THE EFFECT OF TEACHER ERROR FEEDBACK ON THE ACCURACY OF EFL STUDENT WRITING

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Abstract: This study investigated the effect of teacher error feedback on students' ability to write accurately. Three male first-year Physics graduate students at a university in Taiwan participated in this study. They were asked to write a 100-word passage about the greatest invention in human history. Within days of the teacher's grammatical feedback, the students were required to revise their work again based on the teacher's suggested revisions. In addition, oral conferencing was conducted in order to help the students obtain a better comprehension of certain grammar points. Four weeks after the oral conferencing, the students were asked, without prior notice, to revise their original passages again. The findings reveal that the students made progress in the revised versions of their passages, but the success was not repeated in their later test versions. In other words, no positive relationship between teacher error feedback and students' improvement in linguistic accuracy over time was observed. This suggests that teacher error feedback alone may not facilitate the learning of linguistic information. A combination of sufficient exposure to English in reading and writing, plus opportunities to practice the language, for example, may lead to better grammar.

Key words: teacher error feedback, linguistic accuracy, oral conferencing

Research findings indicate that students favor error feedback from teachers because they believe that they will benefit greatly from it (Leki, 1991; Radecki & Swales, 1988; Straub, 1997). In spite of this desire for detailed feedback on errors, there is an ongoing debate in current literature whether error correction actually helps improve the accuracy of student writing. Moreover, due to practical time constraints most teachers offer only per-

functory comments such as "well-written", "poorly organized", or "awkward wording" on the majority of student papers. Do such terse comments help EFL writers in any significant way?

Several studies found that error feedback from the teacher was not significantly more effective for developing accuracy in L2 student writing than content-related comments or no feedback (e.g. Kepner, 1991; Polio, Fleck, & Leder, 1998; Sheppard, 1992). In addition, studies conducted by Truscott (1996, 2007) reveal that error correction may be harmful because it distracts attention from much more important issues, such as the development of ideas. However, research on this topic is far from conclusive. For example, studies by Ashwell (2000), Cardelle and Corno (1981), and Ferris (2003) demonstrate a positive correlation between student writing accuracy and teacher error feedback. Furthermore, Ellis (1998) and Lightbrown (1998) maintain that explicit error correction prevents adult learners from fossilization and ensures the continued development of their L2 proficiency.

Since previous studies have yielded mixed results about the efficacy of error feedback, it behooves us to explore this issue further. This study investigates the effect of error feedback from teachers on graduate level Taiwanese EFL students. We conclude by offering some suggestions to help EFL students write more accurately.

Research on teacher error feedback of student writing has centered on three issues. First, to what extent should student errors be corrected? Whereas some teachers assert the best policy is to correct all errors, others maintain that it is preferable to only make strategic corrections of some errors. Still others maintain that error correction is essentially a waste of teacher time. Second, assuming that a decision to correct errors has been made, which type of intervention is preferable: direct or indirect correction? Whereas some teachers maintain the best policy is to point out errors explicitly, others maintain that indirect corrections are more effective. Third, should teacher error feedback take the form of a face-to-face oral conferencing or merely traditional written comments, or some combination of both?

A. Direct correction refers to the provision of correct forms or structures for students' faculty sentences, whereas indirect correction, as the term implies, simply underlines the errors (Hendrickson, 1980). Several studies suggest that indirect correction provides long-term benefits for EFL writers because it involves engagement with and attention to forms and problems (Ferris, 2003; Frantzen, 1995). Likewise, Ferris (2002) asserts

that one of the benefits of indirect correction may be due to the fact that teachers often misinterpret students and speak for them in ways they did not intend. In contrast, support for direct correction is cited by Ferris (2003), who contends that direct feedback may be appropriate for beginner students and cases when students are unable to correct structural or lexical mistakes themselves.

B. Very little research compared the efficacy of written correction with live teacher-student conferences. However, one study by Bitchener, et al. (2005) has contrasted written feedback with dual-mode written and individual conferencing error feedback for grammatical accuracy on writing new pieces. They found that the combination of written and face-to-face conference feedback was significantly better than mere written comments in terms of accuracy levels with respect to the use of the simple past tense and the definite article in writing new pieces among EFL students. While no substantial empirical investigations compare which feedback mode works better, many writing teachers consider one-on-one teacher-student conferences to be more effective than written corrective feedback alone because they provide opportunities for students to ask questions and for teachers to explain and instruct once corrections are made clear (Ferris, 2002).

METHOD

Participants

Three male first-year Physics graduate students with a mean age of 25 who were enrolled at the same university in northern Taiwan took part in the study. Each participant had 11 years of formal English education, and each was assessed as having low proficiency based on their scores on the simulated General English Proficiency Test. At the time of the study, none of the three participants were taking any English classes in school.

Procedures

Each student wrote a passage of about 100 words on the same topic: the greatest invention in human history. (Refer to Appendices A, C, and E for their original compositions.) Each piece of writing was directly and comprehensively corrected in terms of language. No content revision was

involved, as the study aimed to investigate the effect of teacher response on student improvement of linguistic accuracy.

After receiving their revisions from the teacher, the three students were asked to revise their pieces by themselves. In addition to written feedback, the three students were provided face-to-face teacher responses to their writing tasks. The students turned in their revisions five days after completing their original pieces. The oral conference, which was held two days after the students submitted their revised passages, lasted about three and a half hours (see Appendices A, C, and E for their revised versions).

Four weeks after the oral conferencing, the three students were given their original pieces back and were asked to revise them (see Appendices B, D, and F for their test versions). They were not notified about this test at the beginning of the study. Except for written responses and face-to-face conferences with the teacher, no other classroom instruction took place.

Procedure for Analysis

The present study adopts comprehensive correction for two reasons. First, the three participants wanted the teacher to correct all their errors for them. Second, the three students were required to write a 100-word passage each week, so correcting each of the errors presented no significant workload for the teacher, and there could not be enough errors in the passage to reduce students' confidence.

Direct correction was utilized due to the fact that the subjects had minimal exposure to printed English, and they did not have the ability to self-treat errors. Moreover, interviews on their opinions of error correction revealed that students preferred teachers providing correct usage.

In addition, this study employs a combination of written and conferencing corrective types because the researcher believes that the synthesis of both types will generate a greater number of opportunities for students to understand where their errors occur and how they are corrected, thus leading to improved learning and facilitating accurate writing.

FINDINGS AND DISCUSSION

Students' errors are categorized into three error types (grammatical, lexical, and semantic). Grammatical errors include sentence fragments, incorrect punctuation, verb tenses, nouns, adjectives, clauses, participles, and improper use of subjunctive mood. Lexical errors result from incorrect ap-

plication of vocabulary. Semantic errors refer to "Chinese English" or sentences incoherent in meaning or unnatural in wording. Table 1 shows a distribution of Student 1's errors in the original writing project, in the revised version, and in the tested version. Tables 2 and 3 present the errors of Students 2 and 3 in a similar format, and Table 4 presents a summary of the three students' errors in their original, revised and tested written work.

Table 1. Distribution of Student 1's Errors in His Original, Revised, and Test Versions

Version	Grammatical	Lexical	Semantic	Total
Original	3	2	1	6
Revised	0	1	0	1
Test	2	2	1	5

In the original writing piece, Student 1 committed three grammatical errors, two lexical errors, and one semantic error (see Appendix G). Regarding grammatical errors, Student 1 wrote a sentence fragment, as in "*Although the mobile telephone's new technology have changed our ways of lives and our lives more convenient." Another grammatical error deals with not knowing how to use infinitive verbs, as in "...*it is very important using..." As for lexical errors, Student 1 did not know the term "a handsfree device", and incorrectly used "*hands-free". With semantic errors, Student 1 wrote an incoherent sentence, as in "*So it is very important using hands-free to decrease the radiation to the head and keeping the mobile phone away from the body."

After Student 1 submitted his revised version, the researcher had an oral conference with him. During the conference, he was instructed to be more aware of the concept of a complete sentence in English. In addition, he was reminded about the term 'a hands-free device' because in his revision the term was still not corrected.

In the original writing, Student 1 committed six errors. Moving to the revised version, the number of his errors was reduced by five; in other words, he committed only one error. A month after he turned in his revised version, he made five errors in his test version. The only error which was corrected in Student 1's test version is about the distinction between the verb and the noun. The original version is '...in our *live.' and Student 1

corrected it into '...in our lives.' in the test version. Other than that, the other five errors remained uncorrected.

Although Student 1 seemed to make a small improvement in accuracy, this improvement could not count. Student 1 did make a distinction between the verb and noun forms of 'live' elsewhere in his original writing, as in 'our ways of lives.' The error in 'in our live' may be a typo, despite the fact that 'our ways of lives' is an incorrect lexical collocation and should be worded as 'our way of life.' During the conference, Student 1 confirmed the researcher's suspicion that it had indeed been a typo, so his correction of 'live' into 'lives' in his test version did not denote actual progress.

Overall, the errors that Student 1 committed in his original piece of writing remained unchanged in his test version. He was asked why he had not corrected most of the errors despite the fact that he had received both written and oral feedback from the teacher, and he had revised the work himself. He said that he was able to identify some of his errors, but knowing how to correct these errors was still challenging for him. He assumed that the likely reason for this was his lack of exposure to English. During the one-month period between his revision of his writing based on the teacher's model and his revision of his original writing as a test, he had read no material in English. Due to a lack of exposure to English, which would have reinforced and consolidated the information he had gained from the revision process and oral conferencing with his teacher, the acquisition of grammar points did not occur. In other words, the student may have been capable of noticing or consciously recognizing some of his linguistic problems during the revision process or the conference with his teacher, but noticing a few errors may not add new linguistic information to his knowledge repertoire, unless a significant amount of comprehensible input through extensive reading and writing is added to internalize what he had previously learned (Krashen, 1976).

Table 2. Distribution of Student 2's Errors in His Original, Revised, and Test Versions

Version	Grammatical	Lexical	Semantic	Total
Original	2	2	4	8
Revised	0	0	0	0
Test	1	2	4	7

Student 2 committed two grammatical errors, two lexical errors, and four semantic errors in his original writing (see Appendix H). Regarding grammatical errors, Student 2 did not leave a space after punctuation marks. As for lexical errors, he mistakenly used "*convenient store" for "convenience store." The errors that occur the most often in Student 2's writing are semantic in nature. Awkward wording is prevalent, as in "*In recent years, this invention of the various instant noodles is very significant for us." and "...*you will have a lot of choices in the products."

In Student 2's revision, all the errors had been corrected. During the conferencing time, he was praised for his attention to every detail. However, only one grammatical error was corrected in his tested version, where he left a space after punctuation marks. Except for this mechanical error, other grammatical, lexical or semantic errors were untouched. Strictly speaking, teacher feedback did not develop linguistic accuracy for Student 2's writing.

Student 2 was asked why he had not corrected most of his errors in the test version of his writing. His response was similar to that of Student 1; he had received no further input or engaged in any practice to help him transfer the new information into his internalized knowledge base. In other words, Student 2 attributed his unsuccessful learning of grammar points to insufficient input and practice.

Johnson's (1995) learning model might be used to explain Student 2's failure to learn grammar points. According to Johnson (1995), learning a language must follow three stages: verbalization, automatization, and autonomy. In the first stage of verbalization, the teacher describes and demonstrates the language to be learned, and students perceive it and attempt to understand it. After that, learning moves on to the second stage, automatization, in which the teacher suggests exercises and students practice the language in order to internalize it. Finally, in the autonomy stage, learners continue to use the language on their own, becoming more proficient and creative. Overall, three things are essential to the successful learning of grammar points. First, the teacher should explicitly demonstrate grammar for students to understand. Second, the teacher should provide students with opportunities to practice these grammar points for consolidation. Third, students should continue to use the language in order to reach autonomy, which enables ready and fluent self-expression.

Student 3 committed seven grammatical errors, one lexical error, and two semantic errors in his original writing (see Appendix I). Regarding grammatical errors, he made improper use of tense, where the present perfect was more appropriate than the simple present, as in "...*invention of the digital camera changes people's life greatly." Moreover, two different

Table 3. Distribution of Student 3's Errors in His Original, Revised, and Test Versions

Version	Grammatical	Lexical	Semantic	Total
Original	7	1	2	10
Revised	1	0	0	1
Test	7	1	1	9

types of errors were found in the sentence "*All of these advantages that the traditional camera *do not have." First, the main clause lacked a verb, and second, agreement between subject and verb was incorrectly presented in the relative clause. In addition, Student 3, like many Taiwanese EFL learners, had trouble correctly using determiners such as "the." In the first sentence, "In my opinion, the most important revolution of high technology production is digital camera.", it would be better to use the determiner "the" before "digital camera." Also, this writing piece contained mechanical errors such as spaces before punctuation marks, as in "...of the internet*,". As for lexical errors, it would be a more idiomatic expression to write "the most important advance in high technology" than his "the most important *revolution of high technology production." Two semantic errors included Chinese English, such as the examples "...*retake it again" and "*we can without any films take a lot of pictures..."

During the conference, the researcher found only one error in the agreement between the subject and verb in the student's revised version and reminded him to recognize this error. However, to the researcher's disappointment, only one semantic error was corrected in Student 3's test version, which was "... *retake it again" correctly changed to "take another." Other than that, teacher feedback seemed to have no effect on Student 3's ability to write accurately.

Like Student 1 and Student 2, Student 3 was asked why he was incapable of addressing the errors that he had successfully corrected in his revised version. His reply was the same as the other students. Busy with the physics experiments required by his teachers at the graduate school, the student did not have extra time to devote to reading any books or magazines printed in English. In addition, he did not tend to listen to or watch

any English radio or television programs. A lack of exposure to English prevented him from consolidating what he had learned in the revision process and the oral conference with the teacher. It is not surprising that the final result was that his writing accuracy did not improve.

Table 4. Number of three students' errors in their original, revised, and test versions

Version	Student 1	Student 2	Student 3
Original	6	8	10
Revised	1	0	1
Test	5	7	9

As shown in Table 4, Student 1 made six errors in his original writing and left only one error untouched in his revised version after being given teacher feedback. However, one month after the treatment, it seemed that error correction was not retained mentally because five errors still existed in his test version. A similar scenario happened to Students 2 and 3. Both students' errors decreased in their revised versions, but their success was not repeated in their test versions.

It is evident from Table 4 that students made progress in their revised versions. However, very few improvements were found in students' test versions, where they were asked to revise their original writing one month after the teacher made corrections and they themselves revised their writings based on teacher feedback. These findings are consistent with those of a significant number of research studies (e.g. Kepner, 1991; Polio, Fleck, & Leder, 1998; Sheppard, 1992) in that there is no positive relationship between teacher feedback and students' improvement in linguistic accuracy over time. Truscott (1966) offers three explanations for the inefficiency of teacher feedback on students' ability to write linguistically accurate pieces. First, the acquisition of grammar involves complex learning processes and cannot be achieved only by the transfer of information from teacher to student. Second, to know and to apply are totally different concepts. After being given teacher error feedback, students might have some knowledge of a particular grammatical structure, but that does not necessarily mean that they will be able to use it properly in the future. Third, there are developmental sequences for students to acquire grammar. When students are corrected on grammar points for which they are not ready, the correction is not likely to have much value. Therefore, teacher error feedback may be futile if it is not given in due course.

PEDAGOGICAL IMPLICATIONS

The present study suggests that teacher error feedback has a very limited effect on the ability of students to write accurately. Since grammar correction alone does not offer much help, what can teachers do to develop students' linguistic accuracy? Richards' (2002) model of the three-stage learning process might be an alternative to facilitate students' ability to efficiently absorb and accurately use grammar points. In the first input stage, the teacher directs the students' attention to particular linguistic features by means of explicit instruction. In the second acquisition stage, students are offered opportunities to incorporate new grammar items into their developing system or interlanguage. The teacher can assign readings that contain the grammar points that are being taught, or design writing tasks to apply the linguistic rules. Through noticing, discovering rules, restructuring, and experimentation in a variety of activities, students are more likely to use the language accurately. Finally, in the consolidation stage, the teacher continues to encourage students to immerse themselves in English environments to reinforce what they have previously learned.

SUGGESTIONS FOR FURTHER RESEARCH

Three students took part in an experiment investigating the effect of teacher error feedback on linguistic accuracy. Due to the very small number of participants, there was no comparison between the control group that received no error feedback and the experimental group that received the treatment. The results could have been more reliable and valid if such a comparison had been made.

A further limitation of this study is that it only dealt with low-proficiency students. The reactions of students with different language levels to teacher error feedback may vary. Whether advanced students with better linguistic knowledge develop improved accuracy in their writing to a higher degree than beginners after receiving teacher error feedback is an area well suited to further investigation in future research.

The third limitation of this study is that no questionnaire or survey was involved to systematically investigate students' views about why teacher error feedback was facilitative or harmful to their ability to write accurately. A more comprehensive picture might be obtained if student interpreta-

tions of the relationship between teacher feedback and linguistic accuracy were included in the study.

Because of these limitations, future research should involve a larger number of samples, take language proficiency levels into account, and incorporate students' views about the degree to which teacher feedback served to assist or detriment their abilities to write accurately. In addition, the effect of teacher feedback on content rather than form, as in this study, can be a direction for future studies.

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Appendix A

Student 1's Original and Revised Versions

Topic: Inventions such as eyeglasses and the sewing machine have had an important effect on our lives. Choose another invention that you think is important. Give specific reasons for your choice.

Student 1's Original Version

Since the mobile telephone was invented, it has become one of the most important inventions in the twentieth century. It plays an important role and has a wide application in our live. In addition to the standard voice function of a telephone, current mobile phones may support many additional services and accessories, such as text messaging, email, packet switching for access to the internet, and sending or receiving photos and video.

Although the mobile telephone's new technologies have changed our ways of lives and made our lives more convenient. However, it may also damage our health. This is because mobile phones use electromagnetic radiation in the microwave range. So it is very important using hands-free to decrease the radiation to the head and keeping the mobile phone away from the body.

Student 1's Revised Version

The mobile phone was by far one of the most important inventions of the twentieth century. Mobile phones continue to play an important role in our lives. In addition to the standard voice function of a telephone, current mobile phones support many additional services and accessories, such as text messaging, email, internet access, and sending and receiving photos and video.

Although mobile telephones have changed our way of life and made our lives more convenient, they may also be dangerous to our health. Mobile phones use electromagnetic radiation in the microwave range, so it is very important to use *hands-free (a hands-free device) to keep the phone away from your body and decrease the amount of radiation to which your head is exposed.

Appendix B

Student 1's Test Versions

Topic: Inventions such as eyeglasses and the sewing machine have had an important effect on our lives. Choose another invention that you think is important. Give specific reasons for your choice.

Student (1) Hank Original

Since the mobile selephone was invented, it has become one of the most important inventions in the twentieth century. It plays an important role and has a wide application in our live In addition to the standard voice function of a telephone, current mobile phones may support many additional services and accessories, such as text messaging, email, packet switching for eccess to the internet, and sending or receiving photos and video.

Although the mobile telephone's new technologies have changed our ways of lives and made our lives more convenient. However, it may also damage our health. This is because mobile phones use electromagnetic radiation in the microwave range, So it is very important using hands-free to decrease the radiation to the head and keeping the mobile phone away from the body.

Appendix C

Student 2's Original and Revised Versions

Topic: Inventions such as eyeglasses and the sewing machine have had an important effect on our lives. Choose another invention that you think is important. Give specific reasons for your choice.

Student 2's Original Version

In the recent years, I think this invention of the various instant noodles is very significant for us.

In the case of typhoon, midnight, and watching TV before going to bed...etc,the instant noodles is a nice companion.

Its largest adventage is convenient for a lazy guy and allowed to be saved for a long time.

Besides you are able to buy them in many convenient stores and the food department of a supermarket, and you will have a lot of choices in the prod-

But some reports show that eating this type of food too much is unhealthy to your body.

Student 2's Revised Version

The most significant invention of recent years is the variety of instant noodles now available to consumers. Instant noodles are a nice companion when the weather is bad, when you are watching television, or when it is late and you do not feel like cooking a full meal. The largest advantage of instant noodles is their convenience and time-saving capability. In addition, they are readily available in convenience stores and supermarkets, and there are a variety of noodles from which to choose. However, some reports show that eating too much of this type of food is quite unhealthy.

Appendix D

Student 2's Test Versions

Topic: Inventions such as eyeglasses and the sewing machine have had an important effect on our lives. Choose another invention that you think is important. Give specific reasons for your choice.

Student (2) 劉正禮 Or	iginal
In the recent years, thin	k this invention of the various instant noodles is very
significant for us.	
In the case of typhoon, in	hidnight, and watching TV before going to bedetc, the instant
noodles is a nice compar	nion
Its largest adventage is c	convenient for a lazy guy and allowed to be saved for a long
time.	, .
Besides you are able to b	buy them in many convenient stores and the food department
of a supermarket, and you	u will have a lot of choices in the products
But some reports show t	hat eating this type of food too much is unhealthy to your
body.	too much of these
_	14. 1

Appendix E

Student 3's Original and Revised Versions

Topic: Inventions such as eyeglasses and the sewing machine have had an important effect on our lives. Choose another invention that you think is important. Give specific reasons for your choice.

Student 3's Original Version

In my opinion, the most important revolution of high technology production is digital camera. By using the digital camera, we can without any films take a lot of pictures. So we can not only save our money but also protect our environment. Besides, if we take a picture unsuccessfully, we can find out immediately on LCD and retake it again. By the improvement of the internet, we can also share our pictures on the website and send our pictures to our friends. All of these advantages that the traditional camera do not have, so invention of the digital camera changes people's life greatly.

Student 3's Revised Version

In my opinion, the most important advance in high technology is the digital camera. Because digital cameras do not use film, we can take many more pictures, not only saving money but protecting the environment as well. With the digital camera's LCD, we can see immediately if our pictures are successful, and if not, we can quickly take another. With the internet, we can share digital pictures on our websites and send our pictures to friends. These are all advantages that traditional *camera (cameras) do not have, so the invention of the digital camera has changed people's lives greatly.

Appendix E

Student 3's Test Versions

Topic: Inventions such as eyeglasses and the sewing machine have had an important effect on our lives. Choose another invention that you think is important. Give specific reasons for your choice.

Student (3) 翁茂東 Original

In my opinion, the most important revolution of high technology production is digital camera. By using the digital camera, we can take a lot of pictures without any films. So we can not only save our money but also protect our environment. Besides, if we take a picture unsuccessfully, we can find out immediately on LCD and retake to the out it again. By the improvement of the internet, we can also share our pictures on the our website and send our pictures to our friends. All of these advantages that the traditional camera do not have, so invention of the digital camera changes people's life greatly.

Appendix G

Student 1's Error Breakdown from Original

Grammatical	
to-v	1. It is important *using
noun	2 in our *live
sentence	3. *Although the mobile telephone's new technology has
fragment	changed our ways of lives and our lives more conve-
	nient.

Lexical	
collocation	4*our ways of lives
	5 *hands-free

Semantic	
awkward	6. *It is very important using hands-free to decrease
English	the radiation to the head and keeping the mobile
	phone away from the body.

Appendix H

Student 2's Error Breakdown from Original

Grammatical	
punctuation	1 recent *years,I, *etc,the,
	*typhoon,midnight,*supermarket,and
spelling	2 *adventage

Lexical	
collocation	3 *convenient store
usage	4. Its largest adventage is *convenient

Semantic	
Chinese English	5. *In recent years,this invention of the various instant noodles is very significant for us.
	6. *In the case of typhoon, midnight, and watching TV before going to bedetc, the instant noodles is a nice companion.
	7. *Besides you are able to buy them in many convenient stores and the food department of a supermarket, and you will have a lot of choices in the products.
	8 *eating this type of food too much is unhealthy to your body.

Appendix I

Student 3's Error Breakdown from Original

Grammatical	
tense	1 invention of the digital camera *changes people's
	life greatly.
verb	2. *All of these advantages that the traditional camera do
	not have,
preposition	3. *By the internet,
Noun singu-	4 changes people's *life
lar/plural	
s-v agreement	5 the traditional camera *do not have
determiner	6 is *digital camera.
punctuation	7. In my opinion*, a lot of pictures*., of the inter-
	net*,

Lexical	
usage	8 the most important *revolution of high technology
	production

Semantic	
Chinese English	9. *Besides, if we take a picture unsuccessfully, we can
	find out immediately on LCD and retake it again.
awkward Eng-	10. *By using the digital camera, we can without any
lish	films take a lot of pictures.