

# Effects of Asynchronous and Conventional Paper-and-Pen Metalinguistic Feedback on L2 Learners' Use of Verb Tense

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### Abstract

Although L2 researchers agree that written corrective feedback (WCF) improves L2 learners' grammatical accuracy, few systematic studies have investigated the effect of computer-mediated feedback on improving L2 learners' grammatical accuracy. This study was an attempt to investigate the comparative effects of two types of computer-mediated and conventional WCF (asynchronous paper-and-pen metalinguistic feedback on intermediate L2 learners' use of verb tense. The participants were 49 L2 learners chosen via convenience sampling whose ages ranged from 18-25. They were in three intact settings in Simin Institute in Tehran. They were assigned into three groups including two experimental groups and one control group. To measure the participants' knowledge of verb tense before treatment, a pretest was administered. In the next step, the experimental groups received metalinguistic feedback in separate settings whereas the control group did not receive any treatment. Finally, a posttest was used to measure the participants' knowledge of verb tense after the treatment. Though the ANOVA findings suggested that both types of WCF resulted in the improvement of the participants' verb tense accuracy, the effect of computer-mediated asynchronous feedback on the use of verb tense was more profound. In a conclusion, WCF had a significant effect on the verb tense accuracy of intermediate L2 learners.

*Keywords:* Asynchronous Feedback, Computer-Mediated Feedback, Grammatical Accuracy, Metalinguistic Feedback, Written Corrective Feedback

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### 1. Introduction

Written corrective feedback (WCF) in L2 teaching can be in the form of reinforcement or correction (Ellis, Sheen, Murakami, & Takashima, 2008). Over the last three decades, interest in WCF (e.g., Bitchener & Knoch, 2008; Bitchener, Young, & Cameron, 2005; Ferris, 2006, 2010; Sheen, 2007; Sheen, Wright, & Moldawa, 2009; Shintani & Ellis, 2014) has become pervasive in SLA, which is attributed to Truscott's (1996) controversial article about the ineffectiveness of WCF in L2 writing. Truscott (1996, 2007) argued that WCF does not lead to improved grammatical accuracy. As claimed by him, WCF is harmful because L2 learners may avoid using certain structures to avoid making errors.

In response to Truscott's claim (1996), Ferris (1999, 2002) maintained that providing L2 learners with WCF promotes L2 learning and scaffolds L2 learners to compensate for their limitations. Along with Ferris (1999, 2002), substantial amount of research (e.g., Bitchener & Knoch, 2008; Bitchener, Young, & Cameron, 2005; Chandler, 2003; Sheen, & Ellis, 2011; Sheen, Wright, & Moldawa, 2009; Shintani & Ellis, 2014) have provided evidence that WCF develops L2 learning process and leads to improvement in L2 learners' grammatical accuracy.

Although the efficacy of the different types of WCF is widely examined, few systematic attempts have been made to investigate the comparative effects metalinguistic feedback in different modes of communication on intermediate L2 learners' verb tense accuracy. Metalinguistic feedback was chosen to be investigated in the current study because of the salience of metalinguistic feedback to L2 learners; it explicitly provides L2 learners with the opportunity to diagnose their ungrammatical utterances. Furthermore, Iranian L2 learners prefer corrective feedback types that include explanations (i.e., metalinguistic feedback). This is probably rooted in the fact that "they receive a substantial amount of formal L2 grammar instruction" (Ferris, Liu, Sinha, & Senna, 2013, as cited in Hashemian & Farhang-Ju, 2018, p. 153).

As the computer-mediated communication has been suggested to affect L2 learning (Sachs & Suh, 2007; Sagarra, 2007; Sauro, 2009; Shintani, 2016; Yilmaz & Yuksel, 2011; Yilmaz, 2012), the present study intended to see whether this mode of communication mediates L2 learning. Asynchronous mode of communication was chosen in this study. Synchrotrons mode was not chosen because the internet speed is slow in Iran and Iranian students have limited access to the internet. Considering this, this study attempted to see whether the efficacy of metalinguistic is enhanced when using computer-mediated asynchronous and conventional paper-andpen metalinguistic feedback.

# 2. Literature Review

### **2.1. Corrective Feedback**

WCF is referred to a feedback given on errors in the use of L2. WCF aids L2 learners to greater mastery in the use of partially acquired L2 knowledge (Bitchener, 2009). As put by Suzuki (2004), WCF draws L2 learners' attention to erroneous utterances, which may result in their modified output. So, WCF is significance because it provides an opportunity for L2 learners to notice L2 features that have not yet been learnt or have been partially learnt (Long & Robinson, 1998).

L2 scholars (e.g., Chandler, 2003; Frear, 2012; Hashemnezhad & Mohammadnejad, 2012; Rahimi Domakani, Roohani, & Abdollahian; 2010) have investigated the efficacy of different types of direct feedback. For example, Hashemnezhad and Mohammadnejad (2012) investigated the efficacy of direct feedback on L2 learners during a 16-week study. Their results indicated that the effect of direct feedback was significant. In this regard, Chandler (2003) provided evidence that direct feedback resulted in a high gain of the mastery of L2 forms by helping L2 learners to internalize correct L2 forms.

Although such studies provided evidence for the positive effect of direct feedback, the long-term effect of such corrective feedback was found to be more profound. Frear (2012) conducted a study in the Taiwanese context to examine the efficacy of WCF for two grammatical structures: English regular verbs forms and irregular verb forms. The results indicated that both focused and unfocused direct feedback were beneficial for the L2 learners; however, only the focused direct feedback was found to be effective in the long-term. In another study, van Beuningen, De Jong, and Kuiken (2008) examined the effectiveness of direct corrective feedback. Their results indicated that direct feedback had a significant long-term effect on students' accuracy.

The abovementioned studies (e.g., Chandler, 2000; Hashemnezhad & Mohammadnejad, 2012) have been criticized for their limitations (i.e., the lack of a control group and a focus on text revision rather than a new piece of writing), which have made it difficult to reach a firm conclusion on whether WCF leads to improved grammatical accuracy over time (e.g., van Beuningen, 2010). Few studies (e.g., Bitchener & Ferris, 2012; Shintani & Ellis, 2013; van Beuningen, De Jong, & Kuiken, 2012) have examined the effect of WCF. The results of these studies indicated that WCF resulted in the development of grammatical accuracy of L2 learners.

Metalinguistic feedback, as an explicit type of WCF, refers to the provision of linguistic explanation about the nature of the errors made by L2

learners (Ellis, 2009). L2 scholars have provided solid evidence that metalinguistic explanation promotes the development of explicit knowledge (e.g., Rassaei, Moeinzadeh, & Youhannaee, 2012; Shintani & Ellis, 2013). In this sense, metalinguistic feedback is salient and noticeable to L2 learners because it explicitly provides them with the opportunity to diagnose their ungrammatical utterances. It is suggested that the role of saliency enhances the strength of the corrective function of metalinguistic feedback for L2 learners (Rassaei, 2015). In fact, metalinguistic feedback can scaffold L2 learners to notice the gap between their knowledge and the received metalinguistic feedback.

The growing interest in investigating the efficacy of metalinguistic feedback in recent years has led researchers to investigate the efficacy of such feedback (e.g., Sheen, 2007; Shintani & Ellis, 2013). However, a number of studies investigating the efficacy of metalinguistic feedback is relatively limited. Shintani and Ellis (2013) investigated the impacts of direct and metalinguistic feedback on the development of ESL learners' grammatical knowledge. Their results indicated that metalinguistic feedback was more effective than direct feedback in promoting L2 development.

In another study, the findings of Sheen (2007) indicated that the combination of metalinguistic feedback and direct feedback was more effective in developing the grammatical accuracy of L2 learners. Hashemian and Farhang-Ju (2018) investigated the differential effects of metalinguistic feedback on 52 Iranian L2 learners' grammatical accuracy (English indefinite and definite articles). Their findings indicated that the metalinguistic feedback significantly led to the learners' grammatical accuracy improvement in the experimental groups.

### 2.2. Asynchronous Corrective Feedback

Asynchronous corrective feedback is provided after students have completed a piece of writing. Specifically, the teacher provides feedback on completed computer-composed pieces of writing that students have submitted electronically. Although previous studies of corrective feedback were mostly conducted in conventional paper-and-pen mode, several studies investigated the effects of corrective feedback delivered through computer-mediated setting (e.g., Sachs & Suh, 2007; Sagarra, 2007; Sauro, 2009; Shintani, 2016; Yilmaz & Yuksel, 2011; Yilmaz, 2012). For example, Yilmaz and Yuksel (2011) examined the effects of recasts delivered through text-based CMC and traditional feedback. Their findings indicated that computer-delivered feedback was more effective than feedback provided in a normal communicative mode. Yilmaz (2012) also investigated the effects of implicit and explicit corrections in text-based computer-mediate setting and found more profound effects of explicit corrections over implicit feedback. In contrast, Sauro (2009) examined the effects of recasts and metalinguistic feedback during text chat on L2 development. The results indicated the short-term effects of metalinguistic feedback on L2 development whereas no long-term measurable gains were reported as a result of either feedback types.

The majority of studies on computer-mediated feedback in L2 writing have involved asynchronous feedback using a wiki (e.g., Castaneda & Cho, 2013; Lee, Cheung, Wong, & Lee, 2013; Li & Zhu, 2013; Wang, 2014). These studies focused on peer feedback in collaborative writing, and showed positive effects of drawing learners' attention to form during writing tasks on L2 development. However, few studies (Shintani, 2016; Ene & Upton; 2018) have investigated asynchronous WCF on L2 writing provided by teacher in a computer-mediated environment compared with a paper-and-pen writing activity.

In 2016, Shintani investigated the characteristics of computer-mediated synchronous corrective feedback and asynchronous corrective feedback, in an L2 writing task completed by two Japanese university students. The results indicated that 1) synchronous corrective feedback made an interactive writing process similar in some respects to oral corrective feedback, 2) both the synchronous corrective feedback and asynchronous corrective feedback promoted noticing-the-gap, but self-correction was more successful in the synchronous corrective feedback condition, 3) focus on meaning and form took place contiguously in the synchronous corrective feedback condition while it occurred separately in the asynchronous corrective feedback condition, and 4) both types of feedback facilitated metalinguistic understanding of the target feature, reflecting the unique features of writing.

In a newly published paper, Ene and Upton (2018) investigated the effectiveness of feedback in face-to-face and online ESL writing classes where feedback was offered asynchronously, as Word comments and track changes in electronic drafts as well as in synchronous text chats between teachers and students. Findings showed that corrective feedback was effective, and synchronous TEF effectively reinforced asynchronous corrective feedback.

Shintani and Aurby (2016) examined the relative effects of synchronous and asynchronous corrective feedback on the accurate use of the hypothetical conditional structure. Sixty-eight intermediate-level students of English at a university in Japan participated in their study. They were divided into different groups: two experimental and a comparison group. The 2 experimental groups received focused direct CF with the following differences: The synchronous corrective feedback group received synchronous feedback on grammatical errors during writing tasks, whereas the asynchronous corrective feedback learners received feedback after the tasks. The findings indicated that both experimental groups significantly benefited from the feedback.

In a recently published paper, Rassaei (2019) examined the effects of asynchronous text-based and audio-based corrective feedback along with the moderating effects of the learners' preferred perceptual style on the development of the English article system by Iranian EFL learners. His findings indicated asynchronous corrective (text-based and audio-based) was effective in the learners' L2 development. Finally, Tabatabaei, Khasseh Khan, Gavidelnia, and Ramzi (2017) investigated differential effects of computermediated and metalinguistic feedback on 69 advanced L2 learners' writing accuracy. Their participants received metalinguistic and computer-mediated feedback in different settings whereas those in the control group received no feedback. The analyses of the results proved that both types of feedback significantly influenced learners' writing accuracy. However, analysis of the participants' performances on the posttest demonstrated that metalinguistic outperformed computer-mediated one. Thus, group the effect of metalinguistic feedback was more than that of computer-mediated feedback.

As illustrated, very few attempts (e.g., Shintani, 2016; Yilmaz & Yuksel, 2011; Yilmaz, 2012) have been done to investigate the efficacy of computer-mediated WCF in improving L2 learners' grammatical accuracy. More specifically, no systematic attempt has been made to compare the efficacy of computer-mediated asynchronous and conventional paper-and-pen metalinguistic feedback in developing L2 learners' use of past tense. Thus, this study aimed to investigate the effects of metalinguistic feedback on the development of intermediate L2 learners' verb tense accuracy in conventional and asynchronous settings. Accordingly, the following research questions were investigated:

- 1. Do computer-mediated asynchronous and conventional paper-and-pen metalinguistic feedback promote the development of intermediate L2 learners' verb tense accuracy?
- 2. Is there any significant difference in the effects of computer-mediated asynchronous and conventional paper-and-pen metalinguistic feedback on the development of intermediate L2 learners' verb tense accuracy?

# 3. Method

# 3.1. Participants

The participants were 49 L2 learners chosen via convenience sampling whose ages ranged from 18-25 (M = 23.75). They were in three intact settings in Simin language institute in Tehran. Their level of proficiency had been previously determined by the internal proficiency tests designed and conducted in the institute in which they were studying. Based on the results of English Placement test (Cambridge University Press 2010), administered by Simin Language institute, they were at intermediate level. They attended English classes for two sessions per week, each for an hour and a half during a semester

The participants were randomly assigned into three groups: A conventional paper-and-pen group (n = 18), an asynchronous group (n = 16), and a control group (n = 15). Names and personal information of the participants were strictly confidential and were not disclosed anywhere in the work. Before commencing the study, in order to minimize any misunderstanding pertained to the study throughout the research, the participants and their parents were informed about the study. This was in line with the ethical issues.

# 3.2. Instruments

The instruments included writing tasks, a pretest, and a posttest to measure the participants' use of verb tense as a result of computer-mediated asynchronous and conventional paper-and-pen metalinguistic feedback. Writing tasks for the treatment, pretest, and posttest sessions were chosen from the PET (Cambridge ESOL Examinations, 2015). Cambridge ESOL is a member of the Association of Language Testers in Europe. The members are all providers of language examinations and certificates from countries within Europe. Hence, it is among valid and reliable tests.

Furthermore, the PET focuses on level B1 of the Common European Framework of Reference for Languages (CEFR), which indicates the intermediate level of English proficiency. This is the reason for choosing the PET in the current study. Choosing the PET test (Part 2) was further motivated by the fact that this type of writing test pushes L2 learners to use past tense. The test was the same for all learners in the three groups.

The PET writing test (Part 2) chosen for the writing tasks for the treatment, pretest, and posttest sessions was a similar type of an informal letter which varied in content but which nevertheless provided participants with the opportunity to use the targeted linguistic forms. Eight writing tasks were used for the treatment sessions. One task, for example, asked participants to write a letter to a friend who they spent their weekends with.

Such a writing task was chosen because it elicits the desired target form (simple past) in the current study. They were given 40 minutes to compose the writing task. Attempts were made to choose topics of equal difficulty for the testing occasions.

### 3.3. Target Structure

To date, most of the corrective feedback studies (e.g., Sheen, 2007, 2008; Sheen, & Ellis, 2011) have focused on functions of the English article. Few WCF studies have targeted other linguistic error domains and categories (e.g., Benson & Dekeyser, 2018). The current research, therefore, aimed to examine the effectiveness of metalinguistic feedback in different modes of communication (conventional paper-and-pen vs. computer-based) on errors with verb tenses: simple past. Such errors are often persistent regardless of the learners' L1 and proficiency level (Shintani, 2016). Comprehending the semantics of where the past tense ends or begins is particularly tricky for L2 students (Celce-Murcia & Larsen- Freeman, 1999). Furthermore, the irregular form of past tense can be more problematic to Iranian L2 learners as Persian language does not have such a rule.

### 3.4. Procedure

The study was conducted over 12 weeks. First, the participants filled a demography form in order to elicit their background information (i.e., age, L1). Demographic information such as L1 is important in designing CF studies as each language has its own unique grammatical structure. If not controlled, this might affect the results as the focus of this study was on providing CF on grammatical errors of the learners. The participants were assigned into the three groups: conventional, asynchronous, and control. Then, the pretest was administered. One week later, the treatment sessions started.

Eight writing tasks were used for the treatment sessions (i.e., conventional paper-and-pen and asynchronous feedback). Two highly proficient and experienced L2 teachers were invited to correct the participants' errors during the treatment sessions. The instructions were given to the teachers as to how to provide computer-mediated asynchronous and conventional paper-and-pen metalinguistic feedback in response to the participants' errors. The participants were supposed to write a letter in each treatment session. As for the conventional paper-and-pen metalinguistic feedback, the L2 learners need to work out the correction based on the instructor's comment. Following is an example of writing tasks; the students were supposed to write about a week holiday spent at their friend's home, Sam. They were supposed to tell Sam about their journey back to their home

and what they enjoyed most about their stay. The explanation given in the brackets was given above the errors:

Extract 1

My friend, sam. First of all, I should say you are a very good friend. Because when I arrived, you came to airport to help me, and you <u>show</u> [wrong tense. use past tense. You should add ed to end of verb] me beautiful places in London, you even <u>introducing</u> [wrong tense. use past tense. You should add ed to end of verb] me to your family. I <u>know</u> [wrong tense. use past tense\_irregular] you were a good chef, food was perfect. Thanks. but when you asked me come your house, I was not sure. I preferred to go to restaurant you showed me.

As for the asynchronous group, Microsoft Word Office (2013) was used to provide computer mediated feedback. Microsoft comment feature was used to help the participants diagnose their erroneous utterances:



Two weeks after the last treatment session, the participants were posttested. Each piece of writing was corrected by the teachers for all the groups. Pretest and posttest were scored twice by the teachers. The writing tasks were scored by dividing the correct use of the simple past on the obligatory use of simple past and the number of the errors made by the participants.

As for the participants of control group, they took the pretest. Then, they were required to write an informal letter like the experimental group participants; however, they did not receive any corrective feedback. They were taking the posttest two weeks after the last treatment session. The average number of words produced by all the participants of the three groups in each testing session was as follows: 105 in the pretest and 117 in the posttest.

### 3.5. Data Analysis

To address the research questions, a number of statistical analyses were performed. Descriptive statistics were estimated for the pretest and the posttest. A one-way ANOVA was also run for the pretest scores to compare the participants' scores before the treatment. Moreover, to answer the first research question, a mixed between-within ANOVA was conducted to examine the effect of the direct and metalinguistic feedback on the participants' writing grammatical accuracy. Post-hoc was performed to examine the differences, if any, between the experimental groups.

#### 4. Results and Discussion

#### 4.1. Results

In the first step, descriptive statistics were run to gain an overall view of data. The summary of the descriptive statistics of the pretest and posttest scores for the three groups are illustrated in Table 1:

Table 1

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Deceminations	an the	Dauticinau	tal Duatant	andI	Dogttogt	Convor
Describilive	on the	Participan	us preiesi	ana r	osuesi	Scores
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Variable	N	M	SD	
Pretest	18	48.28	7.25	
Posttest	18	51.00	6.93	
Pretest	16	47.56	8.17	
Posttest	16	54.50	5.48	
Pretest	15	47.20	7.74	
Posttest	15	46.40	6.23	
	Variable Pretest Posttest Pretest Pretest Pretest Posttest	VariableNPretest18Posttest18Pretest16Posttest16Pretest15Posttest15	Variable N M   Pretest 18 48.28   Posttest 18 51.00   Pretest 16 47.56   Posttest 16 54.50   Pretest 15 47.20   Posttest 15 46.40	VariableNMSDPretest1848.287.25Posttest1851.006.93Pretest1647.568.17Posttest1654.505.48Pretest1547.207.74Posttest1546.406.23

ANOVA was performed on the participants' pretest scores to assure the homogeneity of their pretest scores. The ANOVA results on the pretest scores indicated that there were no statistically significant differences between the experimental and control groups' pretest scores (F[2,64] = 49, p = .61).

To address the first research question and to examine the efficacy of treatment (asynchronies and conventional paper-and-pen metalinguistic feedback) in promoting the development of the participants' grammatical accuracy, a two-way ANOVA was performed on their scores (see Table 2). A statistically significant effect was found for time (F[1,46] = 93.48, p < .001), WCF (F[2,46] = 5.02, p < .05), and the interaction effect between time and WCF (F[2,46] = 32.13, p < .001):

Table 2

Two-way ANOVA Results for the Writing Task

Factor	df	Error	F	Sig.	Partial Eta Squared
Time	1	46	93.48	<i>p</i> < .001	.21
Group	2	46	5.02	<i>p</i> < .05	.38
Time*group	2	46	32.13	<i>p</i> < .001	.24

This implies that participants in the experimental groups benefited from the treatment, whereas the grammatical accuracy of the control group did not improve over time. Post-hoc comparisons were, further, performed on the participants' posttest scores. The results indicated that the participants who had received asynchronous feedback outperformed those in the conventional group. The group differences are presented in Table 3:

#### Table 3

(I) Group	(J) Group	Mean Difference (I-J)	Sig.
Commentional	Control Group	$3.600^{*}$	.021
Conventional	Asynchronous	-3.500*	.023
Asynchronous	Conventional	3.500*	.023
Asynchionous	Control Group	$7.100^{*}$	.000

Post-Hoc Results on the Participants' Posttest Scores

#### 4.2. Discussion

This study examined the effect of one type of WCF (metalinguistic feedback) in different settings (conventional and asynchronous) on the intermediate L2 learners' use of verb tense. Whereas the results suggested that computer-mediated asynchronous and conventional paper-and-pen metalinguistic feedback were effective in promoting the participants' use of verb tense, the effect of the asynchronous metalinguistic feedback was found to be more profound on the participants' use of verb tense.

The findings of current study indicated that learners' verb tense use improved from pretest to posttest (Two different writing tasks were used as the pretest and posttest). Concerning WCF, the findings of the current study lends support to a number of corrective feedback studies (e.g., Sheen, 2007; Shintani & Ellis, 2013) that indicated focused metalinguistic feedback leads to L2 grammatical accuracy to write more grammatically accurate essays.

The positive effect of metalinguistic feedback can be explained by the view that attention mediates between input and intake (Macky, 2006). In fact, the metalinguistic information and explanation given by the instructor must have made them attend L2 forms and notice the difference between their own erroneous structures and correct L2 forms. When grammatical explanation of correct L2 forms of past tense were juxtaposed with the participants' non-target like ones, the gap was further highlighted for the participants.

Another reason for the significant effects of metalinguistic feedback is its explicit characteristics that can attract learners' attention effectively. In comparison with other types of WCF as metalinguistic feedback needs around six words or more. Perhaps, this aids L2 learners to successfully correct their errors following the feedback. This can also be justified based on trade-off hypothesis in that L2 learners have limited attentional capacity. Thus, there is an inevitable competition between content and L2 forms among L2 learners (Révész, 2011). Therefore, when they were provided with the explanation, they could rely on their resources as for the content rather than form. This, accordingly, has influenced the participants' grammatical accuracy and use of past tense.

Furthermore, metalinguistic feedback provides L2 learners with enough information and allows them to understand what is wrong with their incorrect utterance. Therefore, it has the greatest effects. Moreover, it can be argued that the efficacy of feedback depends on leaners' expectations of an instructional program. If learners expect an instructional program to focus on grammar and accuracy, they are more likely to interpret L2 teachers' interventions as feedback on their errors. In fact, this is a case with most of L2 teaching programs in Iran. Therefore, another explanation for the findings of the current study is that the participants of this study preferred accuracy and teacher's corrective feedback. Based on the aforementioned reasons, one might offer the L2 learners in Iran perceive metalinguistic feedback as overtly corrective. Hence, it assisted them to promote their grammatical accuracy.

The results of this study further indicated that asynchronous feedback affected the participants' verb tense accuracy more significantly than conventional paper-and-pen feedback. The results are consistent with previous research (e.g., Rassaei, 2019; Shintani, 2016). The findings of this study with respect to the second research question could plausibly be justified that most L2 learners spend lots of time making use of their computers. Consequently, the tasks on their computers might have probably encouraged them to read and review the grammatical explanation on a quite regular basis. This can be verified by the fact that on the posttest, the experimental group's participants who received asynchronous feedback outperformed the participants in the conventional paper-and-pen metalinguistic feedback. Hence, with respect to the findings of the second research question, it can further be argued that in order for L2 learners to put much time and effort to benefit from WCF, they must be accountable for their own learning. In fact, the teaching method should aim at encouraging L2 learners to study and review the given feedback on a more regular and systematic basis and take advantage of L2 learners' object of interest, for instance, computed-mediated learning.

Furthermore, asynchronous feedback is believed to lead to L2 development because, compared to the feedback provided in real communication, it provides learners with planning time opportunities (Sauro, 2009). Also, the technology-based nature of feedback increases its saliency. Accordingly, asynchronous metalinguistic feedback facilitates cognitive

comparison which is essential for learning. Furthermore, it is less demanding on working memory due to their untimed nature.

Another explanation for the results obtained for the second question is that using computers may have positively impacted the participants' performance because of the user-friendly facilities available in computers. Most of the students prefer to receive online corrective feedback as their assignments will not be lost. This study further highlights the importance of focused feedback that is in line with number of studies proving the focused feedback is more effective in developing L2 learners' needs (Shinati, 2016; Shintani & Aurby, 2016). As with Elola and Oskoz (2016), it is probable that the high amount of uptake as results of corrective feedback in this study is because the corrective feedback was appropriate for the students' level. In the same vein, the current study provided further evidence that L2 learners benefit from focused WCF.

### 5. Conclusion and Implications

The present study found that the type of corrective feedback provided had a significant effect on the participants' grammatical accuracy. The provision of WCF resulted in a positively greater grammatical accuracy by the participants, though their gains, as a result of the computer-mediated asynchronous and conventional paper-and-pen metalinguistic feedback, were different. The findings of this study seems to provide further support that computer-mediated instruction is a critical factor in development of grammatical accuracy of L2 learners' verb tense use. Also, a crucial issue might be for L2 researchers and teachers to investigate the effect of different types of corrective feedback and identify factors like L2 learning context (i.e., EFL and ESL) and commuted-based setting. Future research may provide more evidence for the efficacy of WCF by making a comparison between L2 learners' gains as a result of WCF in different contexts.

The findings of this study have implications for both L2 teachers and learners. First, the results may help L2 teachers to use more appropriate WCF types that match their learners' needs. Another pedagogical implication is that the provision of WCF should be consistently applied for L2 grammatical features. However, WCF types need to be matched with L2 learners' factors (e.g., L1). Moreover, the findings were that the metalinguistic feedback provided in computer-mediated setting to the participants proved to be more effective for the development of verb tense use. Therefore, the findings indicate to the importance of providing computer-mediate instruction for L2 learners. In a nutshell, the findings that the WCF suggest that WCF is valuable in improving L2 learners' use of verb tense. Therefore, L2 teachers can help their learners to improve their grammatical accuracy by utilizing

WCF. In particular, L2 teachers should consider utilizing focused WCF, as the results of the current study suggest to be effective for the intermediate participants.

Although attempts were made to eliminate potential flaws, there were inevitably some limitations that should be taken into account while conducting further research. One of the limitations to consider was the number of the WCF sessions provided. So, we suggest that future studies conduct a longitudinal study. The main focus of this study was on the past tense. In adopting this focus, attempts were made to measure the grammatical accuracy of a specific problematic linguistic area for L2 learners. However, further research is needed to investigate the extent to which the findings of this study apply to other L2 error categories. Further research might also find it useful to investigate whether instrument differences (e.g., different writing genre tasks) have similar or different effects on grammatical accuracy. The sample focus in further research can also be extended to include L2 learners from other L1 and ethnic backgrounds and other proficiency levels of English. Moreover, this study measured accuracy retention over a limited amount of time, but further research should extend this scope to include several additional posttests over a longer period of time so that the ultimate value of WCF for L2 development and learning can be determined. Ultimately, the study indicates that significant improvements in writing accuracy might result from the provision of computer-mediated asynchronous and conventional paper-and-pen metalinguistic feedback.

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