership role in the group's interpersonal dynamics.	5	4	3	2	1
9. Completed his/her fair share of the workload.	5	4	3	2	1
10. Was a positive influence on the group.	5	4	3	2	1

© 2000 Gueldenzoph

Appendix B
Checklist for Effective Peer Evaluation

☑ Make sure students understand the who, what, when, why, and how of the assessment process BEFORE the group project begins.

☑ Create a peer evaluation tool (or tailor an existing assessment) that is specific to the purpose, goals, and tasks of the group project.

☑ Be the "guide on the side" as a resource to students and to ensure whole group participation (and curb social loafing).

☑ Ensure the content of the quantitative peer evaluation form is measurable to discourage "popularity points." Also consider using qualitative evaluations as a form of self-evaluation.

☑ Use formative (mid-process) evaluations not as a grading device, but to keep the group on track and to resolve problems as they occur.

☑ Use summative evaluations that allow students to evaluate their own role in the group as well as each of their group members.

☑ At the conclusion of the group project and evaluation process, seek students' input to assess the overall experience.