Proficiency Level and the Relative Effects of Different Corrective Feedback Options on EFL Student Writing

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The present research investigated the effects of direct and indirect feedback options on accuracy improvement of selected target structures (simple past and present perfect tenses) with learners from two levels of L2 proficiency. It focused on two questions: (1) whether written corrective feedback helps enhance accuracy in writing and (2) whether there is any difference in the effectiveness of certain type of corrective feedback in relation to the learner's level of L2 proficiency. In order to answer the questions, the scores of pre- and post-writing tests were analyzed using two-way repeated measures ANOVA. For the purpose of examining relative effects of the treatment, one-way ANOVAs with post-hoc tests were conducted. The results indicated that direct correction with meta-linguistic explanation was more effective for the beginner-level students and that coded feedback was more beneficial to the intermediate-level students. The findings suggest that the effect of the same feedback option may turn out differently in relation to the level of L2 proficiency. Learners with a low level of proficiency may benefit more from direct, explicit type of feedback, and learners with a higher level may engage more in indirect, implicit feedback options, thus promoting more noticing and learning.

I. INTRODUCTION

It had been generally agreed that teacher’s error correction (or corrective feedback) is useful to help students improve accuracy of their writing before Truscott (1996) made a controversial claim that error correction is ineffective and even harmful to the learning process. Opposed to Truscott (1996, 1999), Ferris (1999, 2004) argued that previous

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research forecasted the efficacy of corrective feedback in writing classes, based on three lines of research (1) studies comparing the accuracy of students’ writing with and without error correction (Fathman & Whalley, 1990, Ferris & Roberts, 2001; Kepner, 1991), (2) studies measuring progress in linguistic accuracy over time (Chandler, 2003, Ferris, 1995b, 1997, Ferris, Chaney, Komura, Roberts, & McKee, 2000, Frantzen, 1995, Lalande, 1982, Robb, Ross, & Shortreed, 1986), and (3) studies of student understanding and opinion on teacher’s corrective feedback (Ferris & Roberts, 2001, Leki, 1991, Paulus, 1999) Truscott’s strong claim against teacher’s error correction in writing classes has brought substantial debate and research on the effectiveness of corrective feedback. Regardless of the dependability of his claim, it provided a turning point in error correction research in the way that researchers had to admit that “there have been no attempts to investigate questions surrounding error correction in L2 writing in a sustained, systematic, replicable manner that would allow for comparisons across either similar or different contexts and student populations” (Ferris, 2004, p 55) In other words, research evidence is limited in terms of the quality of research design although there have been quite a few studies on this topic over the past two decades

The aim of the present study was twofold. First, it was set about dealing with the question of efficacy of corrective feedback for the purpose of evaluating two differing positions (for/against error correction). Second, the study was to investigate whether there is any relationship between student’s English proficiency level and the effect on accuracy for different types of corrective feedback. The literature indicates that the level of proficiency of students is an important variable in whether certain type of corrective feedback is successful or not (Aljaafreh & Lantolf, 1994, Han, 2001, Hyland, 2003, Qi & Lapkin, 2001) Despite large number of research on error correction, it is difficult to locate the studies which included more than two participant groups at different proficiency levels in order to examine any differential effect of different corrective feedback options in relation to learners’ proficiency level.

In order to overcome the limitations in design of previous research, the issues of research design and methodology addressed (e.g., Ferris, 1999, 2004, Guénette, 2007, Truscott, 1996, 1999) were taken into account in framing the study. Thus, this study incorporated a control group for each proficiency level (one that does not receive corrective feedback) so that its measured accuracy can be compared with that of the experimental groups. Second, it examined the effectiveness of corrective feedback on new pieces of writing rather than text revisions, by means of a pre-test/post-test design. Third, it focused on targeted error categories (present perfect and past simple tenses) selected in consideration of the distinction between ‘treatable’ and ‘untreatable’ errors (Ferris, 1999, Ferris & Helt, 2000, Ferris & Roberts, 2001) In the following review of the literature,
focus of the study is presented by discussing the effects of different types of corrective feedback on accuracy and the issues in research design and methodology.

II. LITERATURE REVIEW

1 Effect of Different Feedback Options on Accuracy of Writing

There are various corrective feedback options within the distinction of direct (i.e., indicating errors and providing the correct form) and indirect (i.e., identifying errors without providing the correct form) feedback. More recently examined in corrective feedback research among direct feedback options is direct correction with written or oral meta-linguistic explanation, which provides grammar rules and examples corresponding to the errors (Bitchener, 2008, Bitchener, Young, & Cameron, 2005, Sheen, 2007). Three indirect feedback options are consistently dealt with in research—(a) coded feedback, indicating where an error is and what type of error it is using an abbreviated code system, (b) uncoded feedback, pointing out where an error is by circling or underlining the error, and (c) marginal, recording the number of errors in a given line of text in the margin (Ferris & Roberts, 2001, Robb et al., 1986). An increasing number of studies have centered around investigating relative effectiveness of different types of feedback, focusing on direct feedback only, indirect feedback only, or both direct and indirect feedback, in order to find out whether certain types of feedback help learners improve on accuracy of writing.

There has been some positive evidence on the effectiveness of direct feedback in research examining direct feedback only (Bitchener et al., 2005, Bitchener, 2008, Sheen, 2007). Those in favor of direct correction suggest that it assists learners with internalizing the correct form in a more practical way since students don’t suffer from confusion brought about when they fail to understand teacher’s indirect feedback and resolve complex errors (Leki, 1991, Roberts, 1999). Chandler (2003) accounts for superiority of direct correction over indirect one by hypothesizing that indirect feedback is not likely to foster sufficient cognitive processing to promote learning when the confirmation of the learner’s hypothesized correction is delayed. The claim advocating direct feedback is also supported by SLA research on oral feedback, it is reported that explicit, direct feedback resulted in a significant advantage in L2 production tasks over implicit, indirect feedback (Carroll & Swam, 1993, Ellis, 1998, Ellis, Loewen, & Erlam, 2006). However, another group contends that indirect feedback is more beneficial to accuracy improvement because it involves learners in guided learning and problem solving, thereby promoting deeper internal processing and acquisition of the correct form (Ferris, 2002, Lalande, 1982, James, 1998). There seems more research evidence in support of indirect correction among the
studies that investigated the effectiveness of different indirect feedback options (Ashwell, 2000, Chandler, 2000, Fathman & Whalley, 1990, Ferris, 1995, 1997, Ferris & Roberts, 2001) Now our attention is turned to the studies comparing the effect of both direct and indirect feedback to explore which one is more effective to enhance accuracy in writing.

The number of studies comparing the two approaches is rather limited compared to the studies done focusing on either of the approaches. Table 1 presents comparative effects of direct and indirect feedback.

**TABLE 1**

<table>
<thead>
<tr>
<th>Study</th>
<th>Proficiency level</th>
<th>Feedback types</th>
<th>Duration</th>
<th>More effective</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>60 German EFL</td>
<td>b. Indirect coding and required error logs</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>learners at US</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>university</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semke (1984)</td>
<td>Not reported</td>
<td>a. Comments</td>
<td>10 weeks</td>
<td>No difference</td>
</tr>
<tr>
<td></td>
<td>141 German EFL</td>
<td>b. Direct correction</td>
<td></td>
<td>No progress</td>
</tr>
<tr>
<td></td>
<td>learners at US</td>
<td>c. Direct correction with comments</td>
<td></td>
<td>measured</td>
</tr>
<tr>
<td></td>
<td>university</td>
<td>d. Indirect (coded) feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Robb et al (1986)</td>
<td>Not reported</td>
<td>a. Direct correction</td>
<td>1 semester</td>
<td>No difference</td>
</tr>
<tr>
<td></td>
<td>134 EFL learners</td>
<td>b. Indirect (coded) feedback</td>
<td></td>
<td>All groups</td>
</tr>
<tr>
<td></td>
<td>at Japanese college</td>
<td>c. Indirect (highlighted) feedback</td>
<td></td>
<td>improved</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d. Indirect (marginal) feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ferris and Helt (2000)</td>
<td>Not reported</td>
<td>a. Direct correction</td>
<td>1 semester</td>
<td>Indirect</td>
</tr>
<tr>
<td></td>
<td>92 ESL learners at US university</td>
<td>b. Indirect (coded) feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>c. Indirect (uncoded) feedback</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>d. Indirect (marginal) feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chandler (2003)</td>
<td>High-intermediate</td>
<td>a. Direct correction</td>
<td>1 semester</td>
<td>Direct</td>
</tr>
<tr>
<td></td>
<td>36 ESL learners All music majors</td>
<td>b. Underlined indirect (coded) feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>c. Indirect (coded) feedback in the margin</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>d. Underlines only</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ryoo (2006)</td>
<td>Various</td>
<td>a. Direct correction</td>
<td>1 semester</td>
<td>No difference</td>
</tr>
<tr>
<td></td>
<td>proficiency levels</td>
<td></td>
<td></td>
<td>All groups</td>
</tr>
<tr>
<td></td>
<td>32 EFL learners at</td>
<td>b. Direct correction with meta-linguistic explanation</td>
<td></td>
<td>improved</td>
</tr>
<tr>
<td></td>
<td>Korean university</td>
<td>c. Indirect (coded) feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>d. Indirect (coded) feedback with meta-linguistic ex</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Two studies (Ferris & Helt, 2000, Lalande, 1982) provided positive evidence for indirect feedback and Chandler (2003) for direct feedback. In contrast, three other studies (Robb et al., 1986, Ryoo, 2006, Semke, 1984) reported no significant differences across different feedback options.

These studies seem to have failed to provide any conclusive evidence to answer the question of which approach, either direct or indirect, is more effective. Even in the case of the studies with similar findings, it is difficult to draw any conclusion. For example, although both Ferris and Helt (2000) and Lalande (1982) reported a significant advantage for indirect feedback, they are not comparable in the types of indirect feedback implemented in the studies. In Lalande (1982) the group given indirect coding was required to keep error logs, which helped them give more attention to their errors. Among the studies reporting no significant difference between direct and indirect feedback, Semke (1984) suggested that neither direct nor indirect feedback was effective in accuracy improvement, whereas Robb et al. (1986) and Ryoo (2006) found that both direct and indirect correction resulted in significant progress in accuracy. The conflicting results suggest that weighing up the relative effects of different types of feedback may end up with nothing but confusion if the research does not consider other factors that may influence the effectiveness of certain type of corrective feedback. One such factor is that L2 proficiency may play a role in the learner’s noticing in his/her reactions to the type of feedback given (Conrad & Goldstein, 1999, Ferris, Pezone, Tade, & Tinh, 1997, Hyland, 1998, Swann & Lapkin, 1995). None of the studies reviewed above incorporated the factor of learner L2 proficiency. In fact, despite a large number of corrective feedback research, barely any attention has been given to an investigation of how L2 proficiency is related to the learner’s noticing and learning from different types of feedback. In this regard, it is worth noting the findings of Qi and Lapkin (2001) which addressed the issue of efficacy of teacher feedback in relation to learners’ L2 proficiency.

The study does not belong to the body of corrective feedback research in the way that teacher’s feedback was given in the form of reformulated text (i.e., target language model of the learner’s composition rewritten by the native-speaking teacher—see Levenston (1978) for more specified notion of ‘reformulation’) rather than direct or indirect corrective feedback. But it still offers implications for the need to explore right type of corrective feedback according to learners’ level of L2 proficiency. Qi and Lapkin (2001) carried out a case study of two Chinese ESL learners with different levels of L2 proficiency. The participants produced think-aloud protocols reporting what they noticed and how they incorporated what they’ve noticed into writing while composing their first drafts, comparing the draft with a given reformulated version of it, and finally revising the first draft. The results demonstrated that the high-intermediate learner was able to pay attention to more language-related problems including grammar and more capable of
solving the noticed problems alone than the low-intermediate learner. This suggests that
the same kind of teacher feedback may trigger different reactions from learners and
different effect on their writing depending on the level of L2 proficiency.

2 Methodological Issues in Corrective Feedback Research

As Ferris (2004) pointed out, the research base on corrective feedback built up ever
since the early 1980s has not been able to confirm that error correction works as the
existing research is "fundamentally incomparable because of inconsistencies in design" (p.
50) Ever since Truscott (1996) depreciated the role of teacher corrective feedback in L2
writing, the debate between for- and against-error correction proponents is still ongoing. In
order to cease the debate and provide L2 writing teachers with a more practical guide to
giving corrective feedback to students, any future research on corrective feedback should
seriously take the following methodological issues into account in designing the study.

The first issue concerns a control group receiving no error correction. Without a control
group, it cannot be asserted that measured improvements in accuracy result only from error
correction. For example, the results of some studies (e.g., Chandler, 2000, Ferris, 1995a,
1997, Ferris et al., 2000, Lalande, 1982) cannot be counted as the positive evidence of
error correction due to lack of a control group. Many of the earlier studies failed to include
a control group for an ethical reason that there is no virtue in using a no correction group.
However, to rightly address the issue of error correction every research needs to
incorporate a control group that is comparable in every way to experimental groups in
terms of proficiency level and instructional context.

The second issue has to do with the measurement of accuracy in writing. Some
measured accuracy improvement in ten-minute free writing in class (Semke, 1984), journal
entries written at home (Kepner, 1991), and essay assignments written at home (Chandler,
2003). The variation makes it impossible to draw any definite conclusion about the
effectiveness of corrective feedback, and the measures themselves induce extraneous
variables as well. Others measured improved accuracy using revisions only rather than a
new piece of writing (e.g., Ashwell, 2000, Fathman & Whalley, 1990, Ferris & Roberts,
2001). The effect of corrective feedback was measured by the extent to which learners
coped with the feedback to improve the accuracy of the revised text. The concern, however,
is how the results may contribute to the question as to whether error correction results in
learning. As Truscott (1999, 2007) argued, error reduction in revision is not a measure of
learning. Therefore, in order to claim that error correction facilitates the development of
accuracy in writing, accuracy improvement should be measured in new pieces of writing,
which are valid measures of progress such as timed essays in class, by means of pre- and
post-test comparisons.
The selection of error categories for corrective feedback is the third issue to be addressed. It has been suggested that different linguistic error categories should not be treated as if they are comparable since they correspond to separate domains of linguistic knowledge which are acquired in different ways and stages (Chaney, 1999, Ferris, 1995a, Ferris et al., 2000, Ferris & Helt, 2000, Frantzen & Rissel, 1987, Lalande, 1982, Schwartz, 1993, Truscott, 1996, 1999) According to Ferris (1999), there are “treatable” (rule-governed features such as verb tense and form) and “untreatable” (more idiosyncratic such as word choice and prepositions) errors. The distinction is important in the sense that teacher corrective feedback may facilitate improvement in the use of more treatable features (Ferris et al., 2000, Ferris & Roberts, 2001). For instance, Bitchener et al. (2005) found that a significant effect for corrective feedback on accuracy levels in the use of the past simple tense and the definite article but no effect in the use of prepositions. Furthermore, Bitchener (2008) suggests that error categories should not be too broad because it’s not possible to determine exactly where an error lies with a targeting of more than several categories. Hence, any further research would do well to focus on a few treatable errors in examining the effectiveness of error correction.

3 Research Questions

The present study aims to investigate the effect of corrective feedback on accuracy improvement in an EFL class in an attempt to provide further evidence refuting Truscott’s (1996) position. It also explores the relationship between the effect of different types of corrective feedback and the level of L2 proficiency under the assumption that a learner’s L2 proficiency level may mediate the effect of corrective feedback. The subsequent research questions of the study are as follows:

1. Do direct and indirect feedback options have an impact on the accuracy improvement in writing of beginner and intermediate EFL learners?
2. Is there any difference in the effectiveness of certain type of corrective feedback on writing in relation to learner’s level of L2 proficiency?

III. METHOD

1 Participants

The study was carried out at a university in Seoul, Korea. Six intact classes (n = 135) took part. Participant students from different majors (English majors = 14%, non-English
majors = 86%) were enrolled in a required course entitled, Freshman English II, the aim of which was to develop both spoken and written communication skills in English. The majority (92%) had received formal and private instruction in English for an average of 8 years. At the time of the study the students were placed into either beginner-level classes or intermediate classes based on their TOEIC scores. The beginner classes consisted of students whose TOEIC scores ranged from 350 to 420 and the intermediate classes from 580 to 620. None of the students had taken a writing course, and the majority had no experience in English composition. Two beginner classes \((n = 23, n = 24)\) and another two intermediate classes \((n = 24, n = 23)\) were assigned to experimental groups. The rest of the classes constituted control groups for the respective levels, one for beginner \((n = 21)\) and the other for intermediate \((n = 20)\). Between the experimental groups, one received direct correction and the other indirect feedback. Hence, the six groups of the study were beginner direct (B-D), beginner indirect (B-I), beginner control (B-C), intermediate direct (I-D), intermediate indirect (I-I) and intermediate control (I-C) groups.

### 2 Setting and Procedures

The six classes of two proficiency levels were taught by two different instructors. But the classes of each level were taught by the same instructor, so the instructors were in charge of two experimental groups and a control group of either level. All the six classes were instructed based on the same curriculum and lesson plans. The students met twice a week (50-minute and 100-minute class periods) over a semester (16 weeks). The course dealt with short writing consisting of one or two paragraphs. The basics of writing such as composing a topic sentence, organizing a paragraph, and maintaining coherence and clarity were taught in class, but no in-class writing was done during the course except for the testing sessions. Writing tasks were given as assignments, which accounted for 15% of the final grade.

On day 2 of the first week, the pre-test was administered for 40 minutes. The students were asked to write a letter to an old friend telling him/her how they spent the past five years (including travel experiences, fun or terrible things they've done, etc.) and their future plans. The instructors collected the drafts, reviewed them to give feedback according to the correction guidelines given by the researcher, and returned them to the students in the following week. The feedback was given on both content and grammar for the experimental groups but only on content for control groups. When providing feedback, the instructors consulted with the researcher, who reviewed the instructors' correction and checked whether the correction was appropriate for the purpose of each group. Every other week throughout the semester, the students composed writing about an assigned topic drawn from the textbook unit covered during the week to complete the assignment. They
received each assignment (first draft) back with corrective feedback in the following week and revised it based on the feedback. During the course, they completed eight compositions including the pre- and post-tests and revised seven drafts except for the post-test. In week 15, the post-test was administered in class for 40 minutes. The writing prompt used in the post-test was constructed to be an equivalent measure to the pre-test. The students were asked to write a cover letter discussing their past experience and long-term and short-term plans.

3 Target Structures and Treatment

Two functions of verb tenses, simple past and present perfect tenses were selected as the target structures. They were targeted because the results of the pre-test revealed that the participants from both proficiency levels had difficulty in the use of the tenses. Accuracy in the use of these functions in the pre-test was around 34% for the beginner groups and 65% for the intermediate groups. The intermediate groups showed more than 80% of mastery in the use of other error categories such as word order and subject-verb agreement. Besides, the selected functions are categorized as treatable errors in the previous studies (Bitchener et al., 2005, Ferris, 2002, 2006).

The corrective feedback treatment was given by two types of written correction to the experimental groups: Direct and indirect feedback. The direct corrective feedback consisted of meta-linguistic comments that explained the correct form as well as direct correction (i.e., indicating the location of an error by underlying it with the provision of the correct form) as in (1a) and (2a). Indirect feedback was presented by marked errors with codes as in (1b) and (2b).

(1) I travel around Europe two years ago to refresh myself
   a) I travel around Europe two years ago to refresh myself
      traveled
      → Use simple past for an action or condition that was completed at a particular time in the past (e.g., People discovered gold in California in 1848).

   b) I travel around Europe two years ago to refresh myself
      VT(P)*

(2) I met many people since I entered this university
   a) I met many people since I entered this university
      have met
      → Use present perfect for an action that started in the past and continues in the
present The present perfect also expresses the repetition of an activity before now. The exact time of each repetition is not important (e.g., I have flown on an airplane many times.)

b I met many people since I entered this university

VT(PP)**

*code VT(P) → Verb Tense (Past)

**code VT(PP) → Verb Tense (Present Perfect)

Among the six groups, beginner direct (hereafter B-D) and intermediate direct (hereafter I-D) groups received direct error correction with meta-linguistic explanation. The other two experimental groups, beginner indirect (hereafter B-I) and intermediate indirect (hereafter I-I) groups received coded error feedback. The two control groups (hereafter B-C and I-C) were not given any corrective feedback.

4 Data Collection and Analyses

Data from the pre- and the post-tests were analyzed by the researcher. The number of obligatory contexts for each targeted feature was identified, and the target-like use in necessary occasions was counted. Accuracy of each student’s writing was calculated as a percentage of correct uses divided by the number of obligatory contexts for each target feature, thereby adding up the calculated percentages of the two target features (simple past and present perfect tenses).

The percentage scores of accuracy on the pre- and post-writing tests served as the dependent variable. One independent variable of interest was different groups of proficiency in English (beginner and intermediate), and the other was the types of corrective feedback (direct, indirect, and no corrective feedback). First, two-way repeated measures ANOVA was performed to test for interaction between the factors (proficiency level and feedback type), and then one-way repeated measures ANOVAs for each level of proficiency separately and one-way ANOVAs with post-hoc multiple comparison tests using Tukey HSD and Scheffe were done in order to examine relative effects of different feedback options within the level (either beginner or intermediate). The significance level was set at $p < 0.05$ for statistical decisions.
IV. RESULTS AND DISCUSSION

1 Evidence in Support of Corrective Feedback

It was assumed that initial compositions of the groups in each level, either beginner or intermediate, were equivalent since they were all placed into a class based on their TOEIC scores. Yet it is necessary to check whether the accuracy of their writing (i.e., accuracy in the use of target linguistic features in writing) matches each other at the outset, so pre-test scores of the groups were compared within each level. The results of one-way ANOVA tests revealed no statistical difference in accuracy scores across three groups of each level (beginner groups \( F = 0.25, df = 2, p = 0.975 \) and intermediate groups \( F = 11.8, df = 2, p = 0.888 \)).

The means and standard deviations for the accuracy scores of the pre- and post-tests are presented in Table 2. The scores reported here are based on the percentage of correct uses of target features. Mean difference of each group between the pre- and post-tests is also illustrated in Figure 1. All the groups, both experimental and control, performed better on the post-test, thereby indicating some gains over 15 weeks. The result of two-way repeated measures ANOVA shown in Table 2 suggests that the gains are statistically significant \( (F = 5.75, 5.16, df = 1, p = 0.00) \).

### TABLE 2
Descriptive Statistics for the Six Groups

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Pre-test</th>
<th></th>
<th>Post-test</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( M )</td>
<td>( SD )</td>
<td>( M )</td>
<td>( SD )</td>
</tr>
<tr>
<td>Beginner-Direct group ( n=23 )</td>
<td>34 13</td>
<td>9.07</td>
<td>55 13</td>
<td>12.00</td>
</tr>
<tr>
<td>Beginner-Indirect group ( n=24 )</td>
<td>34 08</td>
<td>8.80</td>
<td>45 96</td>
<td>9.75</td>
</tr>
<tr>
<td>Beginner-Control group ( n=21 )</td>
<td>34 62</td>
<td>8.43</td>
<td>36 52</td>
<td>8.09</td>
</tr>
<tr>
<td>Intermediate-Direct group ( n=24 )</td>
<td>65 08</td>
<td>7.97</td>
<td>75 67</td>
<td>5.34</td>
</tr>
<tr>
<td>Intermediate-Indirect group ( n=23 )</td>
<td>65 30</td>
<td>8.07</td>
<td>76 96</td>
<td>10.01</td>
</tr>
<tr>
<td>Intermediate-Control group ( n=20 )</td>
<td>66 20</td>
<td>7.67</td>
<td>69 50</td>
<td>10.07</td>
</tr>
</tbody>
</table>

### FIGURE 1
Group Means on Pre- and Post-Writing Test
Besides, there were significant differences for two of the main effects, Proficiency and Feedback type, and the interaction effects. However, the result does not seem sufficient to answer the research question about the effect of each type of corrective feedback in the groups at different proficiency levels. For example, the result does not explain whether the effect (labeled Time in Table 3) was significant in most of the groups or in all the six groups. Therefore, two one-way repeated measures ANOVAs were conducted separately for the groups on each level of proficiency. The results indicate that in both beginner and intermediate groups, the accuracy score of each group receiving different type of feedback measured in the post-test significantly differs from that measured in the pre-test (beginner groups $F = 374.249$, $df = 1$, $p = 0.000$ and intermediate groups $F = 211.322$, $df = 1$, $p = 0.000$). That is, all six groups including two control groups improved over time, thus indicating that two different feedback options, both direct and indirect corrective feedback, had an impact on accuracy improvement. The significant gain in the control groups is no surprise considering the findings of previous studies, the groups receiving feedback on content only also gained in formal accuracy (Fathman & Whalley, 1990, Goring-Kepner, 1991, Sheppard, 1992). Self-correction might have played a role making some progress in accuracy since the control groups also went through revision processes throughout the semester.

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between subjects effects</td>
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<tr>
<td>Proficiency level</td>
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<td>59308.55</td>
<td>403.70</td>
<td>0.000 *</td>
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<tr>
<td>Feedback type</td>
<td>1504.87</td>
<td>2</td>
<td>752.44</td>
<td>5.12</td>
<td>0.007 *</td>
</tr>
<tr>
<td>Within subjects effects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>6789.49</td>
<td>1</td>
<td>6789.49</td>
<td>575.516</td>
<td>0.000 *</td>
</tr>
<tr>
<td>Time x Proficiency level</td>
<td>159.49</td>
<td>1</td>
<td>159.49</td>
<td>13.52</td>
<td>0.000 *</td>
</tr>
<tr>
<td>Time x Feedback type</td>
<td>1972.21</td>
<td>2</td>
<td>986.11</td>
<td>83.59</td>
<td>0.000 *</td>
</tr>
<tr>
<td>Time x Proficiency x Feedback</td>
<td>465.93</td>
<td>2</td>
<td>232.96</td>
<td>19.75</td>
<td>0.000 *</td>
</tr>
</tbody>
</table>

* $p < 0.05$

The finding is an important contribution to the existing evidence in support of corrective feedback. It is especially meaningful in the way that the study was designed following the guidelines on methodological issues presented in the literature (Ferris, 2004, Guénette, 2007, Truscott, 1996, 1999, 2004), accuracy in the use of treatable linguistic features was measured on a new piece of writing rather than revised drafts, and control group was included in the study. The finding certainly disconfirms Truscott’s (1996, 1999, 2007) claim that teacher’s corrective feedback should be renounced in writing classes due to its harm as well as ineffectiveness.
2 Proficiency Level and Relative Effects of Corrective Feedback

The second research question examined whether there was a differential effect on accuracy for the different feedback options in relation to the level of proficiency. As shown in Figure 1, it appears there was a noticeable gain in the post-test scores of B-D group, compared with B-I and B-C groups given that the mean difference is 21. As for the intermediate groups, both I-D and I-I groups appear to have outperformed the control group, but there doesn’t seem much difference between the experimental groups (I-D and I-I). As reported in Table 3, the result shows that there was a significant interaction effect for Time by Proficiency level by Feedback type, thus suggesting that the two factors, proficiency and feedback option had an effect upon each other, which influenced the measured accuracy. However, it does not explain how the students' level of proficiency relates to different feedback treatments.

In order to make the discussion of results more accessible for accurate interpretations, one-way ANOVAs separately for each level of proficiency groups were performed based on the post-test scores because the pre-test scores were obtained before the treatment. Concerning the beginner groups, since a significant effect for the different feedback treatment was revealed as presented in Table 4, two types of post hoc tests (Tukey HSD and Scheffe) were conducted. The results (see Table 5) showed that both direct and indirect groups outperformed the control and that the direct group manifested significantly greater gains than both the indirect and control groups. This finding suggests that direct correction with meta-linguistic explanation was more effective to the beginner students than coded feedback.

<table>
<thead>
<tr>
<th>TABLE 4</th>
<th>One-Way ANOVA Within the Beginner Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>SS</td>
</tr>
<tr>
<td>Feedback type</td>
<td>3801 72</td>
</tr>
<tr>
<td>Error</td>
<td>6664 81</td>
</tr>
<tr>
<td>Total</td>
<td>10466 53</td>
</tr>
</tbody>
</table>

* p < .05

<table>
<thead>
<tr>
<th>TABLE 5</th>
<th>Results of Post-hoc Tests for Feedback Type (Beginner Groups)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedback types</td>
<td>Feedback types</td>
</tr>
<tr>
<td>Tukey HSD</td>
<td>DF**</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>IF**</td>
<td>DF</td>
</tr>
<tr>
<td></td>
<td>NF</td>
</tr>
</tbody>
</table>
Given that direction correction was provided with meta-linguistic explanation and illustration of usage, more explicit, detailed feedback seems to work better for beginner students. Some researchers claim that the type of feedback should be fine-tuned to the learner’s interlanguage or proficiency level and ability to self-correct because to optimize the feedback, it is essential for the learner to understand the feedback and be able to cope with the problem with it (Aljaafreh & Lantolf, 1994, Han, 2001, Qi & Lapkin, 2001) Even though the beginner students had been instructed in simple past and present perfect tenses before the study, it may not have been sufficient enough for them to understand the various usages of the targeted features, especially the present perfect tense. It is possible that the repetitive feedback given throughout the semester focusing on the specific linguistic features may have facilitated learning because the type of feedback given was appropriate to their developmental readiness.

The results of ANOVA and post hoc tests for the intermediate groups are shown in Table 6 and Table 7. Although there was a significant effect for the three types of feedback treatment just like the case of the beginner groups, the results of post hoc tests reveal another side. Only indirect group was superior to the control, but between direct and indirect groups their scores were not significantly different. It seems the control group improved accuracy without getting error correction to the extent which they got statistically comparable to direct group. It is assumed that the students in the control group, who were probably in a higher stage of interlanguage development than the beginner students, were capable of self-correcting their errors through revision processes.

| TABLE 6 |
| One-Way ANOVA Within the Intermediate Groups |
|---------------|--------------|----------|-------|
| Source         | SS          | Df       | MS    | F     |
| Feedback type  | 667 87      | 2        | 333 94| 4 47  |
| Error          | 4785 29     | 64       | 74 77 |       |
| Total          | 5453 16     | 66       |       |       |

* p < 05
It is a notable finding that coded feedback was most appropriate for the intermediate students. The interpretation based on Ferris (2002) is plausible that cues given by coded feedback were more beneficial in the way that they may have pushed the students to engage in self-directed hypothesis testing, thus resulting in deeper internal processing, which promotes learning. In contrast, the intermediate students receiving direct correction with meta-linguistic explanation may have overlooked the detailed explanation because they thought they were familiar with the target forms, thereby just mechanically revising the error based on the correct form provided. Hence, they failed to notice the difference between their own interlanguage grammar and the target rules of simple past and present perfect tenses.

V. CONCLUSION

The study investigated the effects of direct and indirect feedback options on accuracy improvement of target structures (simple past and present perfect tenses) with learners from two levels of L2 proficiency. The first research question addressed the central issue of the effectiveness of corrective feedback, which has been open to doubt since Truscott’s (1996, 2004) criticism. According to the results, all experimental groups receiving either direct correction with meta-linguistic explanation or coded feedback enhanced accuracy in the use of targeted features, thereby providing evidence in support of written corrective
feedback. The second research question examined is whether there is any difference in the effectiveness of certain type of corrective feedback in relation to learners’ level of L2 proficiency. For the beginner-level learners, direct correction with detailed meta-linguistic explanation turned out to be more effective than coded feedback. Given that learners with a low level of proficiency have limited linguistic knowledge of the target language (Swain & Lapkin, 2000), they would benefit more from direct correction with detailed explanation about the error when making judgments about what is right or wrong and why. By contrast, the intermediate-level learners profited more by indirect coded feedback. According to Swain and Lapkin (1995), learners with a higher level of proficiency pay more attention to grammar and depend more on applying grammatical rules than those with a low level, suggesting that L2 proficiency may play a role in linguistic awareness. Hence, higher-level learners may be able to carry out more grammar-related noticing and capable of solving the noticed problems by themselves while revising their drafts. This account is in line with Ferris’ (2002, 2004) claim that indirect feedback promotes learning through actively engaging learners to figure out problems based on the cues provided by a teacher.

The present study sheds some light on the research in written corrective feedback by raising some important issues that need further consideration in future research. Future research should not be stuck in the question of whether corrective feedback helps learners’ written accuracy. The findings suggest that more explicit and detailed feedback may be beneficial to low-level learners and that implicit, cueing feedback may be more helpful to higher-level learners. Therefore, a certain type of feedback (either direct or indirect) may work for a group of students, but not for another population with different levels of proficiency. More future research needs to address the issues. How learner proficiency is related to the learner’s noticing in reaction to teacher’s feedback and what type of feedback should be provided to learners with different levels of proficiency in order to promote their noticing and learning.

The study was carefully designed to overcome methodological flaws pointed out in the literature, but it still has some limitations. The focus on only two selected verb tenses can be both strength and a limitation. By focusing on a few targeted features, any potential effect of grammar instruction in general may be isolated from the effect of corrective feedback. The findings, however, cannot be generalized to the case of other linguistic error categories. Future research needs to investigate differential effects of corrective feedback options on the use of other linguistic features in relation to the level of proficiency. Besides, the study incorporated only one type of direct (direct correction with meta-linguistic explanation) and indirect (coded) feedback, so it is well worth investigating differential effects of other feedback options with varying degrees of explicitness or implicitness in relation to proficiency level. Future research is also needed to include other populations with different levels of proficiency to explore whether the findings of the present study...
apply to different populations

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