

Preparing Students for Teamwork through Collaborative Writing and Peer Review Techniques

Engaging students in collaborative writing projects will help prepare them for the teamwork and problem-solving skills required by business and industry.

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Introduction

Traditionally, postsecondary students have been encouraged to complete assignments individually without collaborating or critiquing others' work. As Kenneth Bruffee said of being asked to learn collaborately, such students are being asked to engage in a process that "their entire education has not only left them unequipped to do, but has actually militated against" (642). However, collaboration is becoming a workplace reality, since organizational work generally builds on group efforts.

Deborah Andrews and William Andrews list four reasons why collaborative communication can be more successful than individual writing on-the-job. Work produced in a group benefits from the following:

1. The group brings a broader base of information and experience to the project.
2. Group projects tap more perspectives/viewpoints than individual ones. They are, therefore, more truly representative of a whole organization. Different points of view from different people in different parts of the organization result in a more realistic approach to solving communication problems.
3. Groups can work faster by dividing tasks. If properly managed, the total work can be divided according to experience, expertise, and talents.
4. The job of producing an understandable final report is easier because communication within the group duplicates the process of communication by the group to its intended audience. For instance, when an accountant on the team has to translate his or her expertise into understandable language for a human resource specialist, the final job of producing an understandable report for the board of directors becomes easier (199–200).

The "pooling of efforts" is perhaps the best means of completing projects on time, and time is essential in business and industry. In teamwork, each member must work toward the same goal: completing a project successfully.

As the face of the modern workforce changes, workers have a real challenge with group projects. Age, gender differences, and cultural diversity are now more prevalent in work teams. Attention to such differences should be considered when instructing college students. As Carolyn Warner stated in her keynote address at the 1994 American Vocational Association, "the new knowledge worker

will work in teams and we will be seeing smaller and more diverse teams in business and industry.”

Additionally, group interaction requires peer review. Generally, the instructor grades and evaluates, and students have no opportunity to review and evaluate their colleagues' work. However, students need to develop evaluative skills; furthermore, they often feel empowered if given the opportunity to critique another person's work. Certainly, if technical students are to work effectively in teams (or aspire to management), they must not only recognize their own writing flaws but also detect problems in others' work and be able to suggest needed changes diplomatically. Some students can be overly critical of others' work, which can be detrimental to a cohesive work environment. Conversely, other students hesitate to point out mistakes, especially in a friend's work. To maintain group cohesion and to ensure that everyone participates effectively, instructors need to establish unbiased criteria to evaluate and encourage constructive criticism.

Over the past decade, an impressive amount of research has been conducted on collaborative writing, ranging from pedagogy to theory to small group dynamics. For instance, the June 1990 issue of *The Bulletin of the Association of Business Communication* and the fourth quarter of the 1991 issue of *Technical Communication* are devoted entirely to collaboration. This article reviews selective research on collaborative writing and then shows how group dynamics and peer review techniques can be integrated into classroom group writing projects.

Research on Collaboration

In business and industry, writing is a group process, and as Lester Faigley and

Tom Miller discovered through a survey of 200 college-educated professionals, 73.5% wrote collaboratively (567). Lisa Ede and Andrea Lunsford reported that 87% of the 530 respondents surveyed write as a member of a team/group, and that 98% said that effective writing was “very important” or “important” to do their job successfully (151).

Research shows that group writing is “better” than individual writing in business and industry; that is, group work yields better results. Andrew DuBrin in *Essentials of Management* states that aside from being used to enhance the quality of decisions, group decision making is often used to gain acceptance for a decision. If people contribute to a decision, they are more likely to be committed to its implementation (118).

Many models for collaborative writing exist, including “division of labor/integrative team” (Killingsworth and Jones 210); “segmentalist/integrative” (Kanter 85); and “hierarchical dialog” (Ede and Lumsford 133). Lisa Ede and Andrea Lunsford describe seven organizational patterns of collaborative writing that essentially cover the range of models from one person planning and writing and group revising to every member of the group's having a writing and revising role (63–64).

To ensure successful group collaboration, group members must maintain cohesion. Unfortunately, conflicts often arise, and as Sandra J. Nelson and Douglas C. Smith point out, “boundaries of responsibility are unclear.” For instance, students may depend on one another for “performance of tasks” or “when group consensus is required for a method or communication process” (61).

Rebecca Burnett, in discussing the role of conflict in collaboration, argues that “substantive conflict,” that which

involves “considering alternatives and voicing explicit disagreements about both content and rhetorical elements such as purpose, audience, organization, support, and design,” should be tolerated because it helps groups to “explore alternatives, and . . . focus on potential problems” (534).

Carl Barnum and Saul Carliner recommend that “by studying your role in groups as well as the roles of others, by learning the positive and negative aspects of conflicts, by learning how to read non-verbal communication, and by understanding leadership styles, you can understand what contributes to an effective communication team” (114).

Group writing presents special challenges, and, in order to take full advantage of the benefits of the expertise and experiences of all group members, certain guidelines ought to be followed. Paul Anderson suggests:

1. Encourage debate and diversity of ideas.
2. In meetings, emphasize efficiency.
3. Provide detailed guidance for individual work.
4. Make a project schedule: set specific blocks of time for group and individual work (678–86).

Group writing can be a disaster if specific guidelines are not set and followed. The following guidelines which complement Anderson’s suggestions can greatly reduce the possibility of misunderstanding and miscommunication when working on team projects:

1. Make sure that all group members understand the assignment at the onset.
2. Assess/evaluate the expertise, experiences, strengths, weaknesses, and talents of each group member and delegate tasks accordingly.

3. Monitor individual/group progress to ensure that all members are aiming toward specific outcomes and deadlines.
4. Provide detailed guidelines for individualized work.
5. Show respect, tolerance, and understanding for age, gender, and cultural differences. The changing face or non-traditional nature of the modern American workplace means more women in the marketplace, more culturally different people, and people of different sexual orientations. Purposely mix student groups to be heterogeneous, not permitting friends to work together. Sensitivity, tolerance, understanding, and respect need to be stressed when discussing ideas. If some members are hesitant to express their ideas (because they are shy or because of cultural differences), ask politely for their viewpoint and acknowledge it. Remember that a team fails or succeeds together; it is up to the group members to collectively make it work.

Peer Evaluation

For students to work successfully on group projects, they should also be capable of effective peer evaluation. Peer evaluation helps students develop critical thinking and interpersonal communication skills. It also helps students become better writers as they increase their knowledge and gain confidence in critically evaluating their own work and that of their peers.

As organizations decentralize, they concentrate more on teamwork. Supervisors do less critiquing, and workers do more evaluating of their team members and team effort. Since most students have had little or no experience in peer

evaluation or collaborative activities, the instructor's guidance is often needed.

To encourage peer evaluation, instructors should provide students with criteria to evaluate each other's work. The criteria should cover content, structure, style, format, and document design. For instance, when students evaluate peers' reports, instructors should provide a checklist that prompts substantive answers, such as:

1. Confirm that the letter of transmittal is brief, concise, and in appropriate business letter format.
2. Underline the bottom line facts and figures in the executive summary.
3. Identify the audience and underline the purpose.
4. Identify the organizational pattern the writer uses to develop the report (i.e. comparison/contrast, argumentation, etc.).
5. List the major parts of the report.
6. Identify useful stylistic devices the writer employs (i.e. syntax, tone, vocabulary, etc.).
7. Relabel any graphics that are not clear.
8. Circle/correct any grammatical/mechanical mistakes.
9. List any secondary sources not appropriately referenced.

Such checklists are useful for grading and for judging how well students evaluate (grade) their peers.

Peer review can also be used when students make oral presentations. This keeps students alert and allows them to review important elements of speech giving. Students should understand that their speech grade depends not only on the instructor's assessment but also on

their peers' assessment. Again, objective criteria should be provided such as those shown in Table 1. Students should also have an opportunity for open-ended responses on such issues as distracting mannerisms or inappropriate language.

In one course taught in our department, mock job interviews are conducted in a "fish bowl" arrangement with students critically observing other students' interviews. All students are engaged at all times in one of three roles. If they are not being interviewed, they are on an interview panel asking questions, or they are conducting a peer review of the interviewee and the panelists simultaneously. Peer reviewers complete evaluation forms as they observe the interview process. After the evaluation process is completed, instructors need to screen students' comments/suggestions/recommendations for any that are excessively rude or inappropriate. These evaluations are then shared with the instructor, interviewee, and interview panel and are considered when grades are assigned.

As students critique their peers' work, they develop a sense of keenness and attention to details that we hope will carry over to their own work. Students often feel empowered when they are part of the evaluation process rather than just passive learners.

Classroom Procedures for Collaboration

Instructors can structure the classroom environment so that students become acquainted with team efforts as they exist in business and industry and understand how to foster a cohesive problem-solving group. Following are suggestions for implementing classroom collaboration that will have carryover for students in workforce collaboration.

Table 1. Peer Review of Oral Presentations (5 Presenters Evaluated on One Form)

Critique Sheet	Reviewer's Name _____														
	On a scale of 1 (no, the presentation was poor) to 5 (yes, the speaker did a very good job) rate the presenters on the following:														
	1. _____		2. _____		3. _____		4. _____		5. _____						
	Quite Poor	Very Good	Quite Poor	Very Good	Quite Poor	Very Good	Quite Poor	Very Good	Quite Poor	Very Good					
1. The subject was clear from the start of the presentation.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
2. The organizational pattern was clear from the start of the presentation.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
3. I understood the presentation.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
4. The speaker was poised and in control throughout.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
5. The speaker projected enthusiasm.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
6a. The speaker could be easily heard.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
6b. The speaker's voice varied in inflection and was not a monotone.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
7a. Visuals were visible.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
7b. Visuals were professional looking.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
8. Implications were made clear.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
9. Conclusions and summary were clear.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
10. I enjoyed the report.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
The following were done well: _____															
The speaker should avoid _____															
Next time the speaker should plan to _____															

Adapted from material by V. L. Hertz and F. Slaney, CTC/SIUC, Carbondale, IL.

A. Group Preparation

For groups to function effectively, instructors should brief students on group process and reasons for group failure. A good place to start is to discuss the useful roles that a conference leader or participant often assumes. Group roles can be divided into task roles versus group maintenance roles (Houp, Pearsall, and Tebeaux, 53–54). Some people assume one or more of these roles almost exclusively, but many people weave easily in and out of most of them. Certainly, one group leader cannot play all roles effectively, and in well-functioning groups, roles need to be shared so that tasks are accomplished efficiently within a warm group climate.

Task roles include:

Initiators—start the process and give ideas. They often propose or define the task or offer solutions to problems.

Information seekers—see where facts are missing. They solicit the group for facts related to the task at hand.

Information givers—provide data and relevant information.

Opinion seekers—canvass group members on their beliefs and opinions concerning a problem. They may encourage needed value judgments.

Opinion givers—volunteer their beliefs, judgments, and opinions. They help set criteria for problem solving.

Clarifiers—clear up issues confusing to the group by supplying additional information on interpretation or opinion.

Elaborators—further develop the contributions of others. They give needed examples, analogies, or additional information.

Summarizers—draw together ideas, opinions, and facts of the group into a coherent whole. (The leader needs to do this at the end of a session if no members do.)

As important as task roles are, so is the climate of the group. Some people are so task-oriented that they ignore the feelings and opinions of others. Group maintenance roles help build and maintain supportive group climate. They include:

Encouragers—respond warmly to the contributions of others. They encourage and reward group members for participating.

Feeling expressers—sound the group out for its feelings. Often displeasure with ideas or circumstances need to be brought out in the open and dealt with.

Harmonizers—step between warring members. They smooth ruffled egos and attempt to lift conflicts from the personality level and objectify them.

Compromisers—voluntarily withdraw their ideas or solutions in order to maintain group harmony and decision-making.

Gatekeepers—remain alert to blocked out members. They swing discussion away from forceful members to quiet ones, so that all members may contribute.

A self-assessment checklist of the task and group maintenance roles can be distributed to the students to check off if they tend to play these roles “usually,” “sometimes,” or “occasionally”. These self-assessment checklists can then be shared with group members to see how realistically self-assessment matches peer assessment. The instructor needs to monitor groups for group roles and for

smooth functioning and intervene only if problems occur.

B. Problem-Solving Methods

In the work world, a popular reason to call a group together is to solve a problem. Brainstorming is a method of problem solving carried out by a group in which people spontaneously generate numerous solutions to a problem without being discouraged or controlled. The many different viewpoints expressed in a group reflect a broader based knowledge than that produced by individual members. To achieve the maximum advantage of brainstorming, a session needs to be conducted properly. Andrew DuBrin lists the following rules for brainstorming:

- Enroll 5–8 participants (not too few, not too many).
- Allow everyone to generate alternative solutions.
- Discourage criticism, value judgment, derisive laughter, or sarcasm.
- Encourage freewheeling; welcome bizarre ideas.
- Strive for quantity versus quality.
- Encourage building on someone else's idea.
- Record each idea.
- Refine ideas after the brainstorming session.
- Choose one or two solutions to implement (113).

Although brainstorming produces many ideas, it is not a technique for carefully working out details or plans. In a more detailed solution to a problem, the instructor might recommend the following:

- Analyze all factors and address each logically.
- Consider input of every group member.
- View differences of opinion as a stimulus not a hindrance.
- Evaluate all suggestions to determine the implications for each course of action.
- Weigh alternatives.
- Isolate a solution, a desired outcome.

Classroom brainstorming for problem solving can be valuable experience for the world of work.

C. Collaborative Classroom Projects

A number of assignments can be done collaboratively. Of course, they must be restructured to reflect group efforts. Some topics that lend themselves to a group approach are instructions, reports, correspondence, interviews, and oral reports.

1. Students can be assigned to write a report (feasibility, progress, empirical, or proposal) as a team and to design the report's components for a combined audience (such as manager, technician, and president). Students first brainstorm to determine what content to include. Then each student in the group takes responsibility for one section of the report, but the report must be reviewed by all. The instructor may also have the group present the report orally to the class.
2. Writing descriptions of processes, procedures, or instructions is a vital part of business and industry and is usually done in groups. In fact, since many companies are seeking ISO 9000 Certification or are ISO 9000

Certified, employers expect entry-level employees to be able to document changes in processes and procedures or changes from continuous improvement or customizing of a product. With internationalization, companies that produce goods or services used by other enterprises to produce their own product must obtain ISO 9000 certification, a quality assurance model soon-to-be a necessity for marketing businesses regardless of size (Deming 1993). The critical concern is to ensure the preparation of technical workers for writing work instructions to meet ISO 9000 certification requirements.

Instructors can group students together in a project that reflects the students' majors or career choices. Students can write instructions on how to assemble a new technology or explain how a piece of machinery works. Students each write a specific section but must use a style and format similar enough to others in their group that the final work appears as if it is written by one person. A common format guide and style sheet need to be created for each type of report. All members review the writing and proof the final copy.

3. The instructor can set up scenarios, problems that require solutions. *The Wall Street Journal* and the business sections of newspapers are filled with descriptions of business problems. Students may not be aware of the scope of the problems in the business world and how to solve them. Yet they will be expected to derive solutions to problems on the job. For example, instructors can present case studies on customer complaints and have each group come to consensus

and then generate an appropriate letter to a disgruntled customer.

4. A group of students with similar career goals can be assigned to interview professionals in their career field and write a job description. For instance, a group of electronic technology students could interview different electronic technicians. They could ask a range of questions, including duties and responsibilities, types of writing performed on the job, or any special skills needed for the job. Students from similar backgrounds then could pool their notes and come to consensus on the consistent duties and responsibilities of the job and which would vary depending on the place of employment. This assignment also gives students an appreciation for what they are learning in college.
5. The multicultural workforce that students enter requires that they be aware of the nuances of the various cultural groups they will encounter in the marketplace. To help prepare them to succeed, instructors can assign students to investigate the specific cultural differences of a particular ethnic group such as language, food, social values/structure, religion, or festivals. Students could interview students or professors on campus to obtain the information or do library research. Students could combine their individual data into a collective report that examines distinct cultural differences between the Anglo-American culture and other cultures. Such knowledge is invaluable in the business world.

Sometimes students are not eager to participate in group projects. Conscien-

tious students are often negative about group projects or about receiving a group grade because they fear other group members will not do their part or do their part poorly, pulling down their grades or that of the group. The instructor needs to be sensitive to situations like this and grade accordingly. To counteract the likelihood of some students shrugging their responsibilities, a checklist should be distributed so that group members can rate each other's effectiveness and their contributions to the end product. A group member rating scale could include listening skills; speaking skills such as clarity, precision, and checking for understanding; openness; trust; feedback; participation; attendance; helping group maintenance; and overall effectiveness as a group member. An advantage of using this type of checklist is that differing grades can be assigned objectively to different group members, depending on their participa-

tion and quality of work. For students, the advantage of a checklist is that they can evaluate their own contribution and growth as a team member while assessing the competencies of their peers.

Conclusion

Elizabeth Tebeaux asserts that ultimately, collaborative assignments have two goals: (1) to improve an individual's writing through increased sensitivity to group dynamics and shared awareness of how his/her writing is perceived; and (2) to prepare students for work environments where different forms of collaboration occur (124). The group dynamic and peer evaluation techniques and exercises discussed in this essay can help instructors prepare students to participate effectively in the team writing that Terry Bacon regards as a "functional necessity" (4) in business, government, and industry.

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