



CREATING EFFECTIVE PEER REVIEW GROUPS TO IMPROVE STUDENT WRITING

Peer review plays an important role—both formally and informally—in our professional lives. We use it formally to control the quality of publications in refereed journals. We use it informally when we ask colleagues to look over and comment on our written drafts. If we extend peer review to all classrooms—not just composition and literature classrooms—we benefit our students as well as ourselves, especially when peer review occurs in the drafting and revising stages of paper development.

We can save time on final grading because the papers have been through at least one draft with feedback and revision. More importantly, as our students see how their words affect other people, they begin to see themselves as part of a community of writers and readers. As they learn to critique their own and others' writing, they are actively involved in the learning process, and they learn important course content while assessing what others have written. Peer review also helps students learn important skills of interpersonal communication.

Peer review groups can be set up a number of ways, depending upon the size of your class, the length of the papers, the layout of your classroom, and the amount of time you want to devote to peer review. You can usefully schedule reviews while students are planning their writing or after they have a draft. If your class time is limited, electronic peer review is an option, as discussed below.

Remember that when you ask students to do peer review, you are asking them to engage in a highly abstract activity: looking closely at a text in order to identify its strengths and weaknesses for the purpose of helping another writer improve the text. This is a complicated meta-linguistic activity, and most people are not naturally good at it. Regardless of the format you choose, to be successful you need to engage students intellectually with the activity and teach students how to review constructively.

STRUCTURING EFFICIENT AND ACCOUNTABLE PEER GROUPS

- During a term, you can move from less structured, more informal, reviewing to more structured reviews. Pairs are often a good way to begin. Once pairs of students become comfortable with each other, those pairs can be joined for groups of four. Pairs can also work well in very large classes or for very long papers. You can vary the notion of pairs by having two pairs exchange papers, with each pair writing a joint response to another pair's papers.
- A group of 3 to 5 students can review short papers (3 or 4 pages) in a 50-minute class period. Reviewers need printed copies of the paper, however, so remind students ahead of time that they are responsible for bringing copies.
- Groups can start on longer papers in class and finish up outside of class. You can check on their effort by requiring them to submit evaluation notes indicating the work they have done.
- Intact peer groups can function for the semester, for a series of related papers, or for individual assignments, depending on your needs and the dynamics of the group.
- Peer response worksheets (or more formal rubrics) help structure and keep peer review on task. Such worksheets wisely limit the number of criteria to no more than 5 or 6. If you have more, students tend to scatter their attention and their responses.

MODELING THE PROCESS SO PEERS KNOW WHAT TO DO

- Use class time to model a peer review session, using the criteria you have chosen. It is time well spent because it ensures that students understand the process and feel comfortable with it. You can use an overhead projector or hand out a model paper: one from a current student, one you've written yourself, or one from a previous semester. (Always obtain permission from the student before using a paper in your class for demonstration purposes.) A C+ or B- level paper sometimes works best because it isn't so good that students are discouraged and isn't so bad that students don't know where to start.
- Set the review context by having students recall the assignment (purpose, audience, genre, requirements). Ask students to identify criteria for success—what would make a good text of the sort assigned? What do they imagine you, the professor, will be looking for? Criteria can be listed on the board or distributed as written worksheets. The following sites provide good worksheet models:
- Remind students early on that it is the *writing*—not the *writer*—that is being evaluated. You want constructive interaction, and you want to defuse natural defensiveness.
- Explain the terminology they will be using. For example,
 - o What does it mean for a particular sort of text to be *well organized*?
 - o How might *academic or professional style* be characterized?
 - o How does a writer segment *results* from *conclusion* or *discussion* in a research report?
 - o What characterizes a clear *purpose statement*?
 - o How might *usability* be assessed in a lab protocol?
 - o How would stress-test data best be presented in *table format*?

People have very different definitions of these abstract constructs. Note that the terms are all metalinguistic: words about words. Without some intentional training, reviewers will not be working from the same definitions or understandings. Writers and reviewers need to develop a shared vocabulary of good writing.

- Peer review shouldn't focus exclusively on what is wrong or what needs to be improved. Students benefit from knowing what they have done well. Start by identifying some of the strengths of the writing. You might begin yourself by noting the nicely specific title and then ask students to comment on other strong features. Being positive at the outset makes the writer feel good, and it teaches the important interpersonal skill of giving positive feedback on another's performance.
- Have the students comment on the rest of the model paper; then discuss the comments. Show that responses must be backed with specific comments. Responses like "*This isn't so good*" or "*I liked this*" are not that helpful. However, comments like "*This paragraph doesn't fit into your thesis*" or "*You discuss genetic mutation for three paragraphs, but it isn't mentioned in your opening paragraph*" give the writer something to think about and work on. The most helpful comments identify a problem area, show why it is a problem, and suggest one or more ways to improve it.

ENCOURAGE SPECIFIC ACTIVITIES DURING PEER REVIEW

- Consider posing a combination of specific and open-ended questions for your student reviewers. For instance, you might ask them to identify the three main points of the essay and then ask them to explain why or why not the points are well supported with data, examples, or evidence. Or you might ask the reviewer of a lab report to identify the logical alignment of purpose, objectives, variables, measures, results, and discussion. Examples of open-ended questions include *“Is there information that is not relevant or that is contradictory? If so, point out ways it could be incorporated into the paper or explain why it should be omitted.”* Or *“What is the most convincing evidence in support of the main argument of the paper? Explain.”* Or *“How could the conclusion be strengthened?”*
- Consider asking students to take specific action during review:
 - o Underline the purpose statement.
 - o Put a star in the margin next to a particularly strong sentence.
 - o Bracket a paragraph that shows a strong logical argument.
 - o Put a wavy line under sentences that don’t make sense.
 - o Put parentheses around material that appears to be copied from source material without appropriate documentation.
- Separate review from editing. In most classes, review might be the most important task—asking broad questions about the strengths and weaknesses of a text and making suggestions for improvement. While editing is important, students should concentrate initially on what is most important to improving the content, logic, and structure of the paper. In addition, as students improve the content and flow of their papers, they are likely to attend to editing issues on their own as they polish their papers.
- Consider having students write review memos to the student author of the paper. The memo format will encourage students to offer high level commentary, as opposed to marking up several small errors in the text itself. The memo itself is an important kind of written communication, so you will be helping students develop useful writing skills as part of the peer review.
- Create incentives to encourage students to make useful comments. For instance, if students write down their critiques on peer review worksheets, you could collect these sheets and assign a grade or a check for completion. Or, you might encourage students to include acknowledgements within their work that identify reviewers who made important contributions.
- Remind students that they need not follow all peer reviewers’ comments; however, they are obligated to read them and consider them. If several reviewers are having problems with a particular area, the student should recognize that something needs to be done.
- Provide time for students to debrief and consolidate what they have learned. Discuss how differing opinions can show the writer how different readers understand a piece of writing. In fact, differing opinions can expand the writer’s view of the paper. Reviews always produce conflicting advice, and writers must then find the merit in conflicting opinions and reconcile the conflict in the ensuing draft.

USE TECHNOLOGY TO SUPPORT PEER REVIEW

- Email groups can work for large classes, and you can set up either small groups or pairs. The students can exchange papers in class or on email. Then, like other groups, they work from a peer response worksheet and email comments to the author.
- Microsoft Word's revision tools are worth learning. Students enjoy working with these tools (they work really well). *Track Changes* is widely used, so there is a continuing benefit, not only for the remainder of their college experience, but also when they enter the workplace.
 - o Under *Tools/Track Changes*, a set of tools allows a reviewer to mark up text by deleting, adding, and changing elements. Using this feature allows your students to review other students' drafts outside of class. The author can then review the suggested changes and accept or decline them.
 - o With *Insert/Comment*, the reviewer can insert pop-up notes into the text to highlight and comment on various elements. If the PC has a microphone, recorded voice comments can also be inserted into the text.
- A peer review session in the computer lab, using Word's *Track Changes* is useful. Writers can pull their files up on the screen, set the *Tools* to *Track Changes*, and play musical chairs, reviewing two or three other texts. Using *Tools/Options/Track Changes*, different reviewers can change the color of their comments, so the writer can see the responses of two or three different readers.
- Electronic reviews, using course management software (such as WebCT or Blackboard), provide a means for students to post or exchange work for review by other students.
 - o You might require each student to get two reviews on his or her own draft while giving two reviews on other students' drafts.
 - o Or you might set up teams for review, using the team tools. The teams would then have a discussion area (for posting drafts as attachments), convenient email, and a shared drive for storing and exchanging drafts.
 - o The same activities can be accomplished through regular email with attachments.
- Electronic reviews leave a useful record of the review activity. Students get to see how others review: what they comment on and what kind of help or encouragement they give. Good electronic review behavior can be modeled and inspected as part of learning.
- Some special software tools automate the process of getting and giving reviews. Calibrated Peer Review (CPR, a project developed under National Science Foundation funding) and automated essay evaluation are quite sophisticated systems that use computers to organize peer review or that give students feedback (based on latent semantic analysis). In automated essay evaluation, professors create models for specific writing tasks based on clear criteria. In CPR, students evaluate other students' essays according to set criteria. In both systems, the students do a lot of work with their writing, write multiple drafts, and work to align their writing to criteria, all before the professor sees the work. They "train" the computer with a model essay. Students then submit their work to the computer.
 - o Intelligent Essay Assessor: <http://www.knowledge-technologies.com>
 - o Calibrated Peer Review (NSF): <http://cpr.molsci.ucla.edu/>

CAVEATS

- While groups are working and you circulate throughout the room, refrain from commenting on papers because then the students pay attention to you and not to each other. When unsupervised, some groups turn into chat sessions. Here's where you can intervene.
- Although peer review can be helpful at various stages of writing, the earlier it happens in the writing process, the more likely the student will make substantive changes. Make sure you allow enough time for the task. The more complex it is, the more time it takes.
- Because some students don't know enough about grammar to be good editors, you can usefully circulate during review sessions to get a sense of grammar questions and problems. Near the end of the review session, you can ask students to discuss the most important grammatical or formatting problems. (Some instructors wait until after class and then send a brief email to students highlighting any important grammar issues.) You can also show how handbooks can be used effectively during editing sessions. Rather than correcting errors, students can be encouraged to discuss in their teams items that they notice that they think might be in error.
- Be clear about your pedagogical motivations. Some students don't like peer review because they see cooperating as weakening their academic standing, or they have had bad experiences earlier, or they may be shy. If peer review doesn't work well on the first try, don't give up. Often it takes several sessions for students to get the hang of it. Once they know they are accountable, sessions improve.

ASSESSING PEER GROUPS

- Have students attach a cover memo when they hand in their papers, explaining what they used from the peer review, what they didn't, and why. This is also useful if reviewers commented orally in class and did not write down their comments.
- If reviewers have written their comments for the writer, have students hand in peer review worksheets with their drafts. You can do a quick check of the contribution of each reviewer and see how much attention the writer paid to the reviews. Give a "critic grade" worth a few points to each reviewer.
- Have students fill out a review worksheet on their own papers before they submit them. Then they can compare their self-assessment to the feedback from their peers.
- Require that students assess their peer group, explaining who provided the helpful advice, what was helpful, what would improve the group, and whether the group should continue as constituted.
- Ask students to identify particularly good reviewers, and then have those excellent reviewers discuss their methods in class. If the work is done electronically, you might display a strong peer review to the class as a model (with permission of author and reviewer).

USEFUL SOURCES

<http://serc.carleton.edu/introgeo/peerreview/index.html>