Effective Feedback: Guidelines for Improving Performance

Jody S. Underwood, Educational Testing Service, Princeton, NJ, 08541, jodysun@gmail.com

Abstract: Studies suggest that when the goal is to help students develop their abilities, feedback should not be presented along with an overall grade. The effectiveness of feedback will depend on features of its quality. We describe guidelines for giving effective feedback including giving overall grades, levels and functions of feedback, and practices in effective feedback. The guidelines are based on a review of research of feedback on writing as well as general theories of feedback. We learned that in order for students to benefit from feedback, they have to (1) notice it, (2) accept it, and (3) understand what to do with it. After reviewing the research, we end with recommendations that support these notions.

Introduction

Here is a little-known result: Even when feedback interventions improve performance on average, they actually reduce performance in more than *one third of the cases* (Kluger & DeNisi, 1996). In their meta-analysis of feedback interventions, Kluger and DeNisi showed that two out of five comments had a negative effect on performance. These results were based on 131 reports of experimental studies involving 12,652 participants in many different settings. The studies concentrated on feedback interventions for task performance, using selection criteria designed to focus on the effects a teacher, manager, boarding school counselor, or others can have on a learner.

How does this relate to providing feedback about performance on writing and other school subjects? We describe a framework for giving effective feedback including giving overall grades, levels and functions of feedback, and practices in effective feedback. The guidelines are based on a review of research of feedback on writing as well as general theories of feedback (e.g., Kluger & DeNisi, 1996; Black & Wiliam, 1998). Different terms are used for "feedback" in the review: commentary, response, feedback, and comments. We use these terms interchangeably.

Review of Research Studies on Response to Writing

The articles reviewed (see Table 1) focus on the types of feedback that can be given when there is asynchronous interaction between student and some external teacher, tutor, or coach. We will refer to case studies, surveys, and reviews of research carried out in either elementary, middle school, high school, or college classrooms. *Case studies* are typically experiments carried out in one or a few classes. *Surveys* are typically evaluations of questionnaires that students fill out in which they respond to questions about what they do with the feedback their teachers give them on their writing. *Reviews* are typically reviews of feedback research that sometimes go beyond the domain of writing feedback. We found that many reviews focus only on a theory of giving feedback without using any formal methods of measurement. Given that this type of traditional feedback is often used in classrooms at all levels of education, we found this to be a shortcoming in the literature, and did not review papers that only presented theory. This review does not cover rubrics or external assessments explicitly, nor does it summarize theories of feedback. It is also not a meta-analysis, in that it does not use quantitative methods to summarize the results of a set of studies.

Software is being developed today that gives students automated personalized feedback on their writing. Writing workshop spaces on the Internet offer suggestions *a priori* about how to successfully and clearly write an essay but do not offer personalized feedback. These literatures will not be reviewed here because our focus is not on new technologies. However, the designers of educational software and online environments may be particularly interested in the suggestions we offer since we are addressing best practices for responding to student writing and other work in what can be considered an asynchronous environment.

We learned that in order for students to benefit from feedback, they have to (1) notice it, (2) accept it, and (3) understand what to do with it. After reviewing the research, we end with recommendations that support these notions.

Overall Grading and Feedback

It is common to think that giving feedback to students about their writing in any form will foster improvement and that detailed feedback is an improvement to an overall grade because it gives students something to work with to improve their writing. However, studies show that feedback should not be given at the same time as overall grades. One problem with including both grades and feedback is that students view the main function of comments to be "grade justification" (McGee, 1999). Students also tend to ignore specific diagnostic comments when a grade is also included (Storms & Sheingold, 1999).

Table 1: Reviewed Articles, listed by Content Area, Grade Level, and Type of Research.

Article	Content Area	Grade Level				Type of Research		
		Elementary	Middle School	High School	College	Case Study	Survey	Review
Bardine, Bardine, & Deegan, 2000	English			X			X	
Beason, 1993	WAC*				X	X		
Black & Wiliam, 1998	varied	X	X	X	X			X
Clare, Valdes, & Patthey-Chavez, 2000	varied	X	X			X		
Cohen & Cavalcanti, 1990	ESL				X	X		
Covill, 1997	English			X		X		
Ferris, 1995	ESL				X		X	
Hedgcock & Lefkowitz, 1994	ESL				X		X	
Kluger & DeNisi, 1998	varied	X	X	X				X
Knoblauch & Brannon, 1981	English				X			
Leki, 1990	ESL			X				X
Lillios & Iding, 1996	English			X			X	
Matsumura, Patthey-Chavez, Valdes, & Garnier, 2002	English	X				X		
McGee, 1999	Writing				X	X		
O'Neill & Fife, 1999	Writing				X	X		
Ransdell, 1999	Writing				X		X	
Straub, 1996	Writing				X	X		
Straub, 1997	Writing				X		X	
Williams, 1997	Writing				X	X		
Winter, Neal, & Waner, 1996	Writing				X		X	
Zamel, 1985	ESL				X	X		

*Writing Across the Curriculum

In a follow-up to their meta-analysis of feedback interventions, Kluger and DeNisi (1998) found that students usually perceive scores to be a measure of their standing relative to peers. In contrast, feedback to the individual that highlights weaknesses and strengths appears to be more effective in improving performance. In an early study, it was found that scores can actually impede learning and that their normative nature (comparison with others) and low level of specificity attenuate their effectiveness as feedback interventions (Kluger & DeNisi, 1996). In Black and Wiliam's (1998) review of the literature on formative assessment, they found that the use of overall grades in conjunction with feedback can be detrimental. Even if task-oriented feedback comments could be helpful for a student's work, their effect could be undermined by providing grades, which can result in a negative motivational effect.

These studies suggest that when the goal is to help students develop their abilities, feedback should not be presented along with an overall grade. The effectiveness of feedback will depend on features of its quality, as is examined in the remainder of this article.

Level of Feedback in Writing: Content vs. Surface

In analyzing feedback many researchers look at comments in terms of the implied level of revision they call for, for example, those that call for changes to the overall meaning or purpose of a composition and those that call for changes at a micro-level such as spelling and grammar (i.e., those aspects of writing that do not result in alterations to the piece as a whole). Ferris (1995), for example, coded teacher comments according to whether they addressed the organization, content, mechanics, grammar, or vocabulary of the paper. Similarly, Beason's (1993) study coded comments in accordance with the criteria (focus, development/support, organization, mechanics, expression, validity, other) they reflected. Often, these classification systems are referred to and studied in terms of the bifurcation between global (content, organization, etc.) and local (grammar, mechanics, etc.) feedback, otherwise called content- and surface-level feedback.

What Teachers Do

Much attention has been paid to student preferences, teacher practices, and composition quality in terms of this content- and surface-level dichotomy and it has been found that there is quite a discrepancy among what teachers do in practice, what students prefer, and what results in better quality writing. Some teachers concern themselves primarily with surface issues when they respond to student papers (e.g., Clare, Valdes, & Patthey-Chavez, 2000; Matsumara, Patthey-Chavez, Valdes, & Garnier, 2002; Zamel, 1985). Matsumara et al.'s (2002) research in urban third-grade classrooms revealed that across both low- and high-achieving schools most of the comments on student papers were surface-level, but that the quality of the content and organization of students' final drafts were significantly predicted by the amount of *content*-level feedback received on earlier drafts. Beason's (1993) work, on the other hand, revealed that most of the comments teachers and peers made in giving feedback were more global or content-related. One study solicited teacher self-reports on feedback practices from instructors of an English as a Foreign Language (EFL) institute course, an EFL university course, and a native-speaker English course. They, too, found quite disparate views on how and what type of feedback should be given and what is best suited for students – one instructor reported that she emphasized mechanics and grammar (purposefully not concerning herself with content) in giving feedback and another teacher reported focusing on content (Cohen & Cavalcanti, 1990). Teachers in another study reported an interest in global issues, but noted that responses were often at a local level (Fuller, 1987). One possible explanation for this disconnect may be that teachers have a difficult time focusing on and reacting to both global *and* local matters at the same time in reviewing student papers, a finding of Zamel's (1985) study of university-level ESL writing classes. She concluded that teachers can become "so distracted by language-related local problems that they often correct these without realizing that a much larger meaning-related problem has totally escaped their notice."

What students prefer

Similar to the lack of cohesion among teachers in feedback practices, there is no common ground in what students prefer in writing feedback. Just as teachers give feedback as they deem appropriate and as they prefer, the case is the same with college students. In his study, Straub (1997) asked students to look at various comments given on a student essay and complete a survey on their preferences for each type of comment. He found that students seemed to prefer equally comments on both local and global matters of writing. However, preferences were found for certain *types* of local and global comments. For example, feedback on sentence structure, grammar, organization, and development was looked upon favorably by students, whereas feedback pertaining to word choice or that contrasted with ideas expressed by students was not received as well. Ferris (1995), too, found that although most comments were at the local level, students attended to and appreciated both global and local comments equally. While some students find either type of feedback useful in improving their papers, others express distinct preferences for global (Cohen & Cavalcanti, 1990; McGee, 1999) or local (Leki, 1990) commenting styles. Students in McGee's study, for example, reported that feedback on "trivial" matters such as formatting, missing words, and mechanical issues was of little use to them in improving their papers, while Leki's research found that students exhibited a lack of interest in having teachers comment on essay content. They felt that such feedback did not help to improve their writing; instead they benefited much more from teacher response that clearly pointed out errors. We find it interesting that these studies cross college level ESL and writing courses. Since these results all came from studies that focused on college courses, we cannot explicitly extend these findings to students in other grade levels, though we can take them as considerations.

Effect on revision/writing

It is useful to look at the effects of content- and surface-level feedback on the processes of writing and revising. The results of Beason's (1993) study showed that the majority of feedback teachers gave was of a global nature, but the majority of the revisions students actually made were at the surface level or affected only the microstructure of the paper. In a study of 10th and 11th graders' academic and affective responses to content- versus surface-level feedback, Covill (1997) found that students receiving primarily content-level feedback spent significantly more time revising than the group that received primarily surface-level feedback. Furthermore, the types of revisions varied with type of feedback: those in the content-level feedback condition made more micro- and macrostructure changes while those in the surface-level condition made more formal (e.g., mechanics) and meaning preserving (e.g., paraphrasing) changes. It is important to note, however, that there was no significant improvement from the first to the second draft between those in the content-level versus those in the surface-level feedback condition. It appears, then, that there exists no one-to-one correlation between the type of feedback given and the resulting revisions or quality of compositions. Although there is some evidence that points to the benefits of content-level feedback (i.e., that it results in better organization and quality of content, and perhaps results in more time spent revising), the results seem to vary greatly from study to study. More research is needed in order to determine more conclusively the relationship between level of

feedback and writing quality and revision practices.

Timing

Another consideration is the stage of writing at which content- and surface-level feedback is introduced. As Zamel (1985) put it, "we need to establish priorities in our responses to drafts and subsequent revisions and encourage students to address certain concerns before others."

Research suggests that students pay close attention to feedback given on *early* drafts, thus underlining the importance of the type of feedback teachers give at this stage of writing (Ferris, 1995). While Sommers (1982) sees the value in all types of comments, she stresses that "in responding to our students' writing, we should be guided by the recognition that it is not spelling or usage problems that we as writers first worry about when drafting and revising our texts." Responding to surface-level issues in the drafting phase of writing gives the impression, she says, that these are the most critical aspects of writing; it results in the confusion of process and product. Instead we should be helping the student to refine or clarify his/her purpose or meaning, the organization of the piece, and the logic of the argument. Contrary to her opinion, ESL and foreign language (FL) learners in Hedgcock and Lefkowitz's (1994) study seemed to indicate a slightly stronger preference for surface-level feedback on first drafts and reported learning more when teachers did so**.** This, however, could be a by-product of the nature of ESL and FL learning in that students of language are striving more to learn the intricacies and idiosyncrasies of the language itself than having their ideas and organization corrected. Interestingly, the teacher in Cohen and Cavalcanti's (1990) study who reported emphasizing surface issues and deliberately disregarding content issues in providing feedback said the reason behind doing so was that English proficiency examinations did not assess content. Despite the conflicting evidence and opinions in regard to this matter, it does seem important to consider the "scale of concern" we assign to comments (Sommers 151). That is, it is important for the teacher to point out to the student the most critical aspects of the paper that need to be revised.

In summary, the research on the effects of content- and surface-level feedback on student writing is inconclusive. That is, neither level of feedback is the main determining factor for improvement in writing, though both seem to offer some improvement to some students at different times for different purposes.

Function of Feedback: Directive vs. Facilitative

Feedback, when used appropriately for formative improvement, puts the locus of control in the student's hands. There are complex connections between the way in which feedback is received, the way that perception motivates the selection of a course of action, and the learning activity that may or may not follow (Black & Wiliam, 1998). Writing many directive comments (e.g., corrections of wording or conventions, proofreading) gives students the idea that the teacher wants to control the essay, and that the teacher is picky (McGee, 1999). The data indicate that subjects found most unhelpful those comments that lacked a sound explanation, were unclear, that attempted to wrest control of the paper from the student, or that dealt with "trivial" matters such as missing work or formatting (McGee, 1999).

One way to look at feedback is in terms of the tone or function inherent in it. In other words, a comment can be suggestive, perhaps pointing to an idea or phrase that could use more clarification or focus, or it can be instructional, pointing students to a grammar rule or theory that could help to improve the writing. Similar to level of feedback, the function of feedback is also discussed in terms of a dichotomy, between directive (comments that tell students directly what needs to be revised, e.g., criticisms) and facilitative (comments designed to help guide students to rework their text on their own, perhaps in the form of questions or reflections).

It would seem that facilitative comments would have a better effect on student learning than comments that are more directive. However, several studies have found evidence to the contrary. For example, Zamel (1985) found that very explicit, directive comments were more helpful than suggestive comments in improving writing in college freshmen, but she also found that implicit feedback prompted revisions. She suggests that teachers gradually shift their feedback styles from more directive to more facilitative as students become comfortable with the expectations placed on their writing (Knoblauch & Brannon, 1981). In a study of first-year college composition students, Ransdell (1999) found that students almost equally preferred directive comments and facilitative comments, with a smaller number of students believing both types of comments to be equally useful and another small number of students believing a combination of these types would be best. Students who preferred directive commentary reported that it helped them figure out what needs to be fixed and that it did not leave them feeling confused. That is, there is no guesswork with directive commentary. Students who preferred facilitative commentary argue that it allows some room for writers to expand in different ways as opposed to being constrained to making revisions that they believe the teacher wants to see. Ransdell, a teacher-researcher, said he tried to use facilitative commentary. He found, however, in reviewing end-of-semester portfolios, in which students included up to two revised essays, that students made few revisions and often overlooked facilitative comments. First-year students in McGee's (1999) study were put off by directive comments, feeling

that by commenting in this manner the teacher was being too particular or was attempting to control the essay. Balancing comments so that directives and less controlling types of comments are distributed more equally throughout essays makes the teacher seem like an interested reader as opposed to a critic.

Who Controls the Writing?

It may be, then, that it is the level of control over student writing that really impacts how comments are received and heeded in the revision process. Feedback as it controls student writing is a prominent issue among researchers who study feedback practices. Brannon & Knoblauch (1982) speak of the teacher's tendency to comment on student writing in terms of the discrepancy between what the student has written and the teacher's idea of what constitutes good writing, or what they call the "Ideal Text." Instead, they contend, the teacher should be looking at the discrepancy between what the student has achieved and what the student intended to achieve. By doing so, the teacher would exert less control over students' writing, allowing them to reflect on their own purposes and choices. This, of course, would require a discussion or survey, as Reesor (2002) suggests, to actually determine the student's intentions. Reesor was thinking along the lines of Brannon and Knoblauch as to how teachers should negotiate a feedback strategy with the students, so that the teacher's feedback will meet each student's needs, and keep the control of the text in the student's hands. As Sommers (1982) explains, "teachers' comments can take students' attention away from their own purposes in writing a particular text and focus that attention on the teachers' purpose in commenting." Because of this, students may then feel compelled to make changes to meet the teacher's perceived needs instead of what the student deems necessary to improve the quality of the essay. Straub (1996) lays out a hierarchy of control based on the function of comments, ranging from corrections (most controlling), to criticisms and commands, to qualified evaluations and advice (least controlling). Praise is somewhat nebulous and does not fit nicely into this hierarchy; it is "less controlling than criticisms or commands [yet]….underscore[s] the teacher's values and agendas." Students, Straub (1997) found, seem to most favor those comments that offer direction but do not control the writing.

Student Perceptions

Inherent in this connection between the function of a comment and the degree of control it exerts over student writing, is the way that teachers are perceived when they give feedback using different modes of expression. If the teacher comes across as demanding, students may not be as receptive to the feedback as when the comments are posed in a more favorable light (i.e., as guidance, advice, or suggestions). O'Neill and Fife (1999) maintain that teacher comments cannot simply be labeled "directive" or "facilitative" without taking into account the entire classroom context, including the teacher's perceived ethos and the entirety of the feedback system (i.e., student-teacher conferences and other feedback opportunities). Like the students in McGee's (1999) study, whose preference and receptivity for types of feedback were dictated by how it made the teacher look as a person, students in O'Neill and Fife's research indicated that it was the overall character of the teacher that determined how students approached teacher comments. Subjects in Straub's (1997) study were asked to explain preferences for certain modes of commenting, and indicated that some comments made the teacher come across as harsh and judgmental, while others were supportive and encouraging. They also indicated that some comments tried to impose the teacher's view on the students, while others encouraged the students to develop their own ideas. In other words, the role that the teacher plays socially and politically is very important. A teacher with an interruptive voice can silence the student's voice, compelling the students to change their papers even without agreeing with the suggested revisions (Williams, 1997). Just as teachers stress to students the importance of using the appropriate voice, so, too must teachers in responding to students (Fuller, 1987).

Other Practices in Effective Feedback

Positive vs. Negative Feedback

Students prefer positive feedback, which comes in two flavors: praise and constructive criticism. Feedback is considered positive when comments include what the student needs to improve. After interviewing several students about their attitudes toward their teacher's response style, Bardine, Bardine, and Deegan (2000) found that most students believe that the purpose of teacher feedback is to inform students about what they are doing wrong. A teacher of one of the classrooms involved in this study reflected on the results:

> I also learned that the tone of my comments was just as important as the outcome I wanted for the response. In other words, students wanted to be praised and know that they were doing something right. If they don't receive this message, or if it sounds like I am ordering them to do something differently, then I might not get a motivated response. (Bardine et al., 2000, p. 100)

These findings are echoed in several other studies as well. In a study of college freshmen, McGee (1999) notes that students respond more easily and more happily to praise. Beason (1993) writes that positive

response plays a vital role in helping students recognize their strengths and gain confidence. In contrast, negative response styles have been shown to be a major de-motivator, having strong effects on students' attitudes toward writing (Hillocks cited in Connors & Lunsford, 1993; Storms & Sheingold, 1999). Some students in Ferris' (1995) study felt depressed and experienced lower levels of motivation and self-esteem because they felt that all of their teacher's comments were negative. A review of the research by Winter, Neal, and Waner (1996) finds that students may not even attend to feedback stated in a negative manner.

It is important to note that although these studies do point to the positive effects of praise on characteristics of the writer such as confidence and self-esteem, they are also careful to say that praise does not necessarily help students to produce better papers (Knoblauch & Brannon, 1981). For instance, while Beason (1993) confirms that praise does benefit writers, he also finds that compared to problem-oriented feedback, praise does not automatically result in better writing. Winter et al. (1996) report that students who receive praise are likely to write longer essays and to exhibit more positive attitudes about writing, but they do not seem to produce better writing. Praise, like other cues that draw attention toward self-esteem and away from the task, generally has a negative effect on attitudes and performance (Black & Wiliam, 1998). For example, students who received "ego-involving feedback" sought help less than students who received "task-involving feedback." However, verbal praise and supportive feedback can increase students' interest in and attitude towards a task, even if the feedback itself has little effect on performance. Furthermore, students themselves report that praise does not motivate them to improve, nor does it help them to improve (Leki, 1990).

Considering positive feedback in the second, more substantive sense, in a meta-analysis of the instructional effect of feedback from classroom tests (not specifically for writing tasks), Bangert-Drowns, Kulik, Kulik, and Morgan (cited in Black & Wiliam, 1998) found that feedback was more effective when it gave details of how to improve the answer, rather than indicating whether the student's work was correct or incorrect. In addition, phrasing feedback in a constructive rather than negative way is more palatable to students (Storms & Sheingold, 1999). Interestingly, some students categorized as "positive" those statements that were specific and directed them towards improving their writing, whether it was phrased negatively or positively. That is, they did not find "honest criticism" to be negative (e.g., "Get to the point of your argument instead of beating around the bush") (McGee, 1999). Some students noted that all of their teachers' comments were positive because they helped them to improve their writing. We would view these comments as constructive rather than positive.

Kluger and DeNisi (1998) recommend using feedback in combination with goal-setting interventions, thereby focusing on the student's progress toward the goals. By doing this, attention is directed to the task at hand, and not toward self-esteem. Feedback that draws attention away from the task and towards self-esteem can have a negative effect on attitudes and performance.

Specific vs. General

Studies found that when teachers gave very general comments, without being clear about the changes they wanted to see made in the paper, students did not know what to do with the feedback, resulting in either incorrect interpretations or frustration with comments (McGee, 1999; Williams, 1997; Storms & Sheingold, 1999). When feedback is not specific, students find that it is not very helpful or just useless. When students in Ferris' study, for example, were asked if their teacher's responses were helpful, some said they were not specific enough to be helpful. Another study showed that students also prefer specific feedback to be personalized (e.g., something that shows that the teacher is familiar with the student as a person) (Storms & Sheingold, 1999; McGee, 1999). Results of a survey administered to students by Lillios and Iding (1996) showed that all of the useful comments teachers made were also very specific in nature. In both of the classrooms Bardine et al. (2000) studied, they found that students want specifics and clarity in the comments they receive on their writing. A teacher in Bardine et al.'s study said of the results, "I realized that many of my comments were too vague. Terms such as 'explain further,' 'more details needed,' 'too vague,' or 'develop idea' were foreign to many students." Feedback can also fall short of being helpful if it is cryptic (Speck 2000). Cryptic responses often contain one word (e.g., "Awkward") or are abrupt (e.g., "Rewrite this"). In both of these cases, there is not enough information for students to understand what is intended by the comment. Zamel, too, found that teachers "often provide vague and abstract responses that do not enable students to revise their texts" (p. 89). It is an interesting irony that the teacher expects the student to develop and clarify ideas and details, while doing so using vague feedback. As Sommers (1982) put it, "the teacher holds a license for vagueness while the student is commanded to be specific" (p. 153).

The literature suggests that the best feedback is a combination of specific and positive. McGee's (1999) subjects found positive comments that specifically detail what is good about a paper to be helpful, and students in Ferris' (1995) research remembered the details of positive comments better than other items they were asked to remember. In addition, Bardine et al. (2000) found that, telling students that a part of their essay is effective is not enough; students want to know why it is effective, and Straub (1996) learned that students preferred praise only when an explanation followed as to why the writing was worthy of praise).

Amount of Feedback

Even when feedback is positive and specific, it can still fall short of being helpful if it is too long (Speck 2000). Speck advise teachers not to give more feedback than the student wrote (which can be an indication of the student's literacy level), as it can be overwhelming. Long comments can also tend to be diffuse and unfocused, not giving the student good enough direction as to where to begin making revisions (Reesor, 2002). Linking this discussion back to control, Straub (1996) noted that, "Generally speaking, the more comments a teacher makes on a piece of writing, the more controlling he or she will likely be. (p. 233)" As Fuller (1987) said:

> My extensive commentary, I must have thought, would solve most of the problems in one full-sweep. But it is clear to me now that traditional product-centered commentary is not such a sweeping remedy. The diverse and random responses in the 'all-inclusive' commentary do not usually address a student in a consistent, focused, and effective manner. … Unfortunately, without a clear focus, the responder usually barrages the student with a lot of conflicting messages. (p. 308)

Kulhavy and Stock (1989) address the amount of feedback to present to a student from a different perspective. They present an information-processing model of feedback and response, drawing on the results of experiments in which different kinds of written responses are given to students as feedback on different types of tasks. This work is more general than feedback on writing, but the results clearly have application to this domain and others. These authors use students' "response certitude" (the level of confidence the student has in the answer he has written or selected) in determining the amount of time he or she will spend processing feedback. They argue that certitude judgments involve some assessment of the learners' affective and motivational states, as well as whether they know an answer. This is in contrast to most instructional design strategies, where feedback decisions typically depend entirely on task characteristics.

When students have high certitude that an answer is correct, the amount of time they will spend attending to feedback will be small, and elaboration of any type will probably have a small effect on the student's learning. Kulhavy and Stock's recommendation in these cases is to simply verify an answer. At the other extreme, high certitude that an answer is *in*correct increases the amount of time that students will attend to feedback. They suggest that under this condition, elaborating on areas that need improvement makes sense since these students are most likely to improve their work.

Summary

Feedback is most effective when used for formative improvement, as in the case of multiple drafts of writing. It is also most useful to the student when the locus of control is with the student. Constructivist learning theory supports the idea that students need to be in control of their own learning. Students should be able to relate feedback to their work products, choose the pieces of feedback that are important and relevant, and understand what needs to be done in order to improve. There are complex connections between the way in which feedback is received, the way that perception motivates the selection of a course of action, and the learning activity that may or may not follow. Even when research touts positive results (e.g., "improved performance on average"), there is often more than one way to read those results. We summarize the results of this review in the form of recommendations.

1. When providing detailed feedback, do not include an overall grade.
2. Provide both content-level and surface-level feedback.
3. Align directive and facilitative feedback with student goals.
4. Balance control of the feedback.
5. Present feedback in specific rather than general ways.
6. Tell students both what they did right *and* where they need help.
7. Generate text appropriate to the ability level of the student.
8. Generate an appropriate amount of text based on student certitude.
9. Provide alternative feedback methods for specific characteristics of writing and other tasks.
10. Conduct a survey to find out what types of feedback the student would like.

References

Bardine, B.A., Bardine, M.S., & Deegan, E.F. (2000). Beyond the Red Pen: Clarifying Our Role in the Response Process. *English Journal*. *90*(1), 94-101.

Beason, L. (1993). Feedback and Revision in Writing Across the Curriculum Classes. *Research in the Teaching of English, 72(*4), 395-422.

Black, P, and Wiliam. D. (1998). Assessment and Classroom Learning. *Assessment in Education. 5*(1), 7-74.

Brannon, L. & Knoblauch, C.H. (1982). On Students' Rights to Their Own Texts: A Model of Teacher Response. *College Composition and Communication*, *33*(2), 157-166.
Clare, L., Valdes, R., & Patthey-Chavez, C.G. (2000). *Learning to Write in Urban Elementary and Middle Schools: An Investigation of Teachers' Written Feedback on Student Compositions*. LA, CA: CRESST.
Cohen, A.D. & Cavalcanti, M.C. (1990). Feedback on Compositions: Teacher and Student Verbal Reports. In B. Kroll (Ed.), *Second Language Writing: Research Insights for the Classroom* (pp. 155-177). NY: Cambridge UP.
Connors, R. J. & Lunsford, A.A. (1993). Teachers' Rhetorical Comments on Student Papers. *College Composition and Communication*, *44*(2), 200-223.
Covill, A.E. (1997). *Students' Revision Practices and Attitudes in Response to Surface-Related Feedback as Compared to Content-Related Feedback on Their Writing*. Diss. U of Washington. Ann Arbor: UMI.
Ferris, D.R. (1995). Student Reactions to Teacher Response in Multiple-Draft Composition Classrooms. *TESOL Quarterly*, *29*(1), 33-53.
Fuller, D.C. (1987). Teacher Commentary That Communicates: Practicing What We Preach in the Writing Class. *Journal of Teaching Writing, 6,* 307-317.
Hedgcock, J., & Lefkowitz, N. (1994). Feedback on Feedback: Assessing Learner Receptivity to Teacher Response in L2 Composing. *Journal of Second Language Writing*, *3*(2), 141-163.
Kluger, A.N., & DeNisi, A. (1996). The Effects of Feedback Interventions on Performance: A Historical Review, a Meta-Analysis, and a Preliminary Feedback Intervention Theory. *Psychological Bulletin. 119*(2), 254-284.
Kluger, A.N., & DeNisi, A. (1998). Feedback Interventions: Toward the Understanding of a Double-Edged Sword. *Current Directions in Psychological Science. 7*(3), 67-72.
Knoblauch, C.H., & Brannon, L. (1981). Teacher Commentary on Student Writing: The State of the Art. *Freshman English News*, *10*(2), 1-4.
Kulhavy, R.W. & Stock, W.A. (1989). Feedback in Written Instruction: The Place of Response Certitude. *Educational Psychology Review*, *1*(4), 279-308.
Leki, I. (1990). Coaching from the Margins: Issues in Written Response. In B. Kroll (Ed.), *Second Language Writing: Research Insights for the Classroom* (pp. 57-68), New York: Cambridge UP.
Lillios, M., & Iding, M.K. (1996). How Ninth Graders Respond to Teacher and Peer Comments on Their Writing. *Teaching and Change*, *3(*3), 211-226.
Matsumura, L.C., Patthey-Chavez, C.G., Valdes, R., & Garnier, H. (2002). Teacher Feedback, Writing Assignment Quality, and Third Grade Students' Revision in Lower- and Higher-Achieving Urban Schools. *The Elementary School Journal*, *103*(1), 2-25.
McGee, S.J. (1999). A Qualitative Study of Student Response to Teacher-Written Comments. Diss. Purdue U.
O'Neill, P. & Fife, J.M. (1999). Listening to Students: Contextualizing Response to Student Writing. *College Composition and Communication*, *27*(2), 39-51.
Ransdell, D.R. (1999). Directive Versus Facilitative Commentary. *Teaching English in the Two-Year College, 26*(3), 269-276.
Reesor, M. (2002). Issues in Written Teacher Feedback: A Critical Review. *The English Teacher*, *5*(3), 242-255.
Sommers, N. (1982). Responding to Student Writing. *College Composition and Communication 33*(2), 148-156.
Speck, B.W. (2000). *Grading students' classroom writing: Issues and strategies*. ASHE-ERIC Higher Education Report (Volume 27, Number 3). Washington, DC: George Washington U.
Storms, B. & Sheingold, K. (1999). *Teachers' and Students' Uses of and Reactions to the DWS Prototype.* Princeton, NJ: Educational Testing Service.
Straub, R. (1996). The Concept of Control in Teacher Response: Defining the Varieties of "Directive" and "Facilitative" Commentary. *College Composition and Communication*, *47*(2), 223-251.
Straub, R. (1997). Students' Reactions to Teacher Comments: An Exploratory Study. *Research in the Teaching of English, 31*(1), 91-119.
Williams, S.E. (1997). Teachers' Written Comments and Students' Responses: A Socially Constructed Interaction. *Proceedings of the Annual Meeting of the Conference on College Composition and Communication*, Phoenix, AZ.
Winter, J.K., Neal, J.C., & Waner, K.K. (1996). Student and Instructor Use of Comments on Business Communication Papers. *Business Communication Quarterly*, *59*(4), 56-68.
Zamel, V. (1985). Responding to Student Writing. *TESOL Quarterly*, *19*(1), 86-96.