

# Effects of Different Error Feedback: Approaches in Students' Ability to Self-edit Their Writing

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Defining what constitutes the right way to provide students with error feedback in their writing has proved to be a complex task for researchers in language pedagogy. Research indicates that a large number of teachers provide students with written feedback in the areas of content and grammar. Feedback in these two areas seems to help students write better essays. The present study with 30 participants in second semester university-level Spanish investigates: 1) how different error feedback approaches (coded feedback, non-coded feedback and no feedback) effect student ability to self-edit their writing 2) if students show progress in accuracy from their first draft to the final one and 3) if there is an effect, which treatment order is the most beneficial. The students wrote three drafts of three essays during three nonconsecutive weeks with rotating feedback treatments. It was found that students benefited from having coded feedback over both non-coded feedback and no feedback. Paired comparison tests for treatment type showed that the effect of coded feedback and non-coded feedback was significant; however, the effect of non-coded feedback and no feedback showed a non-significant effect. The study raises several implications for L2 writing feedback.

## 1.0 Introduction

### 1.1 Theoretical Views of Focus on Form and Error Correction

Research in the field of Second Language Acquisition (SLA) is broad in large part due to its interdisciplinary nature. Different theories have shaped the practices in the area of second language (L2) writing. As claimed by Huebner and Ferguson with regards to SLA theory, “Yet to date, there exists no comprehensive theory that captures all of the various contexts of occurrence and products and processes that have traditionally been the domains of different ‘parent’ disciplines” (1991, p. 9).

The main goal in L2 writing before the 1970s was error correction and grammar instruction as mirrored by theories of structural linguistics and behavioral psychology. At that time, the focus of language teaching was on how to best teach grammatical forms. Then, towards the end of the 1970s, L2 researchers became highly concerned with ways in which L2 can be acquired naturally. This new turn questioned the efficacy of form-focus instruction (FFI) in language acquisition (Ellis, 2001). During the 1980s, L2 writing practices shifted focus from accuracy to the process of writing and the steps students go through during writing. This switch caused controversy among some researchers, teachers and students because error correction feedback was neglected (Ferris, 2002). Students' ability to learn to focus on form was questioned by Krashen's (1981) claim that teaching grammar or correcting students' errors has no effect on the learners' interlanguage since grammar is only acquired unconsciously through comprehensive input. Thus, noninterventionists believe that the only form of successful SLA is uninstructed learning. However, as stated by Doughty and Williams, "[...] it should be pointed out that noninterventionists have not, as yet, provided any other *expedient* solution to the lack of adult classroom L2 learner accuracy" (original emphasis, 1998, p. 203).

Throughout the early 1990s, SLA began to rely on theories of information processing, cognitive psychology and the natural processes of acquisition. Focus on form acquired special emphasis with Schmidt's Noticing Hypothesis which claims that learners must consciously notice forms from input for acquisition/intake to occur. After that, large numbers of studies (Ellis, 2001) found that explicit instruction has better student-learning outcomes than implicit instruction. Accordingly, Schmidt (1990) points out the importance of distinguishing between noticing and detecting since the latter may or may not include awareness. Schmidt claims that learning without attention is not possible. As stated by Doughty and Williams in reference to Schmidt, "different kinds of learning occur with differing amounts of attention" (1998, p. 249). With regards to noticing, Swain (1995) argues that output promotes noticing. When students notice the 'gap or hole' they become aware of their linguistic problems. She argues with respect to the students' noticing of the 'hole' that, "[...] it is *while attempting to produce* the target language (vocally or subvocally) that learners may notice they do not know how to say (or write) precisely the meaning they wish to convey" (original emphasis, 1998, p. 67). VanPatten (2004) argues that noticing a form in the input is not equated to understanding its meaning. Therefore, input processing is what learners need in order to connect grammatical forms with their meanings (p. 5). This is achieved through processing instruction: Explicit instruction or metalinguistic explanations about language before learners formulate their output. As noted by Doughty (2004), "[...] a potentially crucial component of the explicit instruction is that it orients the learner to the processing problem" (p. 264). Long (1991) claims that instruction based on the natural-order-of-acquisition theory seems to facilitate learning. He states that while input may lead to learning, focus on form in meaningful

contexts may facilitate learning. Long also proposed the Interaction Hypothesis claiming that “[...] a crucial site for language development is interaction between learners and other speakers, especially, but not only, between learner and more proficient speakers and between learners and certain types of written text, especially elaborated ones” (Long & Robinson, 1998, p. 22). It is in breakdowns of understanding during interactions that learners notice the gap and have the opportunity to negotiate for meaning. Therefore, focus on form is embedded in lessons with a focus on meaning or communication and occurs in the presence of communication breakdowns. As argued by Long, “a syllabus with focus on form teaches something else—biology, mathematics [...]—and overtly draws students’ attention to linguistic elements as they arise incidentally in lessons whose overriding focus is meaning, or communication” (1991, p. 45-46).

Ellis claims that focus on form can be categorized into three types of form-focus instruction depending on whether instruction is planned or incidental: 1) focus on form with the goal of learning preselected forms presented deductively or inductively, 2) planned focus on form emphasizing meaning rather than form through communicative tasks and 3) incidental focus on form that arises due to a problem of communication or a problem with form as students are engaged in communicative tasks (2001, p. 16). Ellis (as cited by Doughty and Williams) also argues that, because SLA does not occur free of effort, there are three ways in which adults are more inclined to learn a second language: “1) explicitly, via rules [...], 2) explicitly through selective learning [...], or 3) implicitly” (1998, p. 232).

## **1.2 Teacher Feedback and Accuracy Improvement**

Several researchers in the last decade have studied the effects of error correction on students’ writing. The question of whether error correction works continues to be a controversial issue, the strongest case being made by the debate between Truscott and Ferris.

Ferris and Hedgcock (1998) and Ferris and Roberts (2001) assert that students benefit from error correction feedback over time; however, error correction should be selective: “[...] it makes sense for teachers to focus their feedback and instruction on aspects of grammar that can be explained, understood, and generalized to students’ particular writing needs [...]” (Ferris and Hedgcock, p. 205). Ferris (1997, 2002) states that providing students with simultaneous attention to content and form with underlined examples of errors results in significant essay improvement. Other studies (Ashwell, 2000; Chandler, 2003; Fathman and Whalleyprove, 1990; Lee, 1997) cited in Ferris (2004) provide evidence for the efficacy of teacher error feedback in improving students’ accuracy.

Ferris’ studies (1997, 2002, 2004) and Ferris et al. (1997, 2002) present evidence showing that students made more essential revisions when they were provided with grammatical summary comments. With regards to focus-on-form instruction, Swain (1998) found that students benefited from explicit rule presentation. However, Ferris and Roberts (2001)

differentiate between treatable and untreatable errors. The former refers to errors that students should be made aware of and then should consult a grammar book; these errors occur in a rule-governed way, whereas the latter are idiosyncratic, requiring the learners' use of their acquired knowledge of the target language to correct them. Ferris (2002) provides support stating that there are several reasons to continue with error correction feedback. Some examples are: a) it helps students improve their accuracy in the short-term, b) it makes students feel positive about feedback effects, and c) it empowers students to become independent self-editors.

Ferris' study (1997) provides several implications for L2 writing instruction. She argues that teachers should be very careful in writing their comments to avoid confusing students; they should explain their error correction strategies to their students. Teachers should also include techniques that encourage students to respond to feedback thoughtfully. In doing this, teachers should think of how to provide clear and explicit questions or comments by evaluating their own techniques.

Truscott (1996, 1999, 2004) makes a strong case against grammar correction in L2 writing classes. He argues that "grammar correction has no place in writing courses and should be abandoned" (1999, p. 326). Truscott (1996) presents multiple perspectives based on research by others in support of his argument. First, he mentions several L1 studies showing that correction was not helpful. Second, he looks at several L2 studies that ranged from 1978 to 1993 by different researchers and concludes that correction did not have significant effects on students' errors and in some cases even caused harm to students. Nevertheless, he argues that a variety of factors could have influenced the negative results on error correction of previous studies. Among these are the difference between foreign language (FL) and second language (SL) settings; the form of correction used; the types of assessments employed; the differences in the type of instruction practiced; learners' proficiency level or ability; learners' variables such as age, gender, and educational background and finally, the time spent correcting errors.

Truscott claims that correction creates stress, which in many cases results in students' simplification of their writing. This fact goes against research stating that students want to be corrected. He claims that students believe that correction is helpful even though it is unpleasant. Another disadvantage of error correction is the time students spend trying to correct their errors. Also, teachers spend great amounts of time correcting students' errors instead of using that time to pursue other more relevant issues such as the content of writing. Truscott also claims that some researchers have attempted to construct an argument in favor of grammar correction: They note the danger of fossilization and the students' desire to be corrected as two examples. Regarding the former, Truscott argues, based on his research that there is no reason to hold such a view. In relation to the latter, he states that this is the most disturbing argument because teachers should not use students' opinions concerning what is the best form of instruction but rather should be helping them learn.

Ferris (1999), Ferris and Hedgcock (1998) and Ellis (2001) criticized Truscott for being premature in his thesis and conclusions. First, Ferris claims that Truscott's use of the term 'error correction' lacks definition. Ferris states that there is sufficient research showing that effective error correction does improve students' writing. Secondly, Ferris criticizes Truscott's generalizations based on reviews of previous studies that exhibited crucial variation with regard to groups of subjects, research and instructional paradigms and type of feedback. These variations are an impediment in making generalizations.

Another area of disagreement includes the reasons for continuing with error correction in L2 writing classes. Ferris (1999) claims that based on surveys of what students think of teacher feedback, that students believe that receiving feedback is important in improving their writing. On the other hand, Truscott states, "By using correction, teachers encourage students to believe in it; because students believe in it, teachers must continue using it" (1999, p. 116). Thus, the supposed benefit of error correction is simply a false belief and he argues that this has actually turned into a vicious circle.

In conclusion, there is significant evidence showing that students improve their accuracy and overall writing quality when they receive teacher error feedback. As stated in these studies, failing to provide students with feedback results in frustration. However, research does show that feedback should be carried out selectively, systematically and accurately.

### **1.3 Types of Teacher Error Feedback**

Teachers who decide to implement error-correction feedback because they think it is helpful for students should make relevant decisions regarding what types of errors to focus on. Ferris (2002) argues that the most significant dichotomy is between direct and indirect feedback. Direct feedback refers to the teacher's correction of the error whereas indirect feedback refers to the teacher's indication of the error either through highlighting or underling it or by coding it and then allowing the student to perform the correction. She believes, based on her research, that students learn more when they find their own errors and make their own corrections. Ellis (1984) and Doughty and Williams (1998) believe that providing students with direct feedback constitutes negative evidence; direct feedback gives them input for further acquisition.

In a study of the efficacy of different types of error feedback on accuracy of revision and subsequent writing, Ferris (2002) found that students who received indirect feedback did much better than the students who received direct feedback. She also found that in the short-term, direct feedback had more effective results, whereas, in the long-term, indirect feedback had more positive effects. Furthermore, if teachers decide to use indirect feedback rather than direct feedback, they need to make decisions on the explicitness of it; the teacher may indicate errors through underlining, highlighting, verbal rules, or a code. Teachers may decide to combine both forms of feedback, direct and indirect, depending on whether he/she expects students to focus on some pattern of error.

Ferris and Roberts (2001) argue that L2 students in the beginning levels need and want error feedback; failing to do so may result in frustration. They need to be guided in discovering the nature of their errors; if not, independently correcting errors will be a task that requires a great deal of effort and may result in a lot of frustration. Their study of L2 students' writings with three error correction treatment groups (coded, non-coded, and no feedback/control group) show the following results: 1) there were highly significant revision differences between the two groups that received feedback and the group with no feedback and 2) there were no significant differences between the two groups that received feedback. Nevertheless, all students agreed that they wanted errors corrected. The most common type of feedback was underlining with description, then direct correction and lastly underlining. Since no significant difference was found between coded and non-coded groups, the researchers recommend marking errors without coding given that it is faster and easier for the teacher and helps teachers make fewer errors when doing corrections. They also suggest that students in early target language levels need teachers' feedback. Without feedback most of the students would not be able to identify their own errors, which may cause frustration. Another option for teachers is to provide indirect feedback on certain types of errors and no feedback in other error categories.

As demonstrated by the previously cited studies and others (Chandler, 2003; Lee, 1997; Bitchener et al., 2005), students benefited from error correction in L2 writing. Most studies show that students and teachers prefer direct feedback rather than indirect feedback; however, several studies show that indirect feedback results in higher levels of accuracy over time. In spite of these findings, Ferris (2004) claims, "But in the end this evidence will only be suggestive, not conclusive, unless a more systematic research program of longitudinal designs that include no-feedback control groups is conducted" (p. 60). However, most researchers agree that the presence of a control group constitutes an ethical dilemma for the teacher/researcher.

Ferris (2003) proposes a framework for analyzing error correction studies "in order to assess the validity of their findings and conclusions" (p. 45). This framework includes basic parameters such as, student and teacher characteristics, sample size and duration of treatment and data collection. It also considers instructional procedures including types of writing considered, the instructional context and the nature of error feedback. Furthermore, it recommends a research design that contemplates methodological issues with regard to reliability and validity such as, control group, pretests, posttests and multiple raters (p. 46). However, Ferris (2004) laments that until more consistent and systematic research parameters are adopted, including no-feedback control groups, teachers must: 1) provide competent error feedback, 2) provide indirect feedback since it provides students with opportunities of cognitive problem-solving, 3) have students revise after receiving feedback, 4) provide focused grammar instruction if requested by students to facilitate their progress in achieving accuracy, 5) provide different treatments to different types of errors and 6) have students create error

charts since it can heighten their awareness of their weaknesses and improvements (pp. 59-60). However, Ferris (2004) and Long (1991) believe that the grammar instruction should be brief, a belief shared by Lightbown (1998) with regards to focus-on-form instruction. Long (1991) argues that SLA research supports these findings, when he claims that, "Instruction which encourages a systematic, non-interfering *focus on form* produces a faster rate of learning and (probably) higher levels of ultimate SL attainment than instruction with *no focus on form*" (original emphasis, p. 47).

## **2.0 Study**

### **2.1 Purpose and Justification of the Study**

This study is a quasi-experimental study of the cause and effect relationship of different error-treatment feedback approaches on students' ability to self-edit their essays. The study investigated whether students subjected to the different error-treatment feedback approaches showed progress in accuracy from their first writing to the last one. The purpose of this project was to discover what type of error-feedback treatment seems to benefit students most in terms of grammatical accuracy during the beginning level of L2 instruction. The research questions guiding the study are:

1. What are the effects of different error-feedback approaches (coded, non-coded, and no feedback) on the students' ability to self-edit their writing?
2. Do students show progress in accuracy from their first writing task to the last one?
3. What treatment order is most beneficial in terms of students' improvement of grammatical accuracy?

### **2.2 Hypotheses**

The hypotheses in this study are: 1) Students who receive coded error feedback as the first treatment show more progress in grammatical accuracy than students who receive it after non-coded feedback or no feedback at all and 2) Students in the control condition (no feedback) are out-performed by the coded and non-coded treatment conditions.

### **2.3 Participants**

Thirty second-semester Spanish students from a university in the southwestern United States participated in the study, 18 female and 12 male. Data was collected during the fall semester of 2003. The class met four days a week for 50 minutes each day. The students were not chosen randomly; rather the class remained as an intact group taught by the teacher-researcher. However, the students were randomly assigned to three different rotating treatment conditions: a) coded group, b) non-coded group and c) control group.

## **2.4 Research Design**

This study investigates the types of error treatments students received and the order in which they were given. There were three treatments. The coded group had their errors marked with codes which were based on a list of errors that included examples of errors provided at the beginning of the semester. The non-coded group had their errors underlined but no code was provided. The no-feedback group received neither underlining of errors nor coding. This study investigates the number of grammatical errors per one hundred words in each feedback treatment. Errors were not counted after the first two hundred words.

For the purposes of this study, a grammatical error was any word which does not belong to the standard Spanish form. These were, for example, incorrect verb tenses, subject-verb agreement, incorrect use of prepositions and errors in adjective, noun, and article agreement due to errors of gender and number.

The students wrote three 200 word essays on the following topics: a famous restaurant, the story of their name, and their present and future life. The essays were written in class and the students were allowed to use a dictionary, their textbooks, and notes. The students wrote three drafts on each topic on three non-consecutive days over two-week periods at evenly spaced intervals throughout the semester. The essays in each treatment consisted of one original essay and two rewrites that included the type of feedback treatment that was randomly assigned to each group.

There were three treatment orders for each group of subjects with ten students in each treatment: Group One: Essay 1, coded feedback; Essay 2, non-coded feedback; and Essay 3, no feedback (control group), Group Two: Essay 1, non-coded feedback; Essay 2, no feedback; and Essay 3, coded feedback, and Group Three: Essay 1, no feedback; Essay 2, coded feedback; and Essay 3, non-coded feedback.

## **2.5 Data Collection and Analyses**

Data were collected during the weeks students received the feedback treatments. The first treatment happened during weeks 3 and 4, the second treatment during weeks 8 and 9, and the last treatment during weeks 13 and 14. Data consisted of nine writings (three drafts of three essays) from each student written over the six non-consecutive weeks while data were collected. The original essay in each treatment condition for each subject was not taken into consideration in the data analyses. The number of errors in the second and third versions of each essay were tallied and averaged separately. Then, the number of errors from both the second and third essays was averaged for each treatment condition. The result was a number of errors for each subject in each condition.

Data were analyzed using two separate one-factor within-subject analyses of variance designs and a within-subject ANOVA design with counterbalancing. Two separate one-factor within-subject ANOVA designs were used; one calculated the single factor of type of treatment and the other calculated the single factor of treatment order. To avoid the biases that arise when the treatments are confounded with incidental aspects, such as the order of the feedback provided to students in this study, counterbalancing

was carried out using the Latin Square method (Keppel & Wickens, 2004). The within-subject ANOVA with the factor of type of feedback showed a significant effect ( $F(2,58) = 22.384, p < .001$ ) (see table 1). In order to assess the effects of type of treatment, more directly paired comparisons were carried out. Separate ANOVAs were conducted for the treatment-type levels of coded feedback and non-coded feedback and another ANOVA for the treatment-type levels of non-coded feedback and no feedback. The results of the within-subjects ANOVA with the levels of coded feedback and non-coded feedback showed a significant effect ( $F(1,29) = 20.95, p < .001$ ) (see table 2). The results of the other within-subjects ANOVA with the levels of non-coded feedback and no feedback did not show a significant effect ( $F < 1$ ).

The analysis of the within-subject ANOVA with the factor of treatment order was not significant ( $F < 1$ ). Since the assumption of sphericity was violated, the correction test Greenhouse-Geisser was used in the statistical analysis of the factor treatment order.

Since the means for both factors, treatment type and treatment position, seem to differ appreciably, a within-subject ANOVA with counterbalancing (practice effects) was used. The effect of treatment type was significant ( $F(2,56) = 22.08, p < .001$ ) (see table 3), but the effect of treatment order was not significant ( $F < 1$ ).

**Table 1**  
**Tests of Within-Subjects Effects**

Measure: MEASURE\_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
treatment	Sphericity Assumed	335.117	2	167.558	22.384	.000
	Greenhouse-Geisser	335.117	1.909	175.588	22.384	.000
	Huynh-Feldt	335.117	2.000	167.558	22.384	.000
	Lower-bound	335.117	1.000	335.117	22.384	.000
Error(treatment)	Sphericity Assumed	434.175	58	7.486		
	Greenhouse-Geisser	434.175	55.348	7.845		
	Huynh-Feldt	434.175	58.000	7.486		
	Lower-bound	434.175	29.000	14.972		

**Table 2**  
**Tests of Within-Subjects Effects**

Measure: MEASURE\_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
treatment	Sphericity Assumed	133.504	1	133.504	20.949	.000
	Greenhouse-Geisser	133.504	1.000	133.504	20.949	.000
	Huynh-Feldt	133.504	1.000	133.504	20.949	.000
	Lower-bound	133.504	1.000	133.504	20.949	.000
Error(treatment)	Sphericity Assumed	184.808	29	6.373		
	Greenhouse-Geisser	184.808	29.000	6.373		
	Huynh-Feldt	184.808	29.000	6.373		

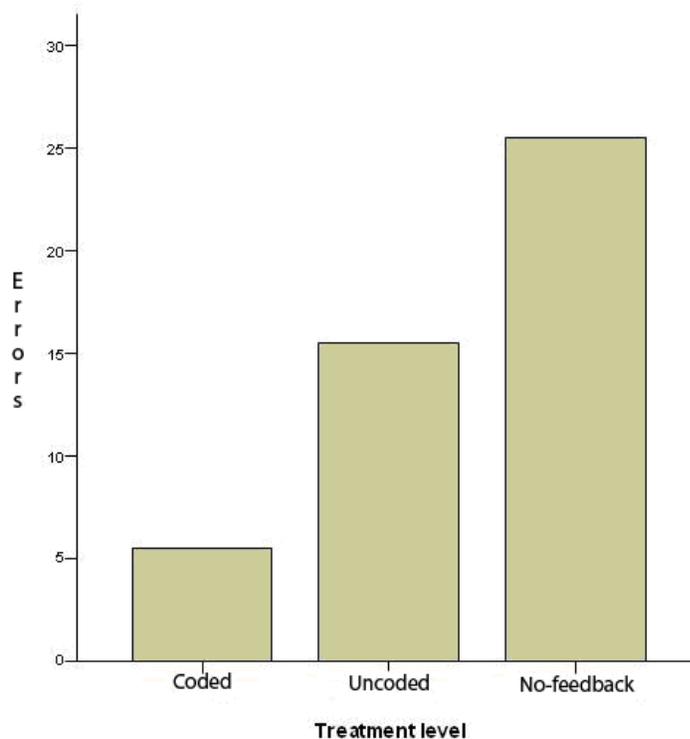
**Table 3**  
**Summary of the analysis of variance, including counterbalancing**

Source	SS	df	MS	F
A	[A]-[T] = 335.11	2	167.56	22.08
P	[P]-[T] = 9.69	2	4.85	0.64
S	[S]-[T] = 1237.27	29	42.66	
Residual	SST-SSA-SSP-SSS = 425.20	56	7.59	
Total	[Y]-[T] = 2007.27	89		

$p < .05$   
 $F_{.05}(2,56) = 3.18$

### 2.6 Results

The current study examined students' ability to correct their essays based on three feedback treatments and the treatment order in which they were received. Each essay was scored based on the number of grammatical errors per one hundred words in each feedback treatment. The analysis of variance (ANOVA) including counterbalancing showed that treatment type had a significant effect ( $F(2,56) = 22.08, p < .001$ ). Students were able to write better revisions when they received coded treatment as was hypothesized.



Paired comparison tests for treatment type showed that the effect of coded feedback and non-coded feedback was significant. Students were able to edit their writings more successfully when coded feedback was given. However, paired comparison tests of non-coded feedback and no feedback showed a non-significant effect. Order of treatment did not show a significant effect either.

Even though these tests showed no significant effect, it can be argued that the trend is that after coded feedback or non-coded feedback was given to students in the first version of their essay, they showed improvement in the second and third versions. Students showed some improvement in their writing from one version of the essay to another during the no feedback treatment. This progress in self-editing could have been caused by factors such as student motivation or effectiveness of instruction.

It was hypothesized that students who receive coded treatment first will continue improving even when other treatments were given, however, this study did not show such effects.

### **3.0 Conclusions**

This research shows that students benefited from having coded feedback over both non-coded feedback and no feedback. Second and third versions of essays showed more progress during the coded treatment than rewrites in the other two treatment types. Students did not benefit from having non-coded feedback over no feedback. These results may encourage L2 teachers to continue providing students with coded feedback. As stated in the literature review, many studies on error feedback have been carried out, but only a few have shown significant results. Most students wish to have their errors coded.

This study should be replicated with more participants over a longer period of time and with pre-test and post-test instruments. Also, in future studies, the teacher/researcher should not address every single error in the students' papers as this practice may overwhelm students. Thus, students should only correct errors based on acquired knowledge of the target language. In other words, the teacher should only code those errors where the student can be expected to understand the grammatical rules behind their errors. Also, teachers should focus more on the students' ideas in the first draft and switch to error feedback in the next drafts. An important issue that needs to be addressed before starting a study of this type is to familiarize students with the codes and symbols used to mark their errors. This was done in this study but perhaps if students had more practice identifying errors and coding them, it would result in better self-correction of their own essays.

I agree with Doughty and Williams in that "[...] the noninterventionist position is inefficient at best and indefinable at worst" (1998, p. 260). I also agree with Ferris' claim:

Though it is arguable whether grammar feedback and instruction will be consistently effective for all L2 student writers, it seems clear that the absence of any feedback or strategy training will ensure that many students never take seriously the need to improve their editing skills and that they will not have the knowledge or strategies to edit even when they do perceive its importance. (1999, p. 8)

From my own experience as an EFL student and a L2 teacher/researcher, I agree with Ferris and Hedgcock (1998) when they state that most students benefit from grammar instruction and feedback, leading eventually to self-correction techniques. Teachers need to keep in mind that simply because some students do not take error correction seriously, it does not mean error feedback is irrelevant. I believe that most beginning level L2 students in SL and FL settings need coding of marked errors until they reach advanced writing proficiency. Also, the opportunities to practice the target language and the students' motivations to learn the language in SL and FL contexts are very different. Therefore, teachers in FL contexts may choose direct feedback over indirect and no feedback.

I believe that students need to be guided in discovering the nature of their errors. Otherwise, correcting errors on their own risks becoming a task that could require extraordinary effort and may end in frustration. However, based on research findings (Ferris et al., 2000; Ferris and Roberts, 2001) with no significant differences between coded and indirect feedback; teachers may opt to provide students with indirect feedback because it is faster and easier for teachers and, more important, reduces the possibility that teachers themselves will make errors while providing students with direct feedback.

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