



Learners' Grammar Achievement via Oral and Writing Modalities in Cognitive and Ecological Perspectives: Recast in Focus

Afrooz Arianfar¹, Parviz Maftoon*², Ghafour Rezaie³

^{1, 2} Department of English, Science and Research Branch, Islamic Azad University, Tehran, Iran

³ Department of English, Garmsar Branch, Islamic Azad University, Garmsar, Iran

*Corresponding author: pmaftoon@srbiau.ac.ir

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Abstract

Language learners receive different types of corrective feedback during the process of second language acquisition. Recast, as an approach to corrective feedback, is one of the most-frequently error correction techniques in classroom contexts. A plethora of research has addressed recast; however, the present study focused on comparing learners' grammar achievement via oral and writing modalities through two perspectives, cognitive and ecological, who received recast. One hundred and twenty language learners, all first-year college students at Islamic Azad University and Applied Science University in Tehran participated in this study. They were assigned to four groups. The participants in all groups were exposed to different instructional programs based on the cognitive and ecological perspectives to language learning orally or in writing, and all learners received recast orally. Results obtained by a pretest and a posttest indicated that all groups made progress in their grammar achievement, while there was a statistically significant difference between the groups in the posttest. The participants in the ecological group had higher gains of grammatical structures than those in the cognitive group. However, data analysis revealed that there was no statistically significant difference between two oral and writing groups in their grammar achievement.

Keywords: cognitive perspective to language learning, ecological perspective to language learning, grammar achievement, modality, recast

Introduction

Despite the agreement on the importance of teaching and learning grammar among scholars, there is disagreement on the way grammar should be taught. A cursory look at literature reveals that grammar teaching has gone through changes during the past years. It started from teaching grammar explicitly and later moved to more implicit methods (Ellis, 2007; Long, 2015). Therefore, the power of corrective feedback (CF) in improving teaching and learning in English as a foreign language (EFL) classes is undisputable.

CF refers to utterances that inform language learners their output is unacceptable in some way. Lyster and Ranta (1997) identified six different types of CF, classified into two categories: reformulations and prompts. Based on this categorization, recast and explicit correction are considered as reformulation since both supply learners with target reformulations of their non-target output. They further maintained that prompts include a variety of signals (i.e., elicitation, metalinguistic clues, clarification requests, and repetition) that push learners to self-repair. Many studies have examined different types of CF and the extent to which feedback has been effective (Al-Surmi, 2012; Banaruee & Askari, 2016; Banaruee, Khatin-Zadeh, & Ruegg, 2018; Choi & Li, 2012; Lee's, 2013; Li, 2010; Maleki & Eslami, 2013; Panova & Lyster, 2002; Rassaei, 2013; Ruegg, 2010; Tsang, 2004; Varnosfadrani & Basturkmen, 2009). They all found CF conducive in learning the second language.

Recast, as one of the techniques of CF that is frequently used by language teachers, has been greatly explored in most CF research studies (Goo, 2020). Recast, as Lyster and Ranta (1997) asserted, refers to "the teacher's reformulation of all or part of a student's utterance minus the error" (p. 46). Furthermore, Long (2007) added that recast is the replacement of the target language form with the erroneous utterance without interrupting communication between interlocutors. In other words, for Long, focus of recast through the exchange of information is on meaning, rather than the language form. In a similar vein, Sheen (2006) thought of recast as the teacher's reformulation of the student's utterance within the context of communication. What is evident is that recast, from Lyster and Ranta's (1997) point of view, focuses on the structure of language; however, Long

(2007) and Sheen (2006) maintained that recast puts the emphasis on the meaning of the message.

Recast, as Sheen (2004) stated, is effective in SLA since it constitutes about 60 percent of CF in the context of second language acquisition (SLA). One reason might be due to the claims that children repeat parents' recast during their first language acquisition. Gass and Lewis (2007) asserted that CF allows learners to notice the target-like utterances and modify their ungrammatical structures. Furthermore, Long (1996) and Long and Robinson (1998) unlike Ellis (2007) and Sheen (2007) who thought recast is ambiguous because learners do not distinguish them from non-corrective repetitions, maintained that recast helps learners notice the gap between their utterances and the target forms. Moreover, Loewen and Sato (2018) in support of some researchers (Goo & Mackey, 2013; Long, 1996, 2007, 2015; Lyster, Saito, & Sato, 2013) argued that recast is an appropriate type of implicit feedback on the grounds that it does not interrupt the flow of learners' communication.

The next advantage is that recast provides the correct form of the language after the learner's erroneous statement. Because of that, Goo and Mackey (2013) and Lyster and Ranta (2013) referred to recast as an input-providing feedback, indicating to learners the correct form of linguistic utterance. Long (2007) and Goo and Mackey's (2013) investigations illustrated the superiority of input-providing to other output-prompting feedbacks. Output-prompting feedback does not provide the learner with the correct; rather, it attempts to elicit the correct form from the learner. Accordingly, a wide range of previous research has shown a general positive effect of recast on language learning and confirmed that recast facilitates language learning (Braidı, 2002; Ellis & Sheen, 2006; Gass & Lewis, 2007; Han, 2002; Iwashita, 2003; Leeman, 2003; Mackey, Gass, & McDonough, 2000; Mackey & Philp, 1998; Nabei & Swain, 2002; Nicholas, Lightbown, & Spada, 2001; Oliver & Mackey, 2003; Philp, 2003).

Numerous studies have emphasized the role of internal factors (e.g., age, gender, motivation, personality traits, ...) and external factors (e.g., task types, language proficiency level, type of instruction, ...) in learning through recast (Ammar & Spada, 2006; Ghahari & Piruznejad, 2016;

Leeman, 2003; Li, 2010; Lyster & Saito, 2010; Sheen, 2010; Oliver & Mackey, 2003). These studies, generally, confirmed Lyster and Rantas' (1997) findings that recast is conducive to language learning. However, they emphasized that the extent to which recasts bear the expected results may partly be determined by some other factors. More specifically, recast may lead to different results in cognitive perspective to language learning (CPLL) and the ecological perspective to language learning (EPLL) as two different approaches to language learning.

Under the spectrum of CPLL, input hypothesis, interaction hypothesis, noticing hypothesis, and output hypothesis are involved in the process of changing input and intake to output (Leow, 2015). From the perspective of input hypothesis, Krashen (1981) believed that "comprehensible input serving as positive evidence is sufficient to acquire a second language" (p. 160). In other words, input hypothesis was based on the proposition that input contributes to language learning, not the CF.

Considering comprehensible speech as what learners need to develop, Long's (1991) interaction hypothesis asserted that recast could be conducive to make learners interact with each other and have meaningful negotiations. Long (2007) claimed that recast could be considered as a helpful strategy used by learners to focus attention both on form and meaning. To Long (1996), second language (L2) interaction facilitates learning because while focusing on communication, learners can receive feedback and receive opportunities to make use of that feedback by modifying their output.

On the contrary, considering noticing hypothesis, Schmidt (1990) believed that "noticing is the necessary and sufficient condition for converting input into intake" (p. 139). He defined noticing as "conscious registration of the occurrence of some event" (p. 29). Noticing from Schmidt's viewpoint was the first stage of learning without which nothing would be learned. As Leow (2015) stated, noticing hypothesis went further than interaction hypothesis. He claimed that learners may pay attention to input, but it does not mean that they notice it. Put another way, noticing leads to language learning. To Smitch (2012), CF could raise learners' awareness and help them to notice the gap between target language forms and their interlanguage forms.

Swain's (1995) output hypothesis was another theory of second language learning. She believed that output is the crucial element for the acquisition

of L2. Lightbown and Spada (1999), in agreement with Swain's (1995) claim, stated that output help learners have more negotiations to express their ideas and thoughts. Swain further argued that CF provides learners with opportunities to negotiate meaning and clarify their thoughts to arrive at mutual understanding. It seems that CF give learners more chances to negotiate and self-repair.

However, CPLL has been criticized due to its narrow view toward language learning. Donato (2000) believed that theories of such approaches ignore the role of interaction in SLA. To better appreciate the concept of recast, Van Lier's (1996) point of view could be investigated as a more comprehensive perspective to language learning to determine whether recast is more effective in EPLL.

Considering EPLL, Van Lier (1996) asserted that language is ecological. By ecological he meant language is perceptual, emergent, and action-based which are central to language learning. In fact, based on his claim, emergence happens when learners are involved in meaningful language activities in an environment. Therefore, he referred to language engagement in order to show that the process of understanding and learning L2 requires one to engage in activities. Furthermore, as Van Lier (2004) put forth, interaction is another important notion for language learning, and learners should be engaged in verbal and non-verbal interactions to acquire language.

Regarding the important role of interaction in SLA, many researchers have expanded a considerable effort to investigating the impact of interaction on language development, attention, noticing, and awareness (e.g., Gass & Alvarez Torres, 2005; Mackey, 2006; Mackey et al., 2000; Philp, 2003; Philp & Iwashita, 2013; Sagarra & Abbuhl, 2013). Van Lier (1996), inclined toward the Vygostkyan sociocultural theory, referred to the updated version of Long's (1996) interaction hypothesis by emphasizing the role of negotiation for meaning which results to input comprehensibility, enhanced attention, and acceptable output. However, Van Lier claimed that EPLL is more comprehensive than cognitive theories of language learning. He stated that the ecological theory covers all the theories of CPLL plus the management of the environment. To Van Lier (2004), real conversation-

based projects in EPLL are more effective as learners have meaningful negotiations with their peers and their teacher, which, consequently, result in more attention, repairs, and self-experiences.

Unlike CPLL, in EPLL learning depends not just on linguistic data, but also on all semiotic clues around the learner. In fact, Van Lier referred to affordances as things environment makes available to learners. Affordance, together with interaction and emergence, is among the basic concepts in EPLL. In other words, in this perspective, the learner is one who explores all direct and indirect information around him to process environmental data to perceive.

To sum up, EPLL never rejects the theories of CPLL; rather it believes that language learning contains all cognitive processes in accompaniment with social processes. In other words, language emerges when all cognitive processes are contextualized in SLA contexts. Some scholars, for example, Johnson, (2004), who supported Van Lier's (1996) outlook proposed that authentic social context, not the artificial ones, is required for SLA.

Recast is generally regarded as one of the most common types of CF used in the context of language learning (Han, 2002; Mackey & Philp, 1998). Although recast has been found beneficial to L2 learning, the primary concern is how recast can be more effective in the context of SLA, which is an area for further research. The learning condition under which exposure to L2 takes place would be one way to increase the effectiveness of recast. For instance, Sheen (2004) explored the context of the foreign language classroom as one of the leading factors and found that instructional setting plays an important role in learners' noticing. Meanwhile, different linguistic approaches to language, such as CPLL and EPLL, may provide different pathways to present the language to learners and lead to different results.

To provide better pedagogical implications for L2 practitioners and researchers, it is important to have an accurate picture of how recast would be effective across different instructional approaches to language learning. Therefore, in this paper, two different learning approaches to language learning, CPLL and EPLL, are adopted to investigate the effectiveness of recast on learners' grammatical achievement within these two perspectives.

In terms of oral vs. writing modalities, there has been a corpus of research emphasizing its importance in language learning (Gilabert, Manch'on, &

Vasylets, 2016; Grabowski, 2010; Kellogg, 2007; Kormos, 2014; Williams, 2012; Zalbidea, 2017, Zeigler, 2016). Some researchers have proposed the advantages of writing modality in enhancing learners' noticing and their L2 development (Beauvois, 1992; Sauro & Smith, 2010; Smith & Sauro, 2009). Besides, some other studies found oral modality more effective in impoverishing linguistic production (Rouhshad & Storch, 2016; Sagarra & Abbuhl, 2013; Zalbidea & Sanz, 2020). For example, Zalbidea and Sanz (2020) examined the contributions of learners' executive, phonological, and visuospatial working memory (WM) skills to learners' L2 grammar outcomes in two oral and writing task-based instruction. The results showed that WM skills are predictive of L2 achievement and task performance in the oral modality, but not in the writing modality. However, Zeigler (2016) compared the effects of modality on interaction in oral and writing modalities in terms of L2 development test scores. The results did not reveal statistical differences between modalities. He concluded that mode of communication has no impact on language development.

A number of the studies, done in this regard, have found the differential levels of WM involvement; yet little attention has been dedicated to investigating how recast may impact learners' grammatical achievement from oral and writing task practice.

Therefore, the present study intends to investigate the impact of recast on learners' grammar achievement across CPLL and EPLL via oral and writing modalities. Thus, the following research questions were posited:

RQ1. Is there any statistically significant difference between learners' grammar achievement across the cognitive and ecological groups who received recast?

RQ2. Is there any statistically significant difference between learners' grammar achievement across oral and writing groups who received recast?

Method

Participants

The participants were 120 intermediate EFL students, majoring in English language translation. They were in eight classes, in each 15 participants took part at Islamic Azad University and Applied Science University in Tehran,

Iran. The participants consisted of both female and male and their age mean was 20 years. They were randomly assigned to four groups as follows: oral cognitive perspective group (OCPG), writing cognitive perspective group (WCPG), oral ecological perspective group (OEPG), and writing ecological perspective group (WEPG).

Instruments

Oxford Placement Test (OPT) was administered to determine the participants' homogeneity in terms of their language proficiency. As regards to psychometric characteristics of OPT, according to Soltani Tehrani and Tabatabaei (2012), the test is a quite valid instrument for language-related research purposes. The reliability and the item characteristics of the test were determined through a pilot study, the Cronbach's Alpha coefficient was found to be 0.76. For both the pretest and posttest, a grammar test (see Appendix A) designed by the researchers was used. It examined students' grammatical knowledge including forty items (i.e., fifteen items for three causative constructions, fifteen items for three types of conditional sentences, and ten items for two types of wish sentences). These target structures were selected due to the fact that they were among upper-intermediate areas, and the participants had not studied the target structures before. The pretest was administered to reassure that the participants had no familiarity with these structures. As far as validity is concerned, the grammar test was validated in the piloting phase of the study. The KR-21 measure yielded reliability indices of 0.81 for the grammar test.

Procedure

The study was conducted during a term of ten forty-five-minute sessions. The treatment started one week after the pretest, and participants in all four groups were exposed to an instructional program based on their grouping. The first author of the present article served as the classroom teacher. Following CPLL, the participants in OCPG, received explicit teaching for each structure as exemplified in the following:

T: Do you paint your house?

S: No, I don't.

T: Who does that for you?

S: The painter does.

Then,

T: You don't paint your house.

*T: You **have the painter paint** your house.*

Next, the teacher wrote on the board:

Have Someone Do Something

I + have (had/ will have) + the painter + paint my house.

In the second phase, the participants were encouraged to answer 20 respective oral communicative questions individually like the following example.

T: Do you repair your own refrigerator?

S: No, I don't.

T: Who does that for you?

S: I have the repairperson repair my refrigerator.

The participants received recast on their errors in this phase by reformulation of the students' answers.

The participants in WCPG, at first, received explicit explanation of the target structures. Then, they were asked to accomplish 20 writing tasks for each structure and carried out the tasks individually. The following is an example carried out:

Change the sentences so that they use the structure 'have someone do something'.

- *The cleaner cleaned the house. (have) : I have the cleaner clean the house.*
- *The taxi driver took us to the airport.*

The teacher supplied recast on the students' erroneous utterances.

The participants in the EPG were taught the same structures as those in OPG. However, the treatment in the EPG was different. In the first part of the class, some project-based tasks were introduced to the learners. The participants did not have any explicit explanations of the target structures. Instead, they had to do the tasks with the use of affordances available in class via the computer, the internet, dictionaries, pictures, graphs, games, video clips, and guide books. The participants in these groups had access to these facilities in their classes in order to carry out their projects.

In OEPG, the participants were required to accomplish a project orally in their groups like the following example. They had to carry out the tasks with

the help of affordances available in the class. As the participants were monitored by the teacher, they were supposed to find out the patterns of the target structures and complete the tasks. While their responses were being checked, the learners received recast.

Find which grammatical structures are used to express the following items in English. Make a conversation with your friend and ask him/her who does the following services for him/her. Use causative verb have.

- *Fix car*
- *Design building*
- *Cut hair*

The participants in the WEPG, like OEPG did not have any explicit instruction. At the beginning of each session, the participants were given a writing project for each structure like the following example:

*You are in a very cold day in winter. You have an appointment with your friend, but she is late. She is late because she couldn't have her car started in the morning. Check the following parts of the car. Use **have** causative verbs for your suggestions.*

- *Radiator/ fill with anti freeze*
- *Brakes/ test*
- *Battery/ check*

They had access to all the resources as mentioned for OEPG. Monitoring the learners during the treatment, the teacher corrected participants' erroneous utterances with recast.

Results

In order to answer the first research question, an independent t-test was utilized to determine whether the learners' grammar achievement in the CPG and EPG who received recast irrespective of the modality is statistically different. As Table 1 shows, the mean scores of pretest in both CPG (M= 4.80) and EPG (M = 4.69) are very close, indicating that they were not different. Examining the mean column of Table 1 indicated that the mean score of the participants in the EPG (M= 18.18) was higher than that (M=15.77) in the CPG. This implies that recast given to the EPG group was more effective in promoting learners' grammar achievement.

Table 1
Descriptive Statistics in the CPG and EPG

		N	Mean	Std. Deviation	Std. Error Mean
Pretest	Cognitive	70	4.80	3.242	.387
	Ecological	80	4.69	2.867	.320
Posttest	Cognitive	70	15.77	5.443	.651
	Ecological	80	18.18	6.627	.741

The significance of the difference was examined through an independent samples t-test whose results are presented in Table 2. The difference on the grammar achievement for the participants in the CPG and EPG was statically significant, $t(148)=-2.406$ $p=.017$.

Table 2
Independent T-Test Results in the CPG and EPG

	Levene's Test for t-test for Equality of Means								
	Equality of Variances		T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
F	Sig.	Lower						Upper	
Equal Variances	3.616	.059	-2.406	148	.017	-2.404	0.999	-4.378	-.429
Posttest Equal Variances not assumed			-2.438	147.435	.016	-2.404	.986	-4.352	-.455

The second question addressed the learners' grammar achievement across oral and writing groups who received recast. This research question was answered by comparing the posttest mean scores of the oral and writing groups using the ANCOVA procedure. The use of ANCOVA made it possible to compare the posttest mean scores while taking this initial

difference into account. In other words, the two groups were not compared on their posttest only; rather their posttests were compared with an attention to their difference prior to the treatment.

Table 3
Descriptive Statistics in Oral and Writing Group

	N	Mean	Std.		Kurtosis		
			Deviation	Skewness	Statistic	Std. Error	
OralPre	80	5.32	3.165	.389	.269	-.847	.532
Oralpost	80	18.15	6.119	-.073	.269	-.915	.532
WritingPre	70	4.07	2.757	.167	.287	-.891	.566
WritingPost	70	15.80	6.097	0.237	.287	-1.052	.566

Prior to the application of ANCOVA, the normality of the data was examined through kurtosis and skewness values. As Table 3 shows, the resulting ratios were within ± 1.96 , indicating that the data were normally distributed and hence appropriate for parametric analysis. Another assumption (i.e., homogeneity of variances) was examined through Levene's Test of Equality of Error Variances. Table 4 presents that this assumption was also met ($p = 0.152$). As a result, the use of ANCOVA, as a parametric statistic, was justified.

Table 4
Levene's Test of Equality of Error Variances

F	df1	df2	Sig.
3.245	1	148	.074

The adjusted posttest mean scores (after taking the initial difference into account) of the two groups are presented in Table 5. It demonstrated that the adjusted mean score for the oral group ($M = 18.28$) was higher than that for the writing group ($M = 16.79$). This implies that recast provided to the oral group was more effective in promoting the learners' grammar achievement.

Table 5
Estimated Marginal Mean Results for Oral and Writing Groups

	Mean	Std. Error	95% Confidence Interval of the Difference	
			Lower	Upper
Oral	18.28	.479	16.338	18.230
Writing	16.79	.513	15.777	17.802

The difference between the posttest mean scores was examined using the ANCOAV procedure. Table 6 represents the results.

Table 6
ANCOVA Results for Posttest Scores of Oral and Writing Groups

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	3089.561 ^a	2	1544.780	86.016	.000	.539
Intercept	4279.370	1	4279.370	238.282	.000	.618
Pretest	2883.387	1	2883.387	160.551	.000	.522
Modality	8.743	1	8.743	.487	.486	.003
Error	2640.013	147	17.959			
Total	49352.000	150				
Corrected Total	5729.573	149				

The results in Table 6 indicate the ANCOVA values, $F_{(1, 57)} = 0.487$, $p = 0.486$, which show that the difference is not statistically significant. As a result, oral and writing groups were different on pretest but not on posttests (after taking the initial difference into account).

Discussion

Due to the fact that instructional contexts in which recast is implemented play an important role in the performance of the learners, the present study was carried out to explore learners' grammar achievement who received recast in two different language learning contexts.

The first research question was to investigate whether there was any difference between learners' grammar achievement across the CPG and EPG who received recast. The results illustrated the presence of a significant difference for those in EPLL. Learners in EPG showed greater grammar gains.

The role of recast in EPLL is a significant issue to be addressed in pedagogical contexts. The major point here is that recast in the EPLL, in which it is believed that grammar does not need to be taught explicitly, was more effective on grammar achievement. A plausible reason for the significant impact of recast in EPLL might be the condition that the participants in the EPG had to work on some projects in groups; thus, they had more opportunities to have interaction. This illustrates that recast could be more compatible with the EPLL's assumptions since recast did not let any language breakdown between the participants in EPG.

The findings of the present study are in favor of Van Lier's (2004) idea that interaction in project-based activities has a pivotal role in the emergence of L2. In addition, the results of this study support the position that Ellis et al. (2019) held. They asserted that project-based tasks can provide different opportunities for interaction that, as a result, could foster the process of language development. Over two decades of empirical research designed to investigate the role of interaction in SLA has yielded much evidence that demonstrates interaction precipitates language learning (Gass & Mackey, 2015; Loewen & Sato, 2018; Mackey, 2012; Mackey, Abbuhl, & Gass, 2012; Mackey & Goo, 2013). Among varied aspects of interaction, as Goo (2019) believed, recast can be examined to determine to what extent it influences interaction and language development.

Besides, the findings portray the efficacy of recast which is in line with Long (2007, 2015), Lyster et al. (2013), and Goo and Mackey (2013), claiming that recast facilitates the process of language learning. Furthermore, the findings of the present study, in general, affirm the results

of abundant researches found recast effective to provide valuable opportunities for the learners to draw their attention to grammar features during interaction, leading to noticing, and ultimately language development (Brown, 2016; Li, 2010; Lyster & Saito, 2010; Lyster et al., 2013; Russell & Spada, 2006; Mackey & Goo, 2007; Nassaji, 2016).

The findings, also, can be substantiated by Wen, Wang, Zhao, and Liu's (2010) investigation on the students learning English in Japan. They found that the students in the ecological environment had better performance than the other students. With reference to analysis on this research, they stated that from the CPLL, language learning is just memorization, repetition, and mechanical learning. In the same vein, the findings of the present study partially confirm the results of a number of studies revealing that there is a positive relationship between learners' awareness of structures and grammatical accuracy (Ellis, Basturkmen, & Loewen, 2001; Thornbury, 1997). These studies have found identical results that learners' awareness is taught through tasks which promote noticing, rather than explicit grammatical instruction of rules.

The effective combination of affordances and recast is the other implication of the study. The present study found that this combination leads to more involvement of English grammar structures. The participants in EPG had access to technology as affordances in their classes. They had access to computer, internet, different kinds of dictionaries, some pictures, graphs, video clips, and games. It is in line with Van Lier's (2004) suggestion that learning emerges when learners have access to information in the environment and choose what they need. It is in line with Loewen and Sato (2018), who stated that technology changes the way in which learners learn the language, as a result, language learning contexts continue to evolve. It would, therefore, be advisable for future studies to address the implications of such contexts.

The next issue that was scrutinized in the second research question was related to the difference between learners' grammar achievement in two oral and writing groups who received recast. The quantitative data analysis demonstrated that learners in both oral and writing groups were not different in terms of their grammar achievement. In an effort to understand how

modality affects noticing and L2 development, some researchers used eye-tracking, and stimulated recall to measure learners' attention to recast (Gurzynski-Weiss & Baralt, 2014; Smith & Renaud, 2013; Zeigler, 2016). Consequently, Gurzynski-Weiss and Baralt (2014), found no difference in learners' perception of feedback in either oral or writing groups. Learners were most accurate in their perception regardless of the modality.

Similarly, Zeigler (2016) compared the effects of modality on interaction in oral and writing modalities in terms of L2 development test scores. The results did not reveal statistical differences between modalities. He concluded that mode of communication has no impact on language development. In another eye-tracking study, Smith & Renaud (2013) measured the amount of time learners gazed at CF during tasks. The results showed that learners fixated on recasts 72% of the time, and their fixation was more for grammatical forms.

Hence, it appears that further research is needed to replicate the present study to support the findings. The present study investigated the immediate grammar gains of the participants. It would be more illuminating if future studies also take the participants' long-term grammar gains by the inclusion of retention in their design. Moreover, further studies can be conducted to explore the features of interaction and grammar achievement in two oral and writing modalities. It would be possible to add individual differences as an important factor affecting language learning in these modalities. In sum, as Nassaji (2020) pointed out, the need for more studies to investigate varied measures of feedback assessment is needed in future research to extend the knowledge of both language teachers and SLA researchers.

Declaration of interest: none

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Appendix A

In order to assess the participants' grammatical knowledge before the treatment and compare their grammar achievement after the treatment, a test was developed by the researcher.

- How often do you have your eyes (check).....?
- If I (live) in Tehran, I would be working at a bank.
- If I have enough apples, I (bake) an apple pie this afternoon.
- I didn't know my friend was depressed. I wish she (tell) me.
- The doctor made the patient (stay) in bed.
- Would you mind if I (borrow) your cell-phone?
- I really must get my eyes (test) I'm sure I need glasses.
- If I (eat) breakfast several hours ago, I would not be hungry now.
- I wish we (not have) a test today.
- We didn't have a map, so we got (lose)
- If the weather had been nice yesterday, we (go) to the zoo.
- I wish the sun (shine) right now.
- If it were not raining right now, I (go) for a walk.
- I was getting sleepy, so I had my friend (drive) the car.
- If I (be)..... a bird, I would not want to live my whole life in a cage.
- Did you used to (get)..... good grades in high school?
- I wish he (lend) me his car tomorrow.
- If he were a good student, he (study) for the test yesterday.
- Would you mind if I (have) your phone number?
- I made my brother (carry) my suitcase.
- I wish that she (tell) me the story tomorrow.
- If she (lend) you her bike, where would you have cycled?
- I got Rosa (lend) me some money so I could go to a movie last night.
- If I (have) more time, I would do more exercises.

-
- My friend didn't come to the meeting. I wish she (come) to the meeting.
 - Have you ever (throw)..... away something really important by mistake?
 - You (have) problems if you get late to work again.
 - He doesn't talk about the exam. I wish he (talk) about it tomorrow.
 - The teacher (angry) with you if you don't do your homework assignments.
 - I had problem (find) his house.
 - This rug (make) by my aunt.
 - I wish I (go) shopping yesterday.
 - I spilled some tomato sauce on my coat. I need to get my coat (clean)
 - Where would you go if you (want) to borrow a book.
 - My friend had her house (paint)
 - Peeling onions always makes me (cry)
 - I can't go with you today, but I wish (go)
 - You (pass) the exam quite easily if you had studied more.
 - We're going to be late. I wish you (hurry)
 - The teacher had the class (write) a 200-word research paper.

Biodata

Afrooz Arianfar is currently a Ph.D. candidate of TEFL at Islamic Azad University, Science and Research Branch, Tehran, Iran. He has taught English courses for over a decade at different universities. Her primary research interests concern attention, noticing, feedback, and second language acquisition.

Parviz Maftoon is an associate professor of teaching English at Islamic Azad University, Science and Research Branch, Tehran, Iran. He received his Ph.D. degree from New York University in 1978 in Teaching English to Speakers of Other Languages (TESOL). His primary research interests concern EFL writing, second language acquisition, SL/FL language teaching methodology, and language syllabus design. He has published and edited a number of research articles and books. He is currently on the editorial board of some language journals in Iran.

Ghafour Rezaie is an assistant professor of Teaching English as a Foreign Language (TEFL) at Islamic Azad University, Garmsar Branch, Garmsar, Iran. His main research interests include cognitive aspects of second language acquisition, research in applied linguistics, and language assessment. He has published and edited a number of research articles.