Explicit and Implicit Written Corrective Feedback in Higher EFL Education: Evidence from Turkey

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Abstract

This study investigated the efficiency of explicit and implicit written corrective feedback in English as a Foreign Language (EFL) education in higher education. Participants of the study were late-elementary and pre-intermediate adult learners of English who were attending a preparatory school in a Turkish state university. During a period of four weeks, exercises on prepositions were delivered to subjects who were divided into three groups as two treatment groups receiving explicit and implicit written correction and a control group receiving no feedback. A pre-test and a post-test were applied to the groups at the start and the end of the four-week treatment, respectively in order to examine possible development of the groups. The results indicated significant differences between pre-test and post-test scores of the groups receiving the two types of written corrective feedback.

Keywords: corrective feedback, explicit and implicit written corrective feedback, EFL teaching and learning in higher education

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Yüksekokşretimde Yabancı Dil Eğitiminde Açık ve Örtük Yazılı Düzeltici Geribildirim: Türkiye Örnegi

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Öz

Bu çalışmada, yükseköğretimde yabancı dil olarak İngilizce öğretiminde açık ve örtük yazılı düzeltici geribildirim kullanımının İngilizce ilgili öğrenimi üzerindeki etkiliği araştırılmıştır. Çalışmanın katılımcıları, bir Türk devlet üniversitesinin hazırlık okulu ve öğrenim görmekte olan geç-başlangıç ve ön-orta-seviyede İngilizce öğrenen yetişkin öğrencilerden oluşmaktadır. Doğrudan ve dolaylı yazılı geribildirim alan iki uygulama grubu ve geribildirim almayan kontrol grubu olmak üzere üç gruba ayrılan katılımcılara dört hafta süreyle ilgili alıştırmalar uygulanmıştır. Grupların gelişimini ölçmek amacıyla, dört haftalık uygulama sürecinin başında ön-test ve sonunda son test uygulanmıştır. Bulgular, doğrudan ve dolaylı yazılı geribildirim alan gruplarının ön- ve son-test sonuçlarının anlamlı bir şekilde farklılaştığını ortaya çıkarmıştır.

Anahtar kelimeler: Yazılı düzeltici geribildirim, doğrudan ve dolaylı yazılı geribildirim, yabancı dil olarak İngilizce öğrenimi ve öğretimi, yükseköğretim

Önerilen Atıf

INTRODUCTION

Feedback refers to comments or other information that learners receive concerning their success on learning tasks or tests, either from the teacher or other persons (Richards & Schmidt, 2010, p. 217). It is needed to be motivated to resolve a discrepancy between where one is and where s/he wants to be (Woolfolk, Winne & Perry, 2003). It informs students that their current efforts fall short of the goal, and allows them exert more effort or gives them an idea of what to do as long as it describes how to do better (Butler & Winne, 1995). Woolfolk et al. (2003, p. 364) stress that when it describes accomplishment in relation to goals, the students can feel satisfied and competent, and may even set a slightly higher goal for the future. Error feedback, on the other hand, has been a controversial issue in the field of foreign/second language education and teacher training in that no consensus has been reached among scholars as to whether it is useful or harmful to foreign/second language learners. Before discussing the concern in detail, it might be useful to discriminate between the terms mistake and error, which are separate phenomena even though they seem to be used interchangeably in some literature. They were distinguished by Corder (1967) in one of his early works “Significance of Learner’s Errors” referring to errors of performance as mistakes and reserving the term error to refer to the systematic errors of the learner from which we are able to reconstruct his knowledge of the language to date, i.e. his transitional competence (p. 167). According to him, mistakes are of no significance to the process of language learning and errors provide evidence of the system of the language that has been learned and used at a particular point in the course. James (1998), on the other hand, distinguishes between these terms stating that an error cannot be self-corrected while mistakes can be self-corrected if the deviation is pointed out to the speaker. Believing that errors are significant in three ways, Corder (1967) remarks,

First to the teacher, in that they tell him, if he undertakes a systematic analysis, how far towards the goal the learner has progressed and, consequently, what remains for him to learn. Second, they provide to the researcher evidence of how language is learned or acquired, what strategies or procedures the learner is employing in his discovery of the language. Thirdly (and in a sense this is their most important aspect) they are indispensable to the learner himself, because we can regard the making of errors as a device the learner uses in order to learn. It is a way the learner has of testing his hypotheses about the nature of the language he is learning (p. 167).

According to Larsen-Freeman (1981), (i) errors are a natural result of the communication development skills, (ii) correction distracts the learner’s attention from the communicative task, (iii) correction forces the learner to focus on the form instead of the meaning, and (iv) correction activates the learner’s affective filter, which blocks learning. Likewise, Truscott (1996) strongly objected error correction in L2 writing claiming that it should be abandoned as it is ineffective and harmful. In return, Ferris (1999), who found Truscott’s claims premature and overly strong, asserted that error correction should be considered for practical issues especially which methods, techniques and approaches in error feedback are effective in short and long-term in L2 improvement. Lightbrown and Spada (1999) underline the importance of learner errors, and advocate that they are natural part of language learning and reveal the patterns of learners developing interlanguage process that expresses where learners overgeneralise a second language rule or where they transfer a first language rule to the second language. According to Ferris and Roberts (2001), most studies on error correction in L2 writing classes support that students who receive corrective feedback from teachers improve in accuracy over time. Consequently, the notion of corrective feedback (CF, henceforth) has become prominent in L2 learning and teaching due to its crucial and postulated facilitating role both in students’ attention in L2 and teachers’ perspective on the error treatment. It basically refers to immediate response of teacher to learner utterances containing error, and it is defined as “any reaction of the teacher which clearly transforms, disapprovingly refers to, or demands improvement of the learner utterance” (Chaudron, 1977, p. 31). Ellis, Loewen and Eralm (2006, p. 340) remark that it takes the form of responses to learner utterances that contain an error, and that these responses can consist of (a) an indication that an error has been committed, (b) provision of the correct target language form, or (c) metalinguistic information about the nature of the error, or any combination of these. When treating learner errors in foreign/second language classrooms, it might be provided in various forms such as oral/written, and explicit (direct)/implicit (indirect). As cited in Tedick and de Gortari (1998), it is classified into six types: (i) explicit correction, (ii) recasts, (iii) clarification requests, (iv) metalinguistic feedback, (v) elicitation, and vi) repetition of error. Table 1 outlines the types in concern.
Table 1

<table>
<thead>
<tr>
<th>Types of CF (Adapted from Lyster, 1997; Lyster &amp; Ranta, 1997)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CF</td>
</tr>
<tr>
<td>---------------------------------</td>
</tr>
<tr>
<td>Explicit Correction</td>
</tr>
<tr>
<td>Recasts</td>
</tr>
<tr>
<td>Clarification Requests</td>
</tr>
<tr>
<td>Metalinguistic Feedback</td>
</tr>
<tr>
<td>Elicitation</td>
</tr>
<tr>
<td>Repetition</td>
</tr>
</tbody>
</table>

The above-mentioned types of CF are not extensively discussed in the current study since it focuses on the use of two types as explicit and implicit CF. Explicit CF is the provision of the correct linguistic form or structure by the teacher to the student above the linguistic error whereas implicit (indirect) CF indicates that in some way an error has been made without explicit attention drawn (Ferris, 2003, cited in Bitchener & Knoch, 2009). More specifically, the former is based on the correction of errors by the teacher, and requires students to transcribe the correction into the revised version of the text whereas the latter involves an indication on the part of the error by teacher instead of the correct form for the students which actually expects the students to rely on their own in revising or self-editing the text and making the required correction (Noroozizadeh, 2009, p. 248).

**Explicit CF:** Teacher provides the correct form of ungrammatical form made by student:

S: She **has** studied English. (indication of the error and correction)

**Implicit CF:** teacher indicates the error without correcting it:

S: She* **have** studied English. (indication/ identification of error)

(*1-person)

In an experimental study Ellis et al. (2006), compared low-intermediate ESL learners’ performance through communicative tasks during which they were provided explicit and implicit CF in response to their errors in the target structure. They indicated a statistical difference between the groups confirming a clear advantage for explicit feedback over implicit feedback. This particular finding has been supported by further studies (Loewen & Philip, 2006; Lyster & Mori, 2006). Table 2 provides a summary of characteristics of these types.
As depicted in Table 2, each type of CF has certain strengths over the other as well as weaknesses. Keeping all in mind, the present study was primarily set out to explore the efficiency of the use of CF in L2 learning. Subsequently, it attempted to compare the use of explicit and implicit CF in instructing a grammatical form (prepositions) in teaching English as a foreign language (hereafter EFL) to Turkish adult learners. Accordingly, two research questions were raised:

RQ 1. Do the students receiving WCF significantly differ from those who receive no WCF in learning EFL prepositions?

RQ 2. Do the groups receiving explicit and implicit WCF significantly differ in learning EFL prepositions?

Prior to outlining methodological design of the study, it is considered beneficial to cover research previously conducted on the use of WCF in different educational levels.

**Previous Studies**

CF and CF types have been largely investigated in terms of effectiveness through various empirical studies in the related literature. Underlining that the learners receiving CF perform better in the post-tests than control groups in all studies, Havranek (2002, p. 257) asserts that CF can be assumed to facilitate language acquisition. In a meta-analysis on effectiveness of CF, Li (2010) reviewed 33 primary studies (published articles and dissertations), and informed that it has a medium overall effect that maintains over time. Sheen (2010) reported that CF was largely effective in helping learners improve the grammatical accuracy of English articles regardless of language analytic ability. In Turkey, Kırkgöz, Babanoğlu and Ağçam (2015) investigated CF types used in EFL primary classrooms through classroom observation, and informed that all types of corrective feedback were used by the teachers to help students overcome errors they made in classes of various grades and that explicit correction was the most and peer correction was the least frequently used CF types in all four grades. In a specific research, Zengin and Kaçar (2015) examined the use of Google search applications in writing activities in respect of written corrective feedback. Kazemifar and Chakigar (2016) reviewed the role of oral and written CF in learners’ grammar through both theoretical and practical studies, and concluded that CF can be a pedagogical means of providing modified input to learners through interaction which would consequently lead to learners to modify their output, and that both oral and written feedback can contribute to the improvement of learners’ grammar and accordingly to that of their writing.

Comparing direct and indirect CF in questioning, Lalande (1982) found that learners receiving indirect CF outperformed those receiving direct CF regarding accuracy whereas Semke (1985) and Robb et al. (1986) indicated no difference between them in respect of efficiency (cited in Bitchener, 2008, pp. 106-107). Fathman and Whalley (1990), and Ferris and Roberts (2001), on the other hand, reported effectiveness indirect CF while Chandler (2003) reported direct correction is the most effective written CF type. Ayoun (2001) tested the effectiveness of written recasts versus models in the acquisition of the aspectual distinction between two past tenses in French, the *passé composé* and the *imparfait*, and found that the learners provided implicit negative feedback performed significantly better than those who were provided explicit positive evidence and negative feedback, partially confirming that recasting is the most effective form of feedback. More recently, Erel and Bulut (2007) examined direct and indirect coded CF by pre-intermediate Turkish learners during a semester and found that although there was no significant difference, the groups received indirect coded CF made fewer errors than groups that received direct coded CF. Von Benungen et al. (2008) concluded that corrective feedback can improve students’ accuracy in short-term periods, on the contrary, contend that only the direct CF have a significant long-term effect.

| Characteristics of explicit and implicit CF (Jawaheer, Szomszor and Kostkova, 2010, p. 2) |
|-----------------------------------------------|-----------------------------------------------|
| Implicit CF | Explicit CF |
| Accuracy | Low | High |
| Abundance | High | Low |
| Context-sensitive | Yes | Yes |
| Expressivity of user preference | Positive | Positive & Negative |
| Measurement reference | Relative | Absolute |
in this concern. Noroozizadeh (2009) tested error correction and writing ability with direct and indirect CF, and noted that indirect CF have more significant effects than direct CF in improving students’ writing.

Jawaheer et al. (2010) overviewed the differentiating characteristics of explicit and implicit feedback using datasets obtained from an online music station and recommender service, and reported that implicit and explicit positive feedback complement each other with similar performances despite their different characteristics. Rassaei and Moinzadeh (2011) examined the immediate and delayed effects of three types of CF (e.g. recasts, metalinguistic feedback, and clarification requests) on the acquisition of English wh-question forms by Iranian EFL learners, and revealed that the effectiveness of metalinguistic feedback and recasts in both immediate and delayed post-tests. They also concluded that that recasts had a more stable and enduring effect on learners’ performance than metalinguistic feedback in the delayed post-test while metalinguistic feedback was more effective than recasts in the immediate post-test. In Korea, So (2011) explored the possible effects of error feedback strategies in Hong Kong with regard to accuracy in writing, and concluded that implicit feedback is more useful for promoting second language written accuracy. Examining the effects of negotiated interaction on the production and development of question forms in English as a second language (ESL) with a focus on recasts, Mackey and Philp (1998) concluded that recasts may be beneficial for short term IL development even though they are not incorporated in learners’ immediate responses.

Lyster, Saito and Sato (2013) revealed a tendency for learners to prefer receiving CF more than teachers feel they should provide it, and stated that the most effective teachers are likely to be those who are willing and able to orchestrate, in accordance with their students’ language abilities and content familiarity, a wide range of CF types that fit the instructional context (p. 30). In a case study in Austria, Pfanner (2015) scrutinised oral CF in an elementary school through classroom observation, and found that the teacher extensively used oral feedback types especially recasts, clarification requests, and metalinguistic feedback or clues. In a more recent study, Brown (2016) investigated the proportions of CF types teachers provide, as well as their target linguistic foci, and indicated that recasts account for 57% of all CF while prompts comprise 30%, and grammar errors received the greatest proportion of CF (43%). Conducting an action research with EFL students attending a Colombian private university, Alvira (2016) reported that the use of coded, written, and oral feedback is widely accepted by students and yields positive results in the improvement of their writing skills at the paragraph level. Investigating oral and written teacher feedback in an EFL classroom in Sweden, Hadzic (2016) revealed that the most frequently used oral feedback types were recast, elicitation, and praise, and that the teachers employed different strategies regarding in providing feedback.

METHODOLOGY

Quantitative research, which focuses on numeric and unchanging data and detailed, convergent reasoning rather than divergent reasoning (i.e., the generation of a variety of ideas about a research problem in a spontaneous, free-flowing design) (Babbie, 2010), has been adopted in our study. Its fundamental characteristics could be listed as,

- The data is usually gathered using structured research instruments.
- The results are based on larger sample sizes that are representative of the population.
- The research study can usually be replicated or repeated, given its high reliability.
- Researcher has a clearly defined research question to which objective answers are sought.
- All aspects of the study are carefully designed before data is collected.
- Data are in the form of numbers and statistics, often arranged in tables, charts, figures, or other non-textual forms.
- Project can be used to generalize concepts more widely, predict future results, or investigate causal relationships.
- Researcher uses tools, such as questionnaires or computer software, to collect numerical data. (Babbie, 2010).

In line with the afore-mentioned research objectives and in order to provide responses to the research questions, this study was designed as a quantitative research. Sampling and data collection procedure are described and outlines in the following sections.
Sampling

Purposive sampling method was utilized in this study due to access and willingness concerns (Creswell, 2007), and to ensure that the population represent eligible attributes based on the study objectives (Berg, 2004) and relevance to the research questions (Bryman, 2008). So, the participants were a group of Turkish adult learners who were studying EFL (late-elementary and pre-intermediate levels) at a preparatory school in a state university in Turkey. At the time of the study, they were enrolled in different undergraduate programmes, and attending EFL preparatory programme as elective part of their higher education. A total of 43 undergraduate students were divided into three groups as two treatment groups receiving explicit and implicit WCF, and a control group receiving no WCF. There were 14 students in each treatment group and 15 students in the control group. Lastly, it might be noted that there was a balance among the students with respect to gender; namely, 23 of them are male and 20 females.

Data Collection Procedure

Data were collected through an experimental procedure of a four-week treatment in the spring semester. A pre-test including questions on English prepositions was administered at the start of the semester, and a post-test of similar type was given at the end of the semester. It is significant to note that the subject in concern is generally taught at A1-A2 (elementary) levels based on Common European Framework of Reference for Languages (CEFR), that the questions were prepared by the researchers, and the expert opinion was elicited from a faculty member who is specialised in EFL testing and assessment. It is also noteworthy that the participants were introduced the subject as a part of ‘EFL Grammar’ course in previous semester. After administering the pre-test, the four-week programme (two sessions a week), was carried out with the three groups. The process in concern is described in Table 3.

Table 3

<table>
<thead>
<tr>
<th>Data Collection Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment Schedule</td>
</tr>
<tr>
<td>Experimental Groups</td>
</tr>
<tr>
<td>Control group</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Implicit WCF</th>
<th>Explicit WCF</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1 Initial tasks</td>
<td>Pre-test</td>
<td>Pre-test</td>
<td>Pre-test</td>
</tr>
<tr>
<td>Weeks 1-2-3-4</td>
<td>Session 1</td>
<td>Controlled exercise</td>
<td>Controlled exercise</td>
</tr>
<tr>
<td>Session 2</td>
<td>Get errors corrected by teachers/ evaluate their corrected errors</td>
<td>Get errors underlined/marked by teacher/ self correction/ revision</td>
<td>Get only errors without correction and revision</td>
</tr>
<tr>
<td>Week 5 Final tasks</td>
<td>Post-test</td>
<td>Post-test</td>
<td>Post-test</td>
</tr>
</tbody>
</table>

The following are taken from the pre-test administered to the groups at the beginning of the semester.

e.g. 1. You can see all the information............ the screen.
   a) at  b) in  c) inside  d) on

2. Are these pictures ................ sale?
   a) at  b) for  c) in  d) to

3. Could you let me know ............ Friday at the latest?
   a) by  b) to  c) up to  d) until

As outlined in Table 3, weekly treatments included an application phase of controlled exercises specifically designed for the treatment that required students to use particular prepositions. These sessions were administered in separate class hours, and no time limit was set for the participants to complete them. Immediately after each session, the teacher checked the exercise sheets, identified and corrected errors, and gave them back to the group receiving explicit WCF to examine their (corrected) errors. Then, he underlined/ specified the errors by the group receiving implicit WCF before giving their sheets back to
them, and requested them to revise and correct errors (self-correction). Finally, he indicated errors in the sheets of the control group that received no revision or correction. At the end of the semester, the three groups were delivered a post-test containing multiple choice items, a few of which are illustrated below.

2. Let’s meet ............... Wednesday?
   a) at   b) on   c) in   d) during

3. I met John ............. my friend’s party?
   a) in   b) to   c) for   d) at

4. The audience clapped ............ the end of the show.
   a) at   b) for   c) in   d) to

Their responses to the questions were evaluated by the researchers, and the results were administered to data analysis. The following section identifies data analysis procedure.

Data Analysis

In line with the research objectives, the obtained data were analysed via SPSS 15.0 statistical programme to see which type of WCF is more useful in teaching prepositions to adult EFL learners. The normality of test scores was measured through Skewness, and the independent t-test was utilized to compare pre-test and post-test scores of the three groups. It was chosen for data analysis since it is considered appropriate for identifying a statistically significant difference between two independent samples that satisfy conditions of normality and homogeneity of variance (Hinkle et al., 2003). Test scores were calculated for the groups separately. Subsequently, the paired samples t-test was conducted to pre- and post-test scores of the groups to see whether they significantly differ, which may be an indication of a development in its performance due to WCF. According to McKenzie (2014), a paired-samples t-test is appropriate for comparing the means of a group that was measured twice, or two separate groups that were matched on variables such as age and gender and are therefore related. Results obtained from data analysis are presented and discussed in the following section.

RESULTS & DISCUSSION

Initial analysis was conducted to measure of Skewness index that was applied to test the normality of test scores. Skewness index is used for the feature of normal distribution of test scores that obtained from a continuous variable. Based on the test results, it falls within the boundaries of normal distribution (Skewness ±1), which means there is not a significant deviation from a normal distribution. The pre-test and post-test scores of all groups showed normal distribution, as indicated in Table 4.

Table 4
Descriptive Statistics of t-Test Scores of Groups

<table>
<thead>
<tr>
<th>Groups</th>
<th>Test</th>
<th>N</th>
<th>Min.</th>
<th>Max.</th>
<th>̅X</th>
<th>sd</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explicit WCF</td>
<td>Pre-test</td>
<td>14</td>
<td>5</td>
<td>16</td>
<td>9,57</td>
<td>2,74</td>
<td>0,55</td>
</tr>
<tr>
<td></td>
<td>Post-test</td>
<td>14</td>
<td>6</td>
<td>17</td>
<td>11,79</td>
<td>3,42</td>
<td>-0,07</td>
</tr>
<tr>
<td>Implicit WCF</td>
<td>Pre-test</td>
<td>14</td>
<td>3</td>
<td>11</td>
<td>7,79</td>
<td>2,15</td>
<td>-0,70</td>
</tr>
<tr>
<td></td>
<td>Post-test</td>
<td>14</td>
<td>6</td>
<td>14</td>
<td>9,79</td>
<td>2,89</td>
<td>-0,06</td>
</tr>
<tr>
<td>Control Group</td>
<td>Pre-test</td>
<td>15</td>
<td>6</td>
<td>15</td>
<td>10,33</td>
<td>3,20</td>
<td>0,22</td>
</tr>
<tr>
<td></td>
<td>Post-test</td>
<td>15</td>
<td>6</td>
<td>17</td>
<td>11,33</td>
<td>2,58</td>
<td>0,24</td>
</tr>
</tbody>
</table>

As seen in Table 4, Skewness index was calculated 0.55 and -0.07 for pre-test and post-test scores of the treatment group, respectively that received explicit WCF. It was found 0.70 and -0.06, respectively for those of the group who was provided implicit WCF. Lastly, it was found 0.22 and 0.24 for the test scores of the control group who received no WCF. As the pre-test and post-test scores of the three groups showed normal distribution, the independent samples t-test and paired samples t-test analyses were used to compare these scores, and the related results are shown in Table 5.
Table 5

**Independent Samples t-Test Results of Pre-test Scores of Groups**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>$\bar{x}$</th>
<th>sd</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explicit WCF</td>
<td>14</td>
<td>9.57</td>
<td>2.74</td>
<td>1.92</td>
<td>0.066</td>
</tr>
<tr>
<td>Implicit WCF</td>
<td>14</td>
<td>7.79</td>
<td>2.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explicit WCF</td>
<td>14</td>
<td>9.57</td>
<td>2.74</td>
<td>-0.69</td>
<td>0.498</td>
</tr>
<tr>
<td>Control Group</td>
<td>15</td>
<td>10.33</td>
<td>3.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implicit WCF</td>
<td>14</td>
<td>7.79</td>
<td>2.15</td>
<td>-2.50</td>
<td>0.019*</td>
</tr>
<tr>
<td>Control Group</td>
<td>15</td>
<td>10.33</td>
<td>3.20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*(p<0.05)*

According to the independent t-test results, no statistical difference was indicated between the pre-test scores of the groups receiving explicit and implicit WCF (*p*>0.05). Similarly, no such significance was found between the pre-test results of the group receiving explicit WCF and the control group. When the pre-test scores of the group receiving implicit WCF and those of the control group were compared, a statistical difference was detected ($t=-2.50; *p*<0.05); namely, scores of the control group were calculated significantly higher than the group receiving implicit WCF. Although the difference seems in favour of the control group against the group receiving implicit WCF, the pre-test results alone are not an indicator of general performance of the groups without examining post-test results. The related results are displayed in Table 6.

Table 6

**Independent T-test results of Comparison of Post-test Scores of Groups**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>$\bar{x}$</th>
<th>sd</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explicit WCF</td>
<td>14</td>
<td>11.79</td>
<td>3.42</td>
<td>1.67</td>
<td>0.107</td>
</tr>
<tr>
<td>Implicit WCF</td>
<td>14</td>
<td>9.79</td>
<td>2.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explicit WCF</td>
<td>14</td>
<td>11.79</td>
<td>3.42</td>
<td>0.40</td>
<td>0.690</td>
</tr>
<tr>
<td>Control Group</td>
<td>15</td>
<td>11.33</td>
<td>2.58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implicit WCF</td>
<td>14</td>
<td>9.79</td>
<td>2.89</td>
<td>-1.52</td>
<td>0.139</td>
</tr>
<tr>
<td>Control Group</td>
<td>15</td>
<td>11.33</td>
<td>2.58</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As illustrated in Table 6, the independent samples t-test results for the post-test scores of the three groups revealed no significant difference among groups (*p*>0.05). The paired samples t-test was applied to pre and post-test scores of the groups to see whether CF practices have effect on their performances, especially on that of the experimental groups who received explicit and implicit WCF during the treatment period for four weeks, as illustrated in Table 7.

Table 7

**Paired Samples T-test Results of Pre-test and Post-tests of Groups**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>$\bar{x}$</th>
<th>sd</th>
<th>Sig.</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explicit WCF Group</td>
<td>14</td>
<td>9.57</td>
<td>2.74</td>
<td>2.21</td>
<td>-3.72</td>
<td>0.003*</td>
</tr>
<tr>
<td>Pre-test</td>
<td>14</td>
<td>11.79</td>
<td>3.42</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-test</td>
<td>14</td>
<td>11.79</td>
<td>3.42</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implicit WCF Group</td>
<td>14</td>
<td>7.79</td>
<td>2.15</td>
<td>2.00</td>
<td>-2.44</td>
<td>0.030*</td>
</tr>
<tr>
<td>Pre-test</td>
<td>14</td>
<td>9.79</td>
<td>2.89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-test</td>
<td>14</td>
<td>9.79</td>
<td>2.89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control Group</td>
<td>15</td>
<td>10.33</td>
<td>3.20</td>
<td>1.00</td>
<td>-1.41</td>
<td>0.181</td>
</tr>
<tr>
<td>Pre-test</td>
<td>15</td>
<td>11.33</td>
<td>2.58</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-test</td>
<td>15</td>
<td>11.33</td>
<td>2.58</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*(p<0.05)*

The paired samples t-test results for the pre- and post-tests scores of the groups revealed a significant difference in favour of the group that received explicit WCF ($t=-3.72; *p*<0.05). Namely, post-test scores of
the students in this group were calculated significantly higher (11.79±3.42) than their pre-test scores (9.57±2.74). Congruently, based on the paired samples t-test results, a significant difference was found between the pre-test and post-test scores of the group receiving implicit WCF (t=-2.44; p<0.05). Namely, their post-test scores (9.79±2.89) were significantly higher than pre-test scores (7.79±2.15). When the performance of the control group was analyzed via the paired samples t-test, no significant difference was detected between their pre- and post-test scores (p>0.05). The general performances of the three groups over pre- and post-tests are shown in Figure 1.

At the end of four weeks of experimental process, the experimental groups who received explicit and implicit WCF via controlled exercises of prepositions displayed statistically significant improvement in learning prepositions whereas no significant difference was found between pre- and post-test results of the control group that received no WFC.

CONCLUSION

Explicit and implicit WCF and their possible impact and/or possible difference were determined the route of this research. The research questions were responded based on the analysis of pre- and post-test results.

RQ 1. Do the students receiving WCF significantly differ from those who receive no WCF in learning EFL prepositions?

Pre- and post-test results of the treatment groups that received explicit and implicit WCF significantly differed whereas no significant difference was found between those of the control group. Thus, it can be interpreted that the treatment groups made more progress in learning English prepositions against the control group thanks to the effectiveness of WCF. These results conform to the ones previously reported in Von Benungen et al. (2008), Li (2010), Sheen (2010), Havranek (2002); Kirkgöz et al. (2015), and Alvira (2016).

RQ 2. Do the groups receiving explicit and implicit WCF significantly differ in learning EFL prepositions?

When the pre- and post-test results of the groups receiving WCF were compared, no significant difference was calculated between the group receiving explicit WCF and the one that received implicit WCF. That is, there is no statistical superiority of explicit and implicit WCF over each other. This finding is in line with Erel and Bulut (2007), and partly conflicts with Lalande (1982), Semke (1985), Robb et al. (1986), Ayoun (2001), Noroozizadeh (2009), Jawheer et al. (2010), and So (2011).

Certain practical implications might be addressed in the light of the findings elicited in this research. When taking into consideration the Noticing Hypothesis (Schmidt, 1990, p. 129), which proposes that some frequent forms in the target language are not acquired until they are consciously noticed by the learners,
WCF types are considered beneficial especially for foreign/second language learners providing them with the opportunity to notice their errors and inspiring courage and self-esteem in them to evaluate and correct their errors while processing the target language as long as they are carefully controlled and applied by the teachers. Likewise, this study has revealed that implicit and explicit WCF have similar influence on EFL learners’ performance; therefore, the teachers could be suggested to employ both types in their teaching to make learning more effective and permanent for their students. While doing so, they are recommended to consider suggestions by Tedick and de Gortiari (1998, p. 5) such as practicing of variety of feedback techniques and letting the learners self-correct. In addition, they might be suggested to provide CF by taking learners’ cognitive and psychological characteristics as well as course objectives into account. As posited by Ellis (2009: 14), they need to be able to implement a variety of oral and written CF strategies and to adapt the specific strategies they use to the particular learner they are correcting. Accordingly, he recommends to start with a relatively implicit form of correction (e.g., simply indicating that there is an error) and, to move to a more explicit form (e.g., a direct correction) if the learner fails to self-correct. Lastly, he suggests them to monitor the extent to which CF causes anxiety in learners and to adapt the strategies they use to ensure that anxiety facilitates rather than debilitates.

This research was limited to the participation of a specific number of EFL learners (late-elementary-pre-intermediate) in Turkey through a treatment in a certain period of time. For future research, it can be suggested that long-term effects of WCF can be examined with a larger number of participants in order to get more substantial and explanatory outcomes.

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