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Author Berger, Virginia

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The Effects of Peer and Self-Feedback

Recent studies of the writing process have confirmed the pervasiveness of revision and the complexity of skills required to revise successfully. Teachers and researchers, looking for ways to improve revisions, have examined the effects of feedback from teachers, peers, or self on this process, but studies juxtaposing these feedback sources have not determined conclusively which is the most effective.

This study, conducted by a community college classroom teacher, was implemented to examine the effects of peer versus self-feedback on (a) the number and kind of revisions ESL students make and (b) their attitudes toward feedback and revision processes. The subjects of this study were 54 multilingual ESL students at Grossmont College, San Diego. Data for the research were collected from drafts of two student essays, writing questionnaires, and feedback evaluation forms. The results suggest that peer feedback is more effective than selffeedback in number and types of revisions students make and that more students prefer peer feedback.

L xtensive writing research in recent years has resulted in a description of writing as a complex cognitive process involving a recursive cycle of prewriting or invention, drafting, evaluating, and revising (Barry, 1980; Emig, 1971; Hairston, 1982; Pearson-Casanave, 1987; Raimes, 1983; Zamel, 1982). Revision is now considered an integral part of the entire writing cycle, said to occur each time the writer reviews her writing for evaluation and tries to resolve any dissonance between the intended and actual text by making changes (Della Piana & Endo, 1977; Fitzgerald & Markham, 1987; Murray, 1978; Nold, 1982; Ruszkiewicz, 1982; Sommers, 1980). Because of this new interpretation of revision, researchers have become more interested in it, and classroom teachers at all levels have required that their students write multiple drafts of their papers. However, basic writers and English as a second language (ESL) students have often had little success in making meaningful changes in their papers (Beach, 1976; Bridwell, 1980; Faigley & Witte, 1981; Heuring, 1985;

Perl, 1979; Raimes, 1985; Sommers, 1980; Zamel, 1983). This has prompted researchers to focus on factors that facilitate revision, one of which, feedback from either peers or self-evaluation, is the subject of this study.

Review of Literature

The three major sources of feedback on written work are the teacher, the writer herself, and peers. Teacher feedback, the traditional source, is in the form of either written responses to papers or oral responses in conferences or on tapes. Self-feedback, which helps writers become independent as they learn to critically evaluate their own writing, is most often conducted by having students either fill out a checklist or self-rating scale or respond to a series of open-ended questions about their intentions, problems, and intended changes (Beaven, 1977). Peer feedback, widespread in composition classes at all levels and for native speakers as well as ESL students, generally follows what Gere (1987) labels a semi-autonomous or nonautonomous format. An example of the former is the technique reported by Brady and Jacobs (1988) in which Brady's 4th and 5th graders met in heterogeneous groups of four (including ESL students) to share and respond to each others' story drafts. No specific guidelines for response were given, but for 5 to 6 weeks the children practiced how to make effective responses to journals and other writing projects in large groups. Nonautonomous peer feedback requires peers to fill out a prepared edit guide, checklist, or evaluation sheet when reviewing the draft (see examples in Beaven, 1977; Freedman, 1987; Pianko & Radzit, 1980; and for ESL students Frodeson, 1988; Hafernik, 1984; Moore, 1986). While each of these feedback sources has its advocates, the question still remains as to which is most effective under which circumstances.

Research that contrasts the effectiveness of peer and teacher feedback has been conducted at all instructional levels. Several of the studies with native speakers showed that there were no significant differences in writing ability when teacher feedback was compared with peer feedback (Fox, 1980; Myers, 1979; Pfeiffer, 1981; Pierson, 1967; Putz, 1970; Sutton & Allen, 1964; Weeks & White, 1982). Others reported higher gains by the peer feedback group than the teacher feedback group (Benson, 1979; Ford, 1973; Karengianes, Pascarella, & Pflaum, 1980; Lagana, 1972; Sager, 1973). Because different methods of peer feedback and teacher evaluation were used in each study, and other techniques such as individualized instruction and teacher conferencing were employed concurrently, it is difficult to generalize from this evidence.

Four experimental studies on feedback have been completed with ESL learners as subjects. Partridge's (1981) study involved a writing class of 17 ESL college students who wrote two compositions a week,

one peer evaluated and one teacher evaluated. The data indicated that teacher feedback was more effective than peer feedback in improving students' writing. The questionnaires, however, reflected a positive attitude toward giving peer feedback and a favorable, though not as positive, attitude toward receiving it. Chaudron's (1983) study was conducted during one quarter with two classes: one advanced and one high intermediate. Two essays were evaluated, half the class by peers, the other half by teachers. A comparison of the mean differences between the draft and revised essays for all students showed improvement, but there was no significant difference between teacher or peer-feedback groups.

Building on Chaudron's study, Zhang and Halpern (1988) and Zhang (1985) added proficiency level and type of writing improvement as variables, as well as self-feedback. The results of both studies indicated no effect of any of the variables on discourse quality. In the Zhang and Halpern study, grammatical/mechanical accuracy was better with teacher feedback at both the intermediate and advanced levels. However, teacher feedback was not significantly more effective than peer feedback in correcting grammatical problems in the second study, although it was more effective than self-feedback. The results of three of these four L2 studies thus favored teacher over peer or self-feedback. But as more studies were completed, it became evident that other factors such as proficiency level and area of writing being analyzed probably had an effect on the results.

The study reported here, conducted by a classroom teacher, was designed to help answer some of the many remaining questions about feedback and revision in ESL writing and, while doing so, to avoid some of the problems of classroom research. Although the subjects were community college students, the design could be adapted for use with other populations as well. This study focused on betweendraft revision on just two papers in an attempt to measure variables that were more directly related to the feedback treatment and to control for the many factors other than feedback that can influence writing quality. Rather than relying on subjective and sometimes inaccurate quality ratings of writing, this research was based on tallies of between-draft changes made in three different revision categories.

The feedback types and techniques in this study were different from other research in several ways. Teacher feedback was not examined directly because this was not part of the between-draft revision process used in the researcher's classroom. Instead, peer and self-feedback were compared to determine how sense of audience and negotiation within the group influenced revisions. The students were also given some training and practice in the feedback techniques before the research began to ensure that a functioning method was being tested rather than students' abilities to follow directions. Both the peer and self-feedback were structured but gave the subjects enough freedom of response that the feedback, not the guidelines themselves, was the variable. Through these different approaches, this study sought to determine what effect, if any, peer feedback as compared to self-feedback had on advanced ESL students' revision.

The Classroom Study

The study was designed to explore the following questions: 1) What effect does between-draft peer or self-feedback have on the number of revisions per 100 idea units students make in each of 3 categories—Linguistic Structures, Content, and Form—and in total?

2) What significant differences are there between how the peer and self-feedback groups revise?

3) What effect does topic have on the revisions?

4) What effect do these two feedback types have on students' perceptions of the feedback and revision process?

5) What relationship, if any, is there between the students' responses during the feedback assignment and the revisions actually made?

Subjects

The subjects of this study were 54 ESL learners at Grossmont Community College who were enrolled in ESL sections of English 110, the freshman composition class. Students had been placed in the classes either because of their scores on the Secondary Level English Proficiency (SLEP) Test (Educational Testing Service, 1980) or because they had passed English 103, the entry level grammar class, with a C or better. Students were further evaluated using the advanced level of the Structure Tests-English Language (Best & Ilyin, 1976) and an in-class writing sample. T tests comparing the STEL scores of the two groups indicated no significant differences between the groups.

Because intact class groups were used, the study did not control for demographic or ethnographic variables. There were 37 (69%) females (15 in Group 1; 22 in Group 2), and 22 students ([41%] 6 in Group 1; 16 in Group 2) were from Japan. Eighteen other nationalities were represented.

Both classes met twice a week for 80 minutes, had the same teacher, used the same text, and followed the same syllabus. Compositions from 46 of these students (23 from each group) were used as data for this research. Two students dropped, three either did not turn in one paper or only wrote one draft of it, and one blind student did not participate completely in the feedback treatment. To obtain the same number of subjects in each group, the data from one student whose background and scores were similar to another's in the same group were eliminated, resulting in 23 subjects in each group.

Procedures

Before data collection for this research began, students in both classes wrote a narrative paragraph on which they practiced the feedback technique assigned to their class. After completion of the next text unit, students in both classes wrote a problem-solution essay at home. The first drafts of these essays were reviewed either by peers or through a self-feedback method. In the peer feedback class (Group 1), students met in groups of three that had been assigned by the teacher to read and respond to each others' papers following the steps practiced (Clifton, 1980; Elbow, 1973; Jacko, 1978, Brady & Jacobs, 1988; Spear, 1988; Yoshihara, 1987). In the self-feedback class (Group 2), students answered questions about their first drafts on a teacher-prepared form (Beaven, 1977; Matsuhashi & Gordon, 1985). All students revised their first drafts at home and turned all drafts and a feedback evaluation form into the teacher at the next class meetings. At the end of the next unit students wrote a different problem-solution paper, following the same between draft feedback procedure. The researcher made two copies of the first and second drafts of all students' papers. All between draft changes were noted and coded by two trained graduate students following a standard research taxonomy of revisions (Faigley & Witte, 1984; Matsuhashi & Gordon, 1985). As teacher-researcher, I divided each paper into idea units, which are text divisions identified as one of the following: main clauses; full relative and adverbial clauses; sentence-initial or interrupting phrases; reduced clauses; post-nominal-ing phrases; absolutes; or appositives (adaption of Kroll's idea units by Johns and Mayes [in press]). I then tallied the number of revisions per 100 idea units in each category. T tests were conducted between the means of all the dependent variables, including the STEL scores and all the revision categories and totals to determine any significant differences between groups and topics.

More in-depth information was obtained from questionnaires, the evaluation forms filled out by the peer feedback groups (see Appendix A), and the self-feedback forms (see Appendix B). The students filled out a questionnaire on writing methods and attitudes toward peer and self-feedback both at the beginning and end of the semester. Any differences in responses were recorded and their statistical significance, if any, was determined. The student questions recorded on all the evaluation forms were divided into those dealing with A-Linguistic Structures, D-Content, and E-Form. These were totalled by category and group and their percentage of the total questions asked was calculated. These figures were then juxtaposed to the percentages of revisions actually made in the different categories. I divided the taxonomy of revisions in a pilot study of the types of revisions my students typically made. It is based on taxonomies previously designed by Faigley and Witte (1984) and Matsuhashi and Gordon (1985). The three major categories of the taxonomy are Linguistic Structures (A,B,C)—Faigley and Witte's surface changes; Content (D)—Faigley and Witte's microstructure changes; and Form or Content Slots (E)—parallel to Faigley and Witte's macrostructure changes. The Form category is further divided into Hoey's (cited in Johns, 1986) problem-solution slots of *situation, problem, solution,* and *evaluation.*

Results

The descriptive data reveal that in both groups more revisions were made in the Linguistic Structures category: 66 and 65% of the total mean in Group 1 and 59 and 69% of the mean in Group 2 (see Table 1). The second highest number of revisions was in Content, and the lowest was in Form. The total number of revisions was higher for Group 1 but T test results indicate that the only significent difference between the feedback groups was in two categories, Linguistic Structures, Topic 1 (p<.05) and Form, Topic 2 (p<.01).

Although a significant difference was indicated between topics in Linguistic Structures (p = .05) and in total number of revisions (p = .05), the topic effect was confounded by the fact that there was a time lapse between topic assignments. Practice, not topic, therefore, could have been the variable actually tested.

Treatment did not seem to affect students' attitude toward their writing ability because both groups felt that their ability had increased. Students' responses on the writing questionnaires did, however, reveal significantly more confidence in whichever feedback method they had been exposed to the most.

Students' revision questions on their feedback forms showed a pattern that differed from the revisions they actually made. In the peer feedback group, over half of the revisions made were in Linguistic Structures, but on the feedback forms less than a third of the students' comments dealt with linguistic Structures. The students in the self-feedback group indicated an almost equal concern with all three types of revisions when they filled out their forms. Their actual revisions, however, were more often made in Linguistic Structures. The data therefore do not point to a positive relationship between students' reseponses during feedback and the actual revisions they make on their second drafts.

Table 1 Mean Number of Revisions Made by Students in Peer and Self-Feedback Groups

Revision Category and topic	Feedback type	
	Peer (1) $(n = 23)$	$\frac{\text{Self}(2)}{(n=23)}$
Structure (1 AC)		
X SD	43.00 30,50	$32.35 \\ 19.00$
Structure (2 AC)		
X SD	48.09 27.83	$45.15 \\ 28.90$
Content (1 D)		
$\bar{\mathbf{X}}$	$10.48 \\ 10.67$	$14.47 \\ 10.76$
Content (2 D)		
X SD	$14.48 \\ 13.86$	$14.52 \\ 13.66$
	15.60	13.00
Form (1 E) X	11.57	7.78
SD	21.08	10.69
Form (2 E)		
$\bar{\mathbf{X}}$	11.70	5.13
SD	10.98	5.46
Total Revisions		
X	65.09	54.70
SD .	30.38	25.51
Total Revisions (2)		
X SD	74.39	64.78
SD	35.29	33.60

Note: Numbers following revision categories refer to Topic 1 or Topic 2. Letters refer to revision codes. \bar{X} = mean; SD = standard deviation.

Conclusions and Discussion

Due to the small sample and intact group design of this study, the results cannot be generalized to other groups, but they are valuable as indicators of certain trends in feedback effects and revision at all levels. They suggest an overall more favorable effect on revision when students use peer rather than self-feedback. The peer feedback groups did make more revisions than the self-feedback groups in every category except Content. Furthermore, one of the revision categories in which Group 1 scored significantly higher—Form—requires the highest level of revision skills. Student attitude also appears more favorable toward peer feedback because on the final questionnaire, 48% of those in the self-feedback group actually chose peer over self-feedback even though they had only tried this method once after little training.

The fact that the groups did not differ more can possibly be attributed to the composition of the intact groups. First, although as the placement scores and initial writing questionnaires indicate, the groups were similar in overall ability and other factors, the language/ nationality mixture was different. An unusually large number of the students in Group 2 were from Japan, many from the same language institute. This may have led to a more conscientious effort to revise than is normally observed with self-feedback, as well as more compliance with the method. In contrast, several students in Group 1 were less motivated and committed than is common, as was indicated by their absenteeism on peer-review days. This may have brought the two groups closer in terms of results.

One major question raised by this research, as with many of the previous studies, is whether or not a longitudinal study would yield different results. Gere (1987) contends that successful writing groups require months of preparation as students establish trust, develop collaborative skills, and learn to critique writing. Indeed, students in the study became more comfortable and adept at this process with each attempt. Therefore, if the data had been collected after more practice, the results may have favored peer feedback more. In addition, Beaven (1977) cautions that self-feedback can make students anxious if used extensively because it puts too much of a burden on them. Therefore, if self-feedback had continued in Group 2 over a longer period of time, the attitudes and revisions made might have been different.

The types of revisions students actually made followed the pattern of most basic writers. Most of the changes were made in the low-level Linguistic Structures category. Students added, deleted, or substituted vocabulary, articles, verb tenses, punctuation, or spelling. These revisions, however, do not reflect the students' greater or equal concern on their feedback forms with Content and Form category problems. Several explanations are possible. First, their reading skills may have developed faster than their writing skills so that they could identify the macrostructure problems but could not fix them (Rubin, 1983). Also, ESL students make a number of these low-level errors and have been taught to focus on them; so they have more competence in correcting these than the higher level errors, even though they may identify these. A third possibility is that the students did, in fact, make the higher level revisions they intended, in addition to Linguistic Structure changes. There were just more of these low-level changes.

Suggestions for Future Research

Future research should be designed to avoid some of the typical problems that I as a teacher-researcher encountered and to discover a definitive answer on which type of between-draft feedback is most effective under which circumstances. The intact group design that most classroom teachers follow limits the number of subjects, making it more difficult to arrive at significant statistical differences. Other variables difficult to control for are the length of the study and the demographic and ethnographic makeup of the classes. In the future, a longitudinal study of a larger population might give a more accurate picture of the effects of feedback type. This research could be replicated with different student populations so that such variables as students' proficiency level, first language, sex, and age can be tested as to their effect on feedback and revision.

Because the teacher as researcher has an obligation to cover the required curriculum and to meet her students' needs, certain results may be confounded, as the topic was in this research. Topic effect should be more accurately measured by assigning different topics to matched groups at the same time in the research process. Although I tested the peer and self-feedback techniques that I had found most effective for my students, other methods should also be studied and compared.

Designing, piloting, and training coders to use an instrument such as this experiment's taxonomy of revisions is time-consuming and often does not measure results accurately. If an improved taxonomy were translated into a computer program, all essay revisions could be coded and tallied by the computer to ensure more precision and objectivity. Although the classroom teacher's resources may be limited in this area, the use of audiovisual equipment would provide more complete qualitative data. Videotaping of both the peer response groups and think-aloud protocols for the self-feedback group would illustrate the feedback process more clearly. Taped student interviews following their writing of second drafts would also provide more data on how they used the feedback to aid revision.

Implications for Teaching

One of my purposes in undertaking this study was to determine whether or not peer feedback actually led to enough quality revisions to warrant the class time it required. Although the results tend to favor peer feedback, there is no clear answer. When teaching writing to all levels of ESL students, therefore, it might be most effective to use both feedback methods for stimulating between-draft revisions. In the beginning, when students are still establishing trust and learning to work cooperatively, it might be better to use a self-feedback form once or twice. After students know each other better and have learned how to respond to writing, they can begin meeting in peer response groups after training in this method.

Although there are many different techniques for peer and selffeedback, it is important that the ones used include supportive, challenging, and editorial feedback. Supportive feedback must be solicited by the writer, focus on what she is able to change, and be reinforcing, as the peer suggests at least two good things about the writing. Challenging feedback involves asking questions, which, at first, may be chosen from a set developed by the whole class. Editorial feedback, the guidance on grammar, punctuation, and spelling, should come last and be aimed at helping the writer turn in a polished paper (Spear, 1988). Students at all levels benefit from feedback, but teachers should adjust their expectations and the amount of guidance they give their students to their proficiency level, maturity, and back grounds. I, for example, teach much simpler and more specific feedback techniques with a lower level writing class.

This research confirms that our ESL students need practice in revising, especially at the higher content and form levels. They need to be exposed to the reading of different texts with a focus on the gist and intention of the writing. They need to be asked: What was the author's purpose and audience? Was she successful in accomplishing her goal? How did she do this? If the author was not successful, the students should revise the text, either individually or in small groups. As Elbow (1981) emphasizs, it is much less painful to rewrite someone else's text than it is your own. After this practice the gap should shrink between students' ability to detect and diagnose correctly problems in their own and others' writing at these higher levels and their knowledge of how to fix the problems.

Finally, it is important that ESL teachers as classroom reearchers at all levels continue to look for answers to these questions about feedback and revision. Each study builds upon the previous ones, either corroborating or refuting them or looking at different variables, until, it is hoped, a clear conclusion can be reached about which type of feedback will be most effective with which students in aiding which type of revision. ■

Appendix A

Writing Response Group Evaluation Form

1. SUMMARY:

How did your response partners summarize your paper?

Were their summaries different from the way you would summarize your paper?

If so, why do you think that happened?

2. STRENGTHS

What specific things did the reader like about the way you wrote your paper?

3. QUESTIONS

What questions for clarification did the listeners have?

What parts, if any, did the reader misunderstand? Why do you think he/she misunderstood?

4. REFLECTIONS

What did you find most helpful about sharing your paper with the response group? What specific changes will you make in the next draft to improve it?

Appendix **B**

Self-Feedback Form

Name ___

1. How long did you spend on this draft?

2. What do you like about the paragraph? (LIST AT LEAST TWO THINGS.)

3. What questions do you have about the paragraph? (AT LEAST TWO)

4. List and number two things that you want to add to improve your paper.

a. b.

5. Turn back to your paper and write in the number of each addition where you think it belongs.

6. On the back of this paper, write out the added material next to its number as you would like it to appear in the next draft of the paper. Do you need more information to accomplish this? What?

The CATESOL Journal ■ NOVEMBER 1990 ■ 31

7. What changes will you make in your next draft besides the additions listed above? (deletions, corrections, substitutions)

Answer after you have completed the second draft.

8. What changes did you make?

9. Did this self-feedback help you write a better paper? Why or why not?

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Virginia Berger is an ESL instructor at Grossmont College in El Cajon. She received her MA in linguistics with ESL specialization from San Diego State University in 1989. She also holds a Language Development Specialist Certificate and an MS in teacher education from USC.

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34 INOVEMBER 1990 I The CATESOL Journal