The Effect of Differential Feedback on Writing Accuracy of L2 College Students

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This study explores the effect of two different types of feedback (form-focused feedback and content-based feedback) on writing accuracy of L2 college students over a period of four months. For the analysis of writing accuracy, this study used a modified version of three treatable error categories (verbs, nouns, and articles) by Ferris and Roberts (2001). The overall findings indicate that students in both feedback conditions experience improvement in their writing accuracy over time and this suggests that form-focused and content-based feedback positively affect L2 writing accuracy. Although there was no significant difference in verb and noun error categories between the two groups, students in the form-focused feedback group performed significantly better in the article error category. This suggests that explicit form-focused feedback may be more beneficial to specific error categories such as articles. This study can provide teachers with valuable information with which they can respond more effectively to the needs of L2 writers.

I. INTRODUCTION

Among the four language skills, writing is the most complex to acquire in one’s first language (L1) as well as in a second language (L2) (Krashen, 1984; Makalela, 2004; Nunan, 1989). L2 writers, studying in institutions of higher learning such as universities in which the medium of instruction is English, face problems in developing their writing skills, making it difficult for them to meet the literacy expectations of their institutions. L2 writers often feel depressed because of the thought that they make lots of errors in their L2 writing (Ferris, 2002), which would in turn make other people including their instructors unable to understand their writing. However, universities continuously require L2 learners to develop their writing skills since most academic coursework requirements such as examinations, essays, reports, and research work depend on them. Thus, developing learners’ writing skills in L2 has been of concern for a long time in university education (Belcher & Braine, 1995; Jordan, 1997).
If improving L2 writing skills is important to L2 learners, then we need to find an effective way of developing them, and teacher feedback is one of the most important components in developing L2 writing skills, especially regarding writing accuracy. It is hard to deny that the provision of feedback from other readers is an important component in the writing process, and L2 writers can develop their writing by means of feedback (Chaudron, 1984). There are numerous essential factors and characteristics of L2 students’ writing that determine their overall quality including content, organization, cohesion, vocabulary and so forth. Thus it is hard to say that only the number of linguistic errors made by students paints a convincing picture of the overall quality of the writing or the students’ ability (Ferris & Roberts, 2001). Even so, few experienced L2 writing researchers and instructors on L2 writing or teachers reading L2 students’ writing would argue that written accuracy is important to students in many contexts. Also, most students believe in the potential for teacher feedback, especially error correction, to have positive effects on their overall writing development. Therefore students themselves would like to receive, expect, and value teacher feedback on their written errors from their teachers (Ferris, 1995; Ferris, Chaney, Komura, Roberts, & Mckee, 2000; Ferris & Roberts, 2001; Hedgcock & Lefkowitz, 1994; Radecki & Swales, 1988; Rennie, 2000; Truscott, 1996). However, L2 students often receive only content-based feedback from their teachers these days, not error correction, with the rise of the concept of process writing.

II. LITERATURE REVIEW

L2 writing has undergone several shifts over the last few decades. Among those shifts, process writing is the biggest one and that approach mainly has been applied to L2 as well as L1 writing classes nowadays. Before the rise of the concept of process writing in the field of L2 writing, writing in L2 classes typically consisted of “controlled” or “guided” composition activities. L2 writing was merely considered as one way to teach grammatical forms or rules, thus error correction and grammar instruction were major components of writing instruction in L2 classes (Ferris, 2002; Ferris & Hedgcock 1988; Johns 1990; Raimes 1991; Silva 1990). On the other hand, process writing is an approach which emphasizes the cycle of generation of ideas, selection and organization, and drafting (Raimes, 1983; Richards, 1990; White & Arndt, 1991). In process writing, teachers and students are encouraged to concentrate on creating and building ideas, drafting, revising, and working collaboratively, rather than emphasizing correct forms for writing (Ferris, 2002; Zamel, 1982, 1983). Therefore, papers are redrafted after receiving feedback from peers or the teacher or both. Students are expected to rewrite their papers several times focusing on the content, and usually writing accuracy is left to the end of the process. Process writing has been considered as a proper way to develop organization, content and even accuracy. Also, quite a few people argue that content-based feedback can improve not
only the overall quality of writing but also writing accuracy (Crocker, 1982; Hayes & Bahruth, 1985; Hipple, 1985).

However, writing accuracy, especially for the case of L2 writing, is not a feat that can be achieved overnight on its own. Thus many teachers and researchers began to worry about the neglect of writing accuracy after process writing entered the L2 writing field, so that form-focused feedback from teachers began to be one of the most important issues in L2 writing (Ferris, 2002; Yoon Hee Soh, 1999). Naturally, a great amount of empirical research on form-focused feedback for L2 writing accuracy has been conducted, but it shows contradictory results regarding the effects of error correction on L2 writing accuracy.

A few words about the effects of teacher feedback on L2 writing in general are necessary before going into the examination of the contradictory reports of error correction on L2 writing. A great number of studies have attempted to show the effects of different types of teacher feedback and they have used various terminologies on teacher feedback such as error corrections, commentaries, explicit feedback, implicit feedback, coded or un-coded feedback, direct feedback, indirect feedback, etc. In general, the terminology of error corrections means form-focused feedback including explicit or implicit feedback, coded or un-coded feedback, direct or indirect feedback. The terminology of commentaries refers to content-based feedback and is often used for the relative concept of form-focused feedback. A lot of studies have shown that teacher feedback, regardless of its type, can improve L2 writing compared with self-generated feedback (Beach, 1979; Chaudron, 1984; Fazio, 2001; Ferris, 2002; Haswell, 1983; Linn, 1976; Robb, Ross, & Shortreed, 1986; Zhang, 1985; Ziv, 1981). For example, Zhang (1985) found that teacher feedback is definitely superior to self-feedback as a source of stimulation for successful grammatical revision. Similarly, in the study of Fathman and Whalley (1985), the group receiving teacher feedback showed a significant degree of improvement in the total error count, compared with student self-revisions. Also regarding the quality of writing, not just in the grammatical sense, students who received teacher feedback improved in the overall quality of their writing.

There are contradictory studies on whether error correction (form-focused feedback) helps L2 learners to improve the writing accuracy (Corder, 1971; Ferris, 1999, 2002, 2004; James, 1998; Reid, 1998; Truscott, 1996, 1999) and also unanswered questions remain about the extent to which commentaries (content-based feedback) alone can result in the improvement in students’ accuracy in writing specifically (Fazio, 2001). In 1996, Truscott published a review essay in Language Learning titled “The Case Against Grammar Correction in L2 Writing Classes” and in that study, he strongly insisted that error correction feedback is ineffective and even harmful to students’ writing and thus should be abolished. Truscott’s paper immediately received a significant amount of attention from the L2 writing field and numerous empirical studies for and against his strong stance have followed. Truscott’s assertion was extremely attractive to L2 writing teachers since teachers need an enormous amount of time and efforts in providing detailed error
correction feedback and the process itself is bothersome to teachers. However, as Ferris (2004) mentioned, there exist more previous studies that have shown that error correction is beneficial for L2 writing accuracy (see Table 1).

TABLE 1

<table>
<thead>
<tr>
<th>Research questions</th>
<th>Studies and findings</th>
</tr>
</thead>
</table>
No: Polio et al. (1998)  
Unclear: Semke (1984) |
No: Cohen and Robbins (1976), Polio et al. (1998)  
Unclear: Semke (1984) |

Quite a few studies have demonstrated that form-focused feedback can improve L2 students’ writing accuracy (Fathman & Whalley, 1990; Ferris, 1995, 1997; Lalande, 1982). That is to say, students in those studies showed remarkable improvement on revisions of the same essay or on targeted patterns of error over the course of a semester after receiving form-focused feedback. Cohen and Cavalcanti (1990) also found that students paid attention to feedback and it did improve their writing accuracy. There are also several studies that have examined the effect of differential types of feedback (form-focused feedback, content-based feedback, form-focused feedback plus content-based feedback, etc.) on L2 writing (Fazio, 2001). Though many studies on content-based feedback have shown benefits for the affective development of L2 learners (Crocker, 1982; Hudelson, 1984; Johnson, 1988; Peyton & Reed, 1990; Spack & Sadow, 1983; Urzua, 1987), its effects on writing accuracy are much contested (Crocker, 1982; Fazio, 2001; Hayes & Bahruth, 1985; Hipple, 1985; Iventosch, 1988; Reyes, 1995; Spack & Sadow, 1983). For example, Hipple (1985) said that her students improved their writing accuracy as a result of receiving content-based feedback even though this type of feedback does not respond to language form. On the other hand, L2 students in the study of Reyes (1995) did not attend to or adopt correct forms as a result of exposure to content-based feedback, demonstrating negative results for the language form. The effect of content-based feedback on L2 writing accuracy is more questionable especially when compared with form-focused feedback. In the study of Fathman and Whalley (1990), they investigated college students’ writing accuracy under the four different feedback conditions; no feedback other than the grade awarded; grammar feedback consisting of underlining all grammatical errors; content feedback in which short, general comments were made about the text; and a combination of grammar feedback and content feedback. Among the four groups, only the grammar
feedback group and the grammar plus content feedback group made progress in grammatical accuracy at a statistically significant level.

Then, it is time to ask whether form-focused feedback is indeed helpful to improve L2 learners’ writing accuracy as normally expected and whether content-based feedback alone can result in the improvement in students’ accuracy in writing specifically. Thus, the researcher in this study would like to examine whether corrections or commentaries would make L2 college students’ writing accuracy improve over time, and the research question of this study is what is the effect of form-focused feedback and content-based feedback on accuracy in L2 writing. The purpose of this study is not to investigate the effect of differential types of error correction feedback – how explicit (direct) or how implicit (indirect) it needs to be – but to examine the effect of error corrections and commentaries on L2 writing accuracy. Therefore, in this study, corrections have the same meaning as form-focused feedback, where the instructor provided correct linguistic forms for the students directly, and commentaries refer to content-based feedback, where the instructor gave general comments on organization, ideas, content, and coherence to students.

III. RESEARCH DESIGN

1. Participants

The participants of the study were eighteen volunteer ESL students enrolled for ELI 73 2005 fall semester in the English Language Institute (ELI) of the University of Hawai’i at Mānoa (UHM). ELI 73 is an intermediate writing course specially designed for graduate and undergraduate ESL students judged in need of additional help with academic English writing. ELI 73 is followed by an appropriate advanced writing course, either ELI 100 (for undergraduates) or ELI 83 (for graduate students). Most of the ESL students at UHM are placed into ELI writing courses (Intermediate or Advanced) on the basis of TOEFL scores and a composition-writing examination administered upon their arrival at the university. The TOEFL scores of ESL learners who take ELI courses are between 173 and 250 on the CBT, or 500 and 600 on the PBT. Students were chosen as a target population because they showed limited proficiency in the English language. Nine students in one class were assigned to a form-focused feedback condition and the other nine students in another class were assigned to a content-based feedback condition. The procedures to follow were explained to the participants once they chose to participate in the study. Procedures and requirements included remaining in the course during the semester, attending all sessions, and being willing to work in the completion of the assigned tasks of the course. Even though the majority of both groups of students were from Asia, they represented fairly heterogeneous L1 backgrounds. Students in the form-focused feedback group were from Japan (3), South Korea (2), mainland China (1), Thailand (1), Indonesia (1), and Vietnam.
The nine participants differed slightly in length of residence in an English-speaking country, varying from approximately two weeks to two years at the time of the study. Seven of them had had less than six months’ exposure to the naturalistic use of English in an English-speaking country. Two of them, one from Korea and another from Japan, had stayed in Hawaii for more than one year but they said they had not had many chances to speak in English. All students in the form-focused feedback group were doing their first semester. Students in the content-based feedback group were from Japan (4), South Korea (2), mainland China (1), Hong Kong (1) and Sri Lanka (1). In the content-based feedback group, one female student from Korea was doing her second semester and the others were doing their first semester. Their average length of residence in an English-speaking country was not significantly different from that of form-focused group students.

2. Procedures

Classes met for 75 minutes, twice a week. Students in ELI 73 submitted four papers with three drafts (first, second, and final) during the semester; Paper 1: Personal writing (student-generated topic), Paper 2: Personal writing (personal position/stance on issue of interest), Paper 3: Academic writing (response to written argument), Paper 4: Academic writing (mini-research paper). The topics for papers were selected by students but the readings for paper 3 were given to students. Two readings for Paper 3 were selected from *Academic Writing* (Leki, 1998) and students were asked to write a paper in response to the readings about grouping gifted students or primate studies and sex differences. All papers were typed in Times New Roman 12-point font and double-space to avoid handwriting effect in scoring. Two teachers, the researcher and another experienced ELI writing lead-teacher, taught each class with the same instructional mode following the same systematic sequence in the course syllabus for intermediate writing lessons except for the types of feedback employed. They also assigned the same course requirements. Students in the researcher’s class received form-focused feedback on their writing and students in the other class received content-based feedback.

For the analysis of writing accuracy, the researcher used a modified version of error categories by Ferris and Roberts (2001) (see Table 2 for a detailed description of the five categories). Ferris (2002) introduced the dichotomy between “treatable” and “untreatable” errors. She explained, “a treatable error is related to a linguistic structure that occurs in a rule-governed way. It is treatable because the student writer can be pointed to a grammar book or set of rules to resolve the problem. An untreatable error, on the other hand, is idiosyncratic, and the student will need to utilize acquired knowledge of the language to self-correct it” (p. 23). Among the five error categories that Ferris and Roberts (2001) described, verb errors, noun ending errors, and article errors belong to treatable errors and the remaining two belong to untreatable errors.
### TABLE 2
**Description of Error Categories Used for Feedback and Analysis in Ferris and Roberts (2001)**

<table>
<thead>
<tr>
<th>Error Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verb errors</td>
<td>All errors in verb tense or form, including relevant subject-verb agreement errors.</td>
</tr>
<tr>
<td>Noun ending errors</td>
<td>Plural or possessive ending incorrect, omitted, or unnecessary; includes relevant subject-verb agreement errors.</td>
</tr>
<tr>
<td>Article errors</td>
<td>Article or other determiner incorrect, omitted, or unnecessary.</td>
</tr>
<tr>
<td>Wrong word</td>
<td>All specific lexical errors in word choice or word form, including preposition and pronoun errors. Spelling errors only included if the (apparent) misspelling resulted in an actual English word.</td>
</tr>
<tr>
<td>Sentence structure</td>
<td>Errors in sentence/clause boundaries (run-on, fragments, comma splices), word order, omitted words or phrases, unnecessary words or phrases, other unidiomatic sentence construction</td>
</tr>
</tbody>
</table>

### TABLE 3
**Description and Examples of Error Categories Used for Feedback and Analysis in This Study**

<table>
<thead>
<tr>
<th>Error Category</th>
<th>Description and Examples</th>
</tr>
</thead>
</table>
| Verb errors       | All errors in verb tense or form, including relevant subject-verb agreement errors. Ex. a. A lot of information exist around our lives.  
|                   | Ex. b. In addition, this effective value will the foundation of the nation’s competitive power.                                                          |
| Noun errors       | Plural or possessive ending incorrect, omitted, or unnecessary; pronoun and relative pronoun errors. Ex. a. There are many differences between men and woman. 
|                   | Ex. b. His intend is to show that it is a small problem caused by cell phones.                                                                         |
| Article errors    | Article or other determiner incorrect, omitted, or unnecessary Ex. a. This is also unbelievable fact. Ex. b. Other children will regard him as mean boy even though they don’t know him at all.  |

In this study, the modified version of three treatable error categories was used (see Table 3 for a detailed description of the three categories) considering the English proficiency level of the participants, the frequency of errors by ESL students, and the limited time period of this study.

Students in the form-focused condition group had all instances of errors in three categories underlined and the correct form was modeled above the location of the error for each draft, as shown in Examples 1, 2, and 3:

**Example 1.** A lot of information exist around our lives.
**Example 2.** There are many differences between men and women.
**Example 3.** This is also unbelievable fact.
Students in the content-based condition group received comments (statements and questions) that pertained to the contents of the writing for each draft. However, the researcher only calculated errors in the first draft of each paper in this study because of the possibility that students in the form-focused condition group could merely copy the teacher’s remarks (Chaudron, 1986). To avoid the effect of the amount of writing, only the first two pages of each paper were analyzed for writing accuracy.

IV. RESULTS

After collecting first drafts of paper 1, the researcher duplicated them and marked two samples of the student papers using the three error categories with another anonymous rater. Interrater reliability calculations showed over 90% agreement ($r = .92$) on both the total errors marked and on the assignment of errors to specific categories. Thus the researcher marked the rest of the papers by herself. In all, four writing papers per student were scored: the first paper in September, the second in October, the third in November and the final in December. Two students in the content-based feedback group did not submit a couple of papers. The researcher randomly selected seven participants among nine in the form-focused feedback group, so fourteen papers of each paper were used for the data analyses finally. SPSS 13.0 for windows was used for the data analyses and the significance level was set at $p < .05$, nondirectional. The researcher conducted a $t$-test to make sure whether students in both groups showed no significant difference for all three error categories from the beginning using the first drafts of paper 1 and there was no significant difference between two groups for all three error categories, and observed power was .06 for verb error category, .06 for noun error category, .07 for article error category. Thus, the researcher assumed that both group students participated in this study had the same level.

Table 4 displays the descriptive statistics for three error categories in both feedback conditions and Table 5 shows the results of repeated-measures ANOVA for total errors over time. The greatest number of errors was observed in the verb error category, followed by noun error category and article error category in the descending order.

The mean scores in Table 4 indicate that students in both feedback condition groups decreased the number of errors they committed over the course of the semester, thus we could remark that both form-focused and content-based feedback appear to positively affect L2 college students’ writing accuracy. The accompanying standard deviations attest to the high variability for all groups in relation to accuracy but standard deviations as well as error count mean scores also decreased in all error categories of form-focused condition. That means that the gap between the students in the from-focused condition group decreased over the course of the semester.
TABLE 4  
Writing Accuracy: Mean Scores for Three Error Categories in All Feedback Conditions

<table>
<thead>
<tr>
<th>Feedback Condition (FC)</th>
<th>Paper 1</th>
<th>Paper 2</th>
<th>Paper 3</th>
<th>Paper 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Verb Errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrections</td>
<td>8.14</td>
<td>3.89</td>
<td>5.57</td>
<td>2.15</td>
</tr>
<tr>
<td>Commentaries</td>
<td>8.71</td>
<td>4.39</td>
<td>7.29</td>
<td>2.43</td>
</tr>
<tr>
<td>Noun Errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrections</td>
<td>5.43</td>
<td>2.44</td>
<td>4.14</td>
<td>3.02</td>
</tr>
<tr>
<td>Commentaries</td>
<td>5.14</td>
<td>2.27</td>
<td>6.14</td>
<td>3.13</td>
</tr>
<tr>
<td>Article Errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrections</td>
<td>4.29</td>
<td>2.06</td>
<td>4.86</td>
<td>2.12</td>
</tr>
<tr>
<td>Commentaries</td>
<td>4.71</td>
<td>1.80</td>
<td>6.29</td>
<td>3.77</td>
</tr>
</tbody>
</table>

TABLE 5  
Summary Table for Two-Way Repeated-Measures ANOVA for Total Errors over Time

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Partial $\eta^2$</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between-subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FC</td>
<td>94.50</td>
<td>1.00</td>
<td>94.50</td>
<td>10.30*</td>
<td>.46</td>
<td>.84</td>
</tr>
<tr>
<td>Error</td>
<td>110.07</td>
<td>12.00</td>
<td>9.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within-subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Errors</td>
<td>291.79</td>
<td>11.00</td>
<td>26.53</td>
<td>3.70*</td>
<td>.24</td>
<td>1.00</td>
</tr>
<tr>
<td>Total Errors * FC</td>
<td>64.07</td>
<td>11.00</td>
<td>5.82</td>
<td>.81</td>
<td>.06</td>
<td>.43</td>
</tr>
<tr>
<td>Error</td>
<td>945.64</td>
<td>132.00</td>
<td>7.16</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* $p < .05$

The assumptions underlying the repeated-measures ANOVA are normality of the distribution and equal variances (Brown, 1992). Since this study has the equal sample sizes, the violation of the latter assumption has little effect on the results of this study (Brown 1988). However, the assumption of normal distribution might have effect on the results of this study because the researcher found skewness in the noun error category of Paper 2 in the form-focused feedback condition, and in the same category of Paper 1 in the content-based feedback group.

Students in the form-focused feedback condition made significantly fewer errors than those in the content-based feedback condition over time. However, students in both feedback conditions experienced a positive change in their writing accuracy over time as a consequence of receiving feedback and taking the writing course.

To get more detail information on the effect of corrections and commentaries on accuracy in L2 writing, the research conducted repeated-measures ANOVAs for each error category. Table 6, 7, and 8 display the results of repeated-measures ANOVAs for verb, noun, and article error category respectively, which would be indicative of a difference in accuracy due to feedback conditions over time.
There was no significant difference between two feedback conditions regarding the category of verb errors. However, the obtained significance for the verb error category, .063, was close to the required .05 level to suggest more research to confirm the results.

**TABLE 6**

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Partial $\eta^2$</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between-subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FC</td>
<td>62.16</td>
<td>1.00</td>
<td>62.16</td>
<td>4.20</td>
<td>.26</td>
<td>.47</td>
</tr>
<tr>
<td>Error</td>
<td>177.6</td>
<td>12.00</td>
<td>14.80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within-subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verb Errors</td>
<td>116.2</td>
<td>3.00</td>
<td>38.73</td>
<td>4.27*</td>
<td>.26</td>
<td>.82</td>
</tr>
<tr>
<td>Verb Errors * FC</td>
<td>37.63</td>
<td>3.00</td>
<td>12.54</td>
<td>1.38</td>
<td>.10</td>
<td>.34</td>
</tr>
<tr>
<td>Error</td>
<td>326.4</td>
<td>36.00</td>
<td>9.07</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* $p < .05$

Also, Figure 1 shows that students in both feedback conditions showed the improvement in the verb error category over time.

**FIGURE 1**

Mean Change for the Verb Error Category over Time

Though there were no significant differences in the noun error category between form-focused and content-based feedback group (see Table 7), Figure 2 shows that the average of noun errors made by students in the form-focused feedback condition was continuously decreased over time. On the contrary, students in the content-based feedback group showed rather irregular change even though they made fewer noun errors at the end of the semester compared to the beginning of it. Among three error categories, the noun error category was the only one where students in the content-based feedback condition made fewer errors.
than those in the form-focused feedback condition at the beginning of the semester. However, students in the content-based feedback condition could not show much improvement in the noun error category over time compared to students in the form-focused feedback condition.

### TABLE 7
Summary Table for Two-Way Repeated-Measures ANOVA for the Noun Error Category

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Partial $\eta^2$</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between-subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FC</td>
<td>18.29</td>
<td>1.00</td>
<td>18.29</td>
<td>2.72</td>
<td>.18</td>
<td>.33</td>
</tr>
<tr>
<td>Error</td>
<td>80.64</td>
<td>12.00</td>
<td>6.72</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within-subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noun Errors</td>
<td>36.79</td>
<td>3</td>
<td>12.26</td>
<td>1.82</td>
<td>.13</td>
<td>.42</td>
</tr>
<tr>
<td>Noun Errors * FC</td>
<td>15.43</td>
<td>3</td>
<td>5.14</td>
<td>.76</td>
<td>.06</td>
<td>.20</td>
</tr>
<tr>
<td>Error</td>
<td>242.8</td>
<td>36</td>
<td>6.74</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* $p < .05$

### FIGURE 2
Mean Change for the Noun Error Category over Time

There was a significant difference in the article error category (see Table 8) and both groups showed similar error patterns over time (see Figure 3). It suggests that it is helpful to give direct and explicit form-focused feedback on specific error categories such as article for L2 learners. This is in line with Ferris (2002) and Hyesook Park (2001).

Though there were no significant differences between the form-focused and content-based feedback groups except in the article error category, overall findings indicate that the students in the form-focused condition group made fewer errors at the end of the semester. Also, the obtained significance for the verb error category was very close to the required 0.05 level. Therefore, more research with larger sample is needed to confirm the results.
TABLE 8

Summary Table Two-Way Repeated- Measures ANOVA for the Article Error Category

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Partial $\eta^2$</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between-subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FC</td>
<td>21.88</td>
<td>1.00</td>
<td>21.88</td>
<td>5.15*</td>
<td>.30</td>
<td>.55</td>
</tr>
<tr>
<td>Error</td>
<td>51.00</td>
<td>12.00</td>
<td>4.25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within-subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Article Errors</td>
<td>31.77</td>
<td>3.00</td>
<td>10.59</td>
<td>2.15</td>
<td>.15</td>
<td>.50</td>
</tr>
<tr>
<td>Article Errors * FC</td>
<td>3.20</td>
<td>3.00</td>
<td>1.07</td>
<td>.22</td>
<td>.02</td>
<td>.09</td>
</tr>
<tr>
<td>Error</td>
<td>177.29</td>
<td>36.00</td>
<td>4.92</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* $p < .05$

FIGURE 3
Mean Change for the Article Error Category over Time

IV. DISCUSSION AND CONCLUSION

Since numerous studies which examined the effect of differential types of teacher feedback on students’ writing accuracy were conducted on the basis of a single “one-shot” study, they could not claim anything about the potential long-term benefits of differential types of teacher feedback. This study was carried out for four months so that we could examine the change of L2 students’ writing accuracy for a rather long period. The overall findings indicate that students in both feedback conditions experience a change in their writing accuracy as a consequence of receiving feedback and taking writing courses and we could consider that both form-focused and content-based feedback positively affect L2 writing accuracy. Although there was no significant difference in verb and noun error categories between form-focused and content-based feedback groups, the article error category showed a significant difference between the two groups. This result is same as that of Ferris (2002). Hyesook Park (2001) also reported that learners’ knowledge of the
article was significantly increased through explicit explanation and negative feedback. Thus, this suggests that form-focused feedback may be more beneficial to specific error categories such as articles. It is extremely difficult for ESL learners to master the usages of articles in English. Thus, it might be helpful to give direct and explicit error correction on article errors for L2 learners.

This study was carried out with a rather small number of participants at a specific level of college students. The results are, therefore, not generalizable to the entire population of ESL learners, especially those of very young age or those with higher language proficiency. The results could be different if further research were conducted with other samples. Unfortunately, this study did not include no-feedback condition as a control group since every student taking ELI intermediate writing courses wanted to receive feedback from their instructors. Therefore, it is hard to say that L2 students’ writing accuracy was obtained only because of teacher feedback. Also in this study, the researcher only examined three error categories and did not consider other error categories such as word choice and sentence structure. In real life, other error categories, which were not covered in this study, have more potential to block communication between L2 writers and readers. Thus, we need further studies to cover untreatable error areas. Besides, students are likely to take on more challenging and complex writing projects as time passes and make errors because of the increased level of complexity. However, the students’ writing complexity was not dealt with in this study for several reasons. Therefore, text complexity needs to be addressed in future research. In this study, students in the form-focused feedback condition group made fewer errors than those in the content-based feedback group, even though there was no significant difference between the two conditions except in the article error category. Content-based feedback mainly focused on organization, content, ideas, etc., and those are deeply related to the overall writing quality. Therefore, it would be also meaningful to include the overall writing quality as well as writing accuracy for further research. In addition, it is possible that students in the form-focused feedback condition were more sensitive to grammatical errors and tried to make fewer grammatical errors since they mainly received form-focused feedback from their instructor.

For English L2 writers, the process of writing in an academic environment is very challenging. We, teachers and researchers, must accept the fact that L2 writing contains errors and it is our responsibility to help learners to develop strategies for self-correction and to become better writers. It is quite misleading to conclude that any one type of teacher feedback is superior to others in all aspects. The benefits can be different depending on individual differences and types of feedback. However, the findings of this study need to be elaborated by future research considering the limitations of this study and that will provide meaningful implications on the L2 writing field. The issue of helping students to improve their accuracy in L2 writing is extremely important. As teachers as well as researchers, we should try to find answers and discover ways to respond more thoughtfully
and effectively to the needs of our student writers continuously.

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The Effect of Differential Feedback on Writing Accuracy of L2 College Students


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