The Effects of Explicit Grammar Instruction and Written Corrective Feedback on Accuracy Development in EFL Writing

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Abstract

L2 production gives students opportunities to recognize and assess their current interlanguage performance and feedback on their performance can provide them with negative evidence. Both self-assessment and external provision of negative evidence are essential to enhance second language acquisition. However, simply letting students produce L2 and receive corrective feedback does not always yield optimal effects for language development. Studies have demonstrated that L2 learners sometimes need to work on other types of grammar training to develop their linguistic accuracy. This study used a pretest–posttest design to investigate whether incorporating explicit grammar instruction (EGI) into writing practice along with focused written corrective feedback (WCF) can enhance correct use of a particular grammatical structure—in this case, the adverbial dependent clause using a subordinate conjunction. 53 Japanese university students were assigned to three experimental groups (which received EGI on the target grammatical structure, WCF from the instructor, or both) and one control group. Two types of accuracy measurements, error correction tests and accuracy ratio of the target structure in the students’ writing, were used in the analysis. The results indicated that only students who received both treatments made substantial progress.

1. Introduction

Written corrective feedback (WCF) on L2 learners’ written production is considered one of the most effective forms of form-focused instruction in the context of second language acquisition (SLA). Many studies have investigated the effects of WCF on various aspects of L2 acquisition; most of these studies have dealt with the accurate use of particular linguistic features. Although a substantial number of studies have supported the use of WCF, some studies—both theoretical and empirical in nature—have questioned its efficacy. If WCF is not sufficient to enhance acquisition of grammar and writing skills in the target language, other types of form-focused instruction may be needed to complement it.

In the current English teaching environment, which emphasizes meaning-focused learning for the purpose of effective communication, the traditional method of explicit grammar instruction (EGI), which takes the form of explaining the rules of the target grammar to the whole class, is not
popular among practitioners. Instead, letting students discover the rules in more communicative ways, such as consciousness raising or a focus on form approach is considered a more effective way to enhance L2 learning. However, recent studies have advocated for continued use of EGI (e.g., Hinkel, 2013; Norris & Ortega, 2000), and the possibility of using such explicit instruction to offset the insufficiencies associated with WCF as mentioned above should be exploited.

This study investigates whether incorporating EGI into writing practice along with focused WCF can enhance L2 learners’ knowledge and accurate use of a grammatical structure that they have partially learned but on which they continue to make frequent errors. In this study, EGI fulfilled the role of a prewriting task and WCF, accompanied by the learners’ correction of their errors, followed as a postwriting activity.

2. Research Background

2.1 Explicit Grammar Instruction

Since it is impossible to review the long history of grammar instruction studies in a short article, this review addresses only a few points relevant to the present study. Ellis and Shintani (2014, Chapter 4) focus on instruction involving explanation of grammar with or without practice, reviewing a great number of studies. They conclude that EGI, especially when accompanied by communicative practice, can contribute to the development of the learner’s grammatical knowledge when the learner has partially acquired the target structure. They also claim that metalinguistic knowledge may be useful for older learners by assisting them in learning explicit grammar knowledge.

Although EGI generally plays a positive role in enhancing language acquisition, it is not effective for all linguistic features. Grammar instruction studies often divide grammatical features into those with simple and complex rules, respectively, and have investigated which type of grammar instruction, explicit or implicit, contributes best to learning each type of grammatical form. This distinction between simple and complex grammar rules is somewhat controversial (Ellis & Shintani, 2014). However, previous studies have reported that explicit instruction is more effective for grammatical features with simple and straightforward rules (e.g., Dekeyser, 1995; Robinson, 1996). For features with complex rules, the findings have been indecisive, as some studies claim that explicit instruction is more efficient than implicit instruction (e.g., Xu & Lyster, 2014) and others claim the opposite (Dekeyser, 1995; Robinson, 1996). The present study investigates a relatively simple grammatical feature, and thus, according to the previous research, it may seem obvious that explicit instruction should be more effective than implicit instruction. However, since the target structure dealt with in this study has drawn little research interest, it may be worth investigating whether EGI contributes to learning this grammatical feature with simple rules.

Hinkel (2013), in a review of studies of grammar instruction, argues that instructors need not simply expose the learner to input the target grammar or provide feedback on learners’ production,
but also classify the grammar (and vocabulary) into what is highly necessary for the learner to produce sentences or passages in L2 and what is less necessary. They can then offer systematic grammatical instruction in the areas of greatest importance. This argument could provide a rationale for the present study, in which systematic writing-based instruction was provided on a grammar feature that was problematic for the participants.

2.2 Written Corrective Feedback

Generally, studies support the efficacy of WCF in developing the accurate use of grammatical features, although some studies have claimed that the effects are not all positive (see Bitchener & Ferris, 2012; Bitchener & Storch, 2016; and Tanaka, 2015 for recent extensive reviews of studies). Although the quantity of WCF studies has been large, they have tended to focus on a limited range of grammatical features such as English articles, prepositions, and verb forms, with a much smaller number examining accuracy in the use of syntactic features (Shintani, Ellis, & Suzuki, 2014).

Several studies have reported the positive effects of combining two or more types of written or oral corrective feedback (e.g., Bitchener & Knock, 2008, 2010a; Bitchener, Young, & Cameron, 2005). Such studies, however, investigated the multiple types of feedback in combination, i.e., two or more types of feedback were provided after the learners’ written production. Few studies have considered the effects of providing form-focused instruction at different times, e.g., grammar practice before writing and feedback at a later time.

The different types of WCF are also a prominent issue in WCF studies. To date, research has given inconclusive answers to the question of what type of corrective feedback is the most effective. There are two main types of WCF: direct correction and indirect feedback (usually in the form of underlining or providing an error code to describe each error). Some studies report no difference between the two (e.g., Ferris, 2006; Semke, 1984), and others support direct correction (e.g., Chandler, 2003; Van Beuningen, De Jong, & Kuiken, 2012). Although few studies have argued that indirect feedback is advantageous in enhancing language acquisition, providing a metalinguistic explanation of errors, which can be used for the same purpose as indirect feedback, may be another effective WCF technique. The purpose of indirect WCF, which simply indicates the location of errors without fully explaining them, is to give learners opportunities to improve by examining their own errors and figuring out how to correct them by themselves. Metalinguistic explanations can have a similar effect and provide the learner with more information about the correct form of the target linguistic feature. Some studies have reported that the effect of this technique was even larger than that of direct error correction (e.g., Bitchener & Knock, 2010b; Shintani & Ellis, 2013).

2.3 The Present Study

Based on the research background summarized above, this study investigated the effects of EGI as a prewriting task and WCF in the form of metalinguistic explanation as a postwriting task on participants’ development of accuracy in recognizing the proper use of adverbial clauses and in
actually using them in a new piece of writing. The two types of grammar instruction (EGI and WCF) were provided both in isolation and in combination, so as to answer the following three research questions:

1. Does EGI as a prewriting task contribute to learning the target structure?
2. Does focused WCF contribute to learning the target structure?
3. Does the combination of EGI and focused WCF have larger effects than the isolated use of either form of instruction individually?

3. Methodology

3.1 Participants
The participants were 53 Japanese university students in two intact classes of a fundamental academic course focused on English writing. The initial sample contained 64 students, but 11 were eliminated from the analysis because they did not take both posttests. One class consisted of psychology, English literature and linguistics majors; the other contained sociology majors. The students had taken a proficiency test and received course placements according to their results on that test, so that the group of students was relatively homogeneous with regard to English language ability. When converted into a TOEIC score, their average score was 421.5. As described more fully below, the participants were divided into four groups for the experimental treatment. The four groups had no significant differences in the average scores of the grammar section of the placement test ($F(3, 49) = 2.289, p = .090, \eta_p^2 = .12$).

3.2 Target Structure
The target structure in this study was the adverbial clause and its function of expressing reasons and contrasts, using the conjunctions because, since, although, though, etc. This structure was chosen because the incorrect use of these conjunctions is quite common in the writing of Japanese EFL learners (Murakoshi, 2015), whereas conjunctions that express time and conditions, such as when and if, are used with greater accuracy. Although both types of conjunctions are used in identical adverbial clause structures, students are more likely to misuse the target group of conjunctions, as illustrated by the following example:

*SNS is a very useful and necessary tool. Because people around the world need to get information quickly.

Students tend to treat the adverbial subordinate clause as a complete sentence even though it should be incorporated with the main clause into one sentence.
The incorrect use of the adverbial clause to express reasons and contrasts was a common error in the writing of the participants in this research prior to the beginning of the study. Murakoshi (2015) claims that the incorrect use of this structure may be a result of the conversational why–because pattern which students may have engaged in their previous English learning experiences, as the proper use of conjunctions like because and although as well as when or if may not be integrated in learners’ linguistic knowledge. Therefore, restructuring their knowledge to integrate the two types of subordinate conjunctions is needed, but unfortunately, previous research has had little interest in this structure.

To distinguish these two types of conjunctions in this study, those in the when/if category are labeled Type 1 and those in the because/although category are labeled Type 2. In addition, to examine whether there are differences between the use of Type 2 and of compound sentence structure to express resultative and contrastive relations (since compound sentences are often used as an alternative way to accomplish the same function as sentences with the Type 2 conjunctive structure), such compound structures, which involve coordinating conjunctions (e.g., but, and) and conjunctive adverbs (e.g., so, therefore), are labeled Type 3 and analyzed in the same way as the complex sentence structures.

3.3 Treatments

The EGI was conducted by letting learners review the use of the target structure with an instruction sheet. The sheet contained an explanation of the target structure and cautions about the common but incorrect use of the adverbial clause in isolation from the main clause. The purpose of this handout was to help the students grasp that all the subordinate conjunctions that introduce adverbial clauses should be used in the same way. The sheet also contained exercises that asked the students to combine two clauses into a sentence by using a subordinate conjunction to make a complex sentence. The groups that did not practice with this sheet read a passage that contained several sentences using the target structure and answered comprehension questions on the passage.

The WCF took the form of underlining and brief metalinguistic explanation in Japanese, which was attached to the error and was concerned solely with the target structure; no feedback was given on errors of other types. After receiving this feedback, the students revised their incorrect sentences. The groups that did not receive WCF were provided with a model passage on the same topic as their writings and corrected their errors on their own after reading the passage.

3.4 Research Instruments

To examine how the participants had learned the target structure, sentence error correction tests, and paragraph writing tasks were administered. Three sentence error correction tests were conducted, serving as the pretest, immediate posttest, and delayed posttest, respectively. Each test consisted of 15 items, ten of which concerned the target structure and five of which were distractors. The participants were required to judge whether the sentence was correct or incorrect, and to correct
the error if one was present. They received one point for each instance when they marked a correct sentence as correct or successfully corrected an incorrect one. The test was conducted in written form, and 15 minutes were given to a whole test: time limit was not set up for each item. The students were able to answer all the items within the designated time in each test.

The participants also wrote a paragraph in 30 minutes on a given topic during the same sessions as the error correction tests to examine whether they could use the target structure accurately. The writings were intended to extract as many uses of the target structure as possible by asking the students’ opinions about social issues. The third writing took the form of responding to a question about a news article which the participants read before writing the paragraph, whereas the others contained no reading parts. The writings were analyzed both qualitatively and quantitatively.

3.5 Procedure

Each of the two classes was divided into two groups that received different treatments, resulting in a total of four different groups (three treatment groups and one control group). The first treatment group (EGI + WCF: \(n = 14\)) received EGI before they received their writing instructions and WCF on their drafts. The second group (WCF-only: \(n = 15\)) received only WCF on their drafts, and the third group (EGI-only: \(n = 11\)) received only EGI before the writing instructions. The control group (\(n = 13\)) received neither EGI nor WCF.

One week before the start of the treatments, the participants took the first error correction test and wrote their first paragraph as the pretest. Based on these results, four groups that were statistically homogeneous with regard to their prior knowledge of the target structure were constructed. After each group received the EGI (or the alternative practice activity), the students participated in the assigned communicative writing practices (writing drafts and correcting errors in their drafts, with or without WCF) twice, with a one-week interval between sessions. Immediately after the last treatment, they took the second error correction test and wrote another paragraph on a new topic as the immediate posttest (posttest 1). Two weeks after posttest 1, they took another test and wrote another paragraph as the delayed posttest (posttest 2). Figure 1 illustrates the overall research procedure.

![Figure 1. Research procedure. ECT = error correction test.](image-url)
3.6 Data Analysis

The error correction test scores were analyzed quantitatively by comparing the average scores across the three tests and four groups with a “test x group” comparison design. The participants’ writings were also analyzed quantitatively. First, the accuracy ratio for the two types of target structures (Type 1 and Type 2) was calculated by dividing the number of structurally correct clauses containing the conjunctions of interest by the total number of such clauses in the draft. The accuracy ratio for the Type 3 structure was calculated and analyzed in the same way. The ratios were then compared across the groups and the times when the paragraphs were written.

The students’ writings were also analyzed qualitatively, with a focus on how the target structure use changed as the instruction progressed. All drafts by each participant were examined with respect to whether the conjunctive adverbial clauses were used, whether they were used accurately, whether they were used with variety (i.e., in various forms and with various conjunctions), and how often the target structure was used in comparison to compound sentence structures that conveyed the same meaning as the sentences with the target structure. With regard to this last measure, it was assumed that, as the number of sentences using the target structure increases, the number of compound sentence structures that deliver the same meaning with a simpler linguistic structure should decrease accordingly. Therefore, comparing the relative use of these two grammatical forms during the progress of the instruction may reveal the development of the students’ knowledge of the target structure.

4. Results

4.1 Error Correction Tests

Table 1 shows the descriptive data for the three error correction tests. The internal consistency scores (Cronbach’s alpha) on the tests were .77, .76, and .76, respectively. Although the mean score of the EGI group in the pretest was slightly higher than other groups, there were no significant differences among the four groups ($\chi^2(3) = 7.252, p = .064$).

Table 2 illustrates the results of the statistical investigation of the error correction tests. The data indicate that both groups that received WCF developed their explicit knowledge of the target
structure across the tests, whereas the groups that did not receive any corrective feedback showed no significant development of the target structure. The pairwise comparisons for the two feedback groups show that the EGI + WCF group members developed their knowledge of the target structure to a greater degree after the treatments (i.e., between the two posttests) than during the treatments, whereas the WCF-only group members developed their knowledge during the treatment period (i.e., between the pretest and posttest 1). That is, the development of the understanding of proper adverbial clause use might have occurred earlier among students receiving the WCF-only treatment than among those receiving a combination of both modes of form-focused instruction.

Table 2

Results of Friedman Tests for the Error Correction Tests

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>χ²</th>
<th>df</th>
<th>p</th>
<th>pre vs. post 1</th>
<th></th>
<th></th>
<th>pre vs. post 2</th>
<th></th>
<th></th>
<th>post 1 vs. post 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EGI+WCF</td>
<td>14</td>
<td>9.50</td>
<td>2</td>
<td>.009</td>
<td>.050</td>
<td>.523</td>
<td>.007</td>
<td>.718</td>
<td>.015</td>
<td>.652</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WCF</td>
<td>15</td>
<td>6.33</td>
<td>2</td>
<td>.042</td>
<td>.010</td>
<td>.665</td>
<td>.015</td>
<td>.628</td>
<td>.935</td>
<td>.021</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGI</td>
<td>11</td>
<td>4.51</td>
<td>2</td>
<td>.105</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
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<td></td>
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<tr>
<td>Control</td>
<td>13</td>
<td>2.13</td>
<td>2</td>
<td>.345</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. pre = pretest; post = posttest.

4.2 Qualitative Analysis of the Written Paragraphs

The qualitative analysis focused on how participants’ use of the target structure changed between the three writings. As mentioned earlier, compared to their relatively more accurate use of the conjunctions expressing time and conditions, all four groups made frequent errors on the conjunctions expressing reasons and contrasts prior to receiving treatment. The following excerpt from the EGI + WCF group represents a typical pretreatment draft, indicating how most students in the sample had not yet integrated knowledge about subordinate conjunctions.

I will go to korea for a long time. Because I like korean culture and music. I want to see their concert in korea. Also I want to speak korean so I want to study there. Second if I have a lot of money I use for myself. I will go to beauty salon every week and I will buy facial massager. Because my skin ability is low so I want to recover my skin and I want to get white skin. Third the other money, I will save. In short, if I won 700 million yen I will use money what I like.

(Writing 1: Student 3126NR)

In their first paragraph (Writing 1), the EGI + WCF group tended to generate complex sentences using because to express cause and effect, but made a substantial number of errors. In the paragraphs written as the immediate posttest (Writing 2), the number of errors decreased slightly, but the number of target clauses used did not increase relative to Writing 1. Only one or two target
clauses appeared in their drafts, and compound sentences containing conjunctive adverbs (so, therefore, and contradictory conjunctions) were used more frequently than the target structure. Meanwhile, the (relatively high) accuracy of and the number of clauses containing conjunctions of the if/when type remained as in the pretest. In this sense, the integration of target knowledge during the treatment period was not noteworthy.

In contrast, in the delayed posttest (Writing 3), the EGI + WCF group’s use of the target structure flourished, as it appeared both more often and with greater accuracy. In particular, those who had shown little improvement from Writing 1 to Writing 2 now improved in both accuracy and quantity. In addition, the group showed a variety in the types of target conjunctions used. In Writings 1 and 2, the use of subordinate conjunctions expressing contrasts, such as although and though, was limited, and most students used compound sentences containing but instead of using subordinate conjunctions to express the same meaning. However, in Writing 3 they wrote more sentences containing those subordinate conjunctions—although in some cases, these sentences did not make sense even when they were correct in grammatical structure.

The WCF-only group displayed a different pattern of development of the target structure. Although this group made progress between the pretest and the immediate posttest on the error correction test, it showed little development between the two paragraphs written at the same time as these tests. The first set of paragraphs was similar to those of the EGI + WCF group, except that slightly higher use of the target structure was observed. However, the second writing witnessed a different tendency: instead of developing accurate use of the target structure, 7 of the 15 students did not use it at all. In cases where subordinate conjunctions could easily have been selected, the simpler compound structure was used, as in the following excerpt:

I use any SNS. I use them when I be alone in home or in college. I think their merits are getting connection too easy. In addition, using them can be friend you and other people. However, them have a risk that my important informations known by other people. Therefore, we need to pay special attention when us them. (Writing 2: Student 1132M.M)

In Writing 3, this tendency disappeared and the WCF-only group used the target structure more often and with greater variety. In addition to the use of because, though still with considerable errors as observed in Writing 1, a few students began using even if with the meaning of though and with increased accuracy. Those who did not use the target clauses previously also produced several sentences containing them, but there were still errors in their use of the structure, like those seen in Writing 1.

It appeared that the EGI-only group’s knowledge of the subordinate conjunctions was not adequate to be able to produce accurate adverbial clauses, since there was a large number of errors in the use of Type 2 conjunctions compared with Type 1 conjunctions, and there were no cases of using either resultative or contradictory complex sentences in Writing 1. The accurate use of the
conjunction was observed in a few students’ drafts in Writing 2, but not in those of the other group members. In Writing 3, use of the target structure increased slightly in quantity and variety in some students’ writings, but they still made considerable errors with Type 2 conjunctions. One can see the mixing of different rules in these students’ application of subordinate conjunctions, which could be interpreted as indicating that they were in a transitional stage of integrating the rules about subordinate conjunctions into their linguistic knowledge.

The control group’s Writing 1 paragraphs were not different from those of the other groups: they mostly used the compound structure to express resultative and contradictory relationships between clauses, and Type 2 conjunction errors were salient. These features in Writing 1 did not change substantially in terms of quality in Writing 2. Errors with because remained, and again, more coordinate clauses (i.e., compound sentences) were used in most cases. In the final writing, more accurate target structure use emerged and the participants’ intention to produce complex sentences for resultative and contradictory connections between clauses increased somewhat—a change not observed in Writing 2. However, the roughly equal presence of erroneous and accurate uses, as seen in the EGI-only group, may indicate that the group was still in the transitional stage of acquisition of the target structure.

In sum, the qualitative analysis of the students’ writings before and after the treatments indicates that the treatments were effective for the EGI + WCF group, but contributed toward the other groups’ improvement only to a limited degree. The EGI + WCF group developed strong knowledge of the target structure, even though this development was rather late. On the contrary, the WCF-only group had a different pattern of development. The use of the target structure disappeared in many cases in their second paragraphs. Although it returned to some extent in the final set of paragraphs and some varieties of the subordinate clause were seen, there were still errors in their drafts. Finally, the EGI-only group and the control group did not move beyond the transitional stage in their development of the target structure, with a combination of erroneous and accurate uses of Type 2 conjunctions.

4.3 Quantitative Analysis of the Paragraph Writings

Table 3 shows the descriptive data for each sentence structure type. The results of a Friedman test for the Type 1 structure indicate no significant differences across the three writing periods within each treatment group (p = .584, .087, and .123, respectively), but there were significant differences within the control group (χ²(2) = 9.33, p = .009). Post hoc analyses for the control group demonstrate a difference between the first and second writings (p = .009, r = .72). Thus, the treatment groups and the control group had different patterns of developing their Type 1 conjunction use.

The developmental patterns for the Type 2 and Type 3 structures were different from that for Type 1 grammar. Table 4 shows the results of another Friedman test and the post hoc analyses applied to examine the difference in accuracy ratios across the writings. It shows only the data for the groups whose overall differences in accuracy ratio between sets of writings were significant (i.e.,
$p < .05$). For Type 2, clauses using resultative and contrastive conjunctions, two of the treatment groups (EGI + WCF and EGI-only) made significant progress over time. The post hoc analyses demonstrate that the EGI + WCF group achieved substantial development between the second and third writings, since the differences between Writing 1 and Writing 3 ($p = .003, r = .79$) and between Writing 2 and Writing 3 ($p = .012, r = .67$) were significant, whereas the difference between Writing 1 and Writing 2 was not ($p = .021, r = .62$). On the other hand, the EGI-only group’s progress was rather dull. Although the overall difference within the group was significant, the post hoc analyses did not show adequate progress: all the $p$-values are larger than the corrected significance level.

Table 3

**Descriptive Statistics for Accuracy Ratios by Sentence Structure Type**

<table>
<thead>
<tr>
<th>Structure</th>
<th>Group</th>
<th>$n$</th>
<th>Writing 1</th>
<th>Writing 2</th>
<th>Writing 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean (%)</td>
<td>SD</td>
<td>Mean (%)</td>
</tr>
<tr>
<td>Type 1</td>
<td>EGI+WCF</td>
<td>14</td>
<td>8.77</td>
<td>10.29</td>
<td>11.73</td>
</tr>
<tr>
<td></td>
<td>WCF</td>
<td>15</td>
<td>4.22</td>
<td>6.89</td>
<td>11.39</td>
</tr>
<tr>
<td></td>
<td>EGI</td>
<td>11</td>
<td>7.15</td>
<td>8.29</td>
<td>12.98</td>
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<tr>
<td></td>
<td>Control</td>
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<td>3.56</td>
<td>4.33</td>
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<tr>
<td>Type 2</td>
<td>EGI+WCF</td>
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<td></td>
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<td></td>
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<tr>
<td>Type 3</td>
<td>EGI+WCF</td>
<td>14</td>
<td>9.14</td>
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<td>7.11</td>
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<tr>
<td></td>
<td>Control</td>
<td>13</td>
<td>12.70</td>
<td>9.63</td>
<td>8.80</td>
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</tbody>
</table>

*Note. W1-3 = Writing 1-3.*

Table 4

**Statistical Comparisons of Accuracy Ratios for Sentence Structures of Type 2 and Type 3**

<table>
<thead>
<tr>
<th>Structure</th>
<th>Group</th>
<th>$\chi^2$</th>
<th>$p$</th>
<th>W1 vs. W2</th>
<th>W1 vs. W3</th>
<th>W2 vs. W3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$p$</td>
<td>$r$</td>
<td>$p$</td>
</tr>
<tr>
<td>Type 2</td>
<td>EGI+WCF</td>
<td>13.911</td>
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<td>.021</td>
<td>.62</td>
<td>.003</td>
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<td></td>
<td>EGI</td>
<td>7.800</td>
<td>.020</td>
<td>.028</td>
<td>.66</td>
<td>.028</td>
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<tr>
<td>Type 3</td>
<td>EGI+WCF</td>
<td>6.465</td>
<td>.039</td>
<td>.068</td>
<td>.49</td>
<td>.034</td>
</tr>
</tbody>
</table>

*Note. W1-3 = Writing 1-3.*

5. Discussion

Concerning the first research question, whether explicit grammar instruction contributes to integrating knowledge of the adverbial clause structure, the results of the error correction tests
suggest that providing only EGI is not sufficient. The group that received both EGI and WCF made considerable progress in target structure knowledge, although this development was rather late, coming not during but after the instruction. However, the EGI-only group did not make as much progress as the EGI + WCF group in terms of pragmatic use of the target structure.

The results of the qualitative analysis of the participants’ writings may verify this finding. The EGI-only group showed improvement in their quantity and variety of adverbial clauses as the instruction progressed, but this development was not large compared to that of the EGI + WCF group, whose use of the Type 2 subordinate conjunctions made constant progress through the research period and ended with flourishing target structure use. The results of the quantitative analysis of the writings also support this view. Table 4 indicates that both groups that received EGI showed significant overall improvement in their correct use of Type 2 conjunctions across the three time periods, but the results of the multiple comparisons illustrate that the magnitude of the differences was not equal between the groups. The comparisons for the EGI group do not show considerable difference between time periods, whereas those for the EGI + WCF group show large differences between Writings 1 and 3 and between 2 and 3. The average ratios of accurate Type 2 conjunction use, illustrated in Table 3, also demonstrate that the development achieved by the EGI-only group was not comparable to that of the EGI + WCF group, because the average ratio in Writing 3 for the EGI group remained at the same level as that in Writing 2 for the EGI + WCF group. The findings above suggest that EGI as a prewriting practice plays an important role in assisting university students integrate their knowledge of the adverbial clause, but it is not sufficient by itself, and these students need additional assistance to consolidate their knowledge.

Nevertheless, the overall high scores attained by the EGI group on the error correction tests through the study cannot be ignored, despite the lack of statistically significant difference from the other groups. Shintani (2016) demonstrated that learners with prior knowledge of the target grammar benefited more from receiving negative feedback on their writing tasks than from grammatical explanations received before their writing. The EGI group did not receive any explicit grammar instruction after completing the writing task; rather, it simply read a model passage and self-corrected their errors. Therefore, this group with relatively higher scores of the grammar tests might have developed more quickly if it had received WCF instead of prewriting EGI.

WCF seems to have had the effect of consolidating target grammar knowledge: both groups that received feedback containing metalinguistic explanations of structural errors developed their knowledge on the error correction tests (see Table 2). However, the feedback may have had only a limited effect in developing students’ grammar knowledge. Although the error correction test results were encouraging for the WCF group, the analyses of these students’ practical use of the target structure in their writings offer a somewhat gloomy perspective on the effectiveness of the instruction received. As mentioned in Section 4.2, many WCF-only participants did not even produce any adverbial clauses containing Type 2 conjunctions in Writing 2. The quantitative data also support the conclusions suggested by the qualitative data. Although the overall average ratio of
Type 2 accuracy increased from the first to the second and from the second to the third writing (see Table 3), there was no significant difference between writing tasks for all conjunction types. These findings may indicate that although WCF also has positive effects on the development of understanding of the target structure, its influence is not sufficient to enable appropriate recognition or use of the adverbial clause with Type 2 conjunctions. Therefore, the answer to the second research question, whether focused WCF by itself enhances learning of the target structure, may be about equally unfavorable as the answer to the first question.

The results of the analyses for the EGI + WCF group offer an affirmative answer to the last research question. Only this group showed evidence of learning the target structure in both the error correction tests and their paragraph writings. The combination of prewriting EGI and postwriting corrective feedback, followed by correction of errors, may enable students to pay sufficient attention to the grammatical features being taught. As Schmidt (2001) argues, learning requires “specifically focused” attention (p. 30). EGI and WCF were both intended to drive learners to focus on the target language when writing sentences, reread them after writing, and rewrite them if necessary, i.e., to be attentive to their own language production. The groups receiving only one of the two interventions did study the target structure: they read a passage containing adverbial phrases instead of reading an EGI sheet, or read a model paragraph instead of reviewing WCF when they self-corrected their drafts. However, it seems that these more implicit presentations of the accurate target structure did not function as an efficient trigger of attention to the structure. The limited improvement shown by the control group reinforces this interpretation. Moreover, providing either EGI or WCF could not draw sufficient attention from the learners when it was provided in isolation. Some previous studies have found that a combination of two types of explicit feedback, providing more opportunities for focused attention, has positive effects on accuracy development. The present study also suggests that such multiple doses are needed to give learners sufficient opportunities to attend to the proper grammatical forms in their cognitive process.

6. Conclusion

The present study investigated whether EGI as a prewriting task and WCF (followed by error correction) as a postwriting task contributed to Japanese EFL students’ development of accuracy in their use of adverbial clauses. The investigation of error correction test scores and paragraph compositions through a pretest–posttest research design revealed that the combination of both prewriting and postwriting grammar instruction was more effective in enhancing L2 learning than the isolated use of either method. Letting learners focus on the target structure before the written composition task and providing negative evidence to their errors may increase their attention to the target structure, which is needed for learning. The time required to give thorough WCF and have learners process it is one of the main concerns of this method, but giving learners feedback solely on the target structure and giving grammar instruction as a plenary task may reduce the time
problem, and combining these two less time-consuming activities may establish a better learning context than taking the time to correct students’ writing in detail.

This study does have some limitations. First, the sample size was not large enough to permit effective statistical analysis of the data. It was difficult to adopt parametric analysis to examine the difference in the effects of the treatments, which may reduce the reliability of the analyses to some extent. The scores of the EGI group on the error correction test were always higher than those of the other groups, even though the statistical analysis revealed no significant difference among the groups on the pretest. This result occurred because four of the students originally assigned to the EGI group were later removed from the analysis due to the absence of posttest data. This problem could have been eliminated had there been more participants in each group from the beginning, as eliminating absent students’ data would not have affected the results as strongly. Second, the internal consistency of the error correction tests was not very high. To grasp the learners’ grammatical knowledge more precisely and make the findings more valid, additional test items would be needed. These limitations should be addressed in further research.

Finally, I would like to propose some possible approaches for further research. The first issue to consider is the number and types of target structures covered in a single block of instruction. This study investigated the effects of EGI and WCF for a single grammatical structure. It would be beneficial to examine whether the same findings are observed when language instruction deals with more than one structure at a time. Shintani et al. (2014) points out the possibility of contradictory findings related to the number of target structures treated in one instructional block. Teaching two or more structures together in a single treatment may be pedagogically more economical, but the students may experience information overload. Furthermore, the findings may differ according to the type of target structure. Most studies dealing with grammar instruction in writing investigate relatively small units of language, such as articles, verb forms, and prepositions, whereas studies dealing with oral production tend to treat larger units such as word order and syntax. The difference in target structure type may also affect the findings with regard to the effects of grammar instruction.

In addition, this line of research would benefit from a more cognition-oriented perspective. The current study has concluded that combining two treatments may have drawn more attention to the target structure, but it does not answer the question of how the treatments stimulated the students’ focused attention. Likewise, it does not explain why most of the improvement by the EGI + WCF group occurred after the treatments, not during the instruction. Multiple approaches to answering these questions, such as interviews, protocol analyses, and detailed comparisons between feedback and students’ revision or correction of errors, are needed.

Notes

1. The adverbial clause structure with this type of conjunction is usually used when the causal or contradictory relationship between the main clause and the subordinate clause is robust. However,
the treatments did not deal with this rule because including this aspect in the instruction might confuse the participants who had not fully acquired even the superficial structure of the target grammar.

2. A nonparametric test of analysis (Kruskal–Wallis test) was adopted here because the normality of the scores of the three tests was not confirmed and the sample size was not large enough. Comparison using a one-way ANOVA was also conducted for reference, and there was no significant differences among the groups ($F(3, 49) = 2.716, p = .055, \eta_p^2 = .09$).

3. A Friedman test was conducted to examine the overall differences between the tests in each group. The pairwise comparisons were conducted for the feedback groups using Wilcoxon signed-rank tests with the Bonferroni correction ($\alpha = .017$).

4. The underlined words in the excerpts indicate errors in use of the target structure. The double-underlining indicates correct use of the target structure. The wavy underline indicates that the student used a compound sentence structure instead of a complex sentence structure containing the target grammar. Although this usage is not an error, frequent use of this form could indicate that the learner has not learned to use the target structure and has chosen to use a simpler sentence structure instead.

References


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