

Recasts, Modified Output and L2 Development: A Case of Persian EFL Learners

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Abstract

The current study compared the effectiveness of recasts which triggered learners' modification to their incorrect forms with recasts which triggered no modified output. To this end, 60 Iranian EFL learners randomly selected from two EFL classes received recasts for their errors during task-based interactions with their interlocutors. Using a tailor-made design, we compared the efficacy of recasts which were followed by learners' modified output with the efficacy of recasts which triggered no modified output. The results indicated that recasts which were followed by learners' modified output were more effective than recasts which prompted no modified output on promoting L2 development.

Keywords: Corrective feedback, Modified output, Recasts, Uptake, Focus on form

1. Introduction

Second language (L2) acquisition research over the past decade has investigated what type of instruction best promotes the acquisition of L2 knowledge. It is nowadays a consensus among L2 researchers and practitioners that input alone is insufficient for learners to acquire L2 knowledge to high levels of target like precision and some kind of form-based instruction should accompany meaning-focused and communicative activities in L2 classrooms (e.g., Doughty & Williams, 1998; Long & Robinson, 1998). One kind of form-based instruction which has been investigated thoroughly over the past two decades by researchers is corrective feedback. Corrective feedback is defined by Sheen (2007) as "a teacher's reactive move that invites a learner to attend to the grammatical accuracy of the utterance which is produced by the learner" (p. 301). Corrective feedback according to Ellis, Loewen, and Erlam (2006) takes the form of one or a combination of the following responses by a teacher when a learner makes an error: (1) an indication that the learner committed an error, (2) The provision of correct form of the error, and (3) The provision of some metalingual explanation regarding the error. The most comprehensive taxonomy of corrective feedback has been provided by Lyster and Ranta (1997) who classified corrective feedback into six categories: explicit correction, recast, metalinguistic feedback, elicitation, repetition, and clarification request. Among these categories, recasts will be considered in the current study. Lyster & Ranta (1997) defined recasts as "the teacher's reformulation of all or part of a student's utterance, minus the error" (p.46). An example of a recast adapted from Sheen (2007) is given below.

Student: There was fox.

Teacher: There was a fox. (Sheen, 2007, p. 307)

Although researchers have extensively studied the effectiveness of different types of corrective feedback usually in

terms of L2 development as gauged by pretest and/or posttests in both laboratory and classroom settings, little is known about why certain types of corrective feedback are more effective than others and lead to L2 development. In an attempt to answer this question, a number of studies investigated learners' responses to corrective feedback on the ground that qualitatively different learning processes are at work behind different learner responses to different types of corrective feedback (Egi, 2010). Some types of corrective feedback such as metalinguistic feedback and clarification requests usually demand modification or self-repair on the part of learners, while other types of corrective feedback such as recasts demands no self-repair or modified output. While using learners responses to corrective feedback as a yardstick for measuring the effectiveness of feedback has invoked some criticism (e.g., Long, 2007), some researchers suggested a link between certain types of learners' output in response to corrective feedback and subsequent L2 development (e.g., Loewen, 2005; McDonough, 2004, 2005; McDonough & Mackey, 2006). The aim of the current study is to investigate the association between learners' responses to recasts and subsequent development.

2. Recasts

Recasts are among the most frequently studied types of corrective feedback. Despite their popularity, however, researchers have failed to reach a consensus regarding how to operationally define them uniformly in different contexts. Table 1 adapted from Ellis and Sheen (2006) provides an overview of operational definitions of recasts in several studies.

One reason why recasts have been the focus of study by many researchers is that recasts are one of the most frequently used feedback types in L2 classrooms (Lyster & Ranta, 1997; Panova & Lyster, 2002; Sheen, 2004). Lyster (1998a), for example, examining the distribution of six types of corrective feedback in four immersion classrooms in Canada found that recasts were the most frequent type of corrective feedback used by teachers. Similarly, Sheen (2004) examining the distribution of recasts in four communicative setting (French immersion, Canada ESL, New Zealand ESL, and Korea EFL) found that, on average, 60% of all the feedback moves involved recasts. Furthermore, recasts have been considered as an appropriate and ideal corrective move because they provide learners with opportunities to focus on form without disrupting the flow of communication. Trofimovich, Ammar, and Gathbonton (2007) stated that recasts are ideal interactional feedback moves because they are implicit and unobtrusive (i.e. they highlight the error without breaking the flow of communication) and are also learner-centered (i.e. they are contingent on what the learner is trying to communicate).

Despite the frequency of recasts in L2 classrooms, their saliency to learners as corrective moves has been questioned by some researchers on the ground that some learners may fail to distinguish them from non-corrective repetition of learners' utterances which are used as confirmation of the message. The following example adapted from Nicholas, Lightbown, & Spada (2001) displays how recasts can play two functions simultaneously and thus remain ambiguous to learners:

S: The boy have many flowers in the basket.

T: Yes, the boy has many flowers in the basket. (Nicholas et al, 2001, p. 721)

In the above example, the recast serves two functions simultaneously. Conversationally, it helps communication keep going and provides a confirmation to the student utterance, and as a corrective feedback, it provides an indication to the student that an incorrect form has been produced. Such a functional ambiguity compels some researchers to argue against the effectiveness of recasts as corrective feedback.

3. Learners' Responses to Recasts

Researchers investigating the effectiveness of recasts have adopted two approaches to investigating recasts. They have either examined the effects of recasts on L2 development in pre-test post-test designed (e. g., Ammar, 2008; Ammar & Spada, 2006; Carroll & Swain, 1993; Doughty & Varela, 1998; Loewen & Nabei, 2007; Ellis, 2007; Ellis, Loewen, & Erlam, 2006) or they have investigated the effects of recasts indirectly by documenting learners' responses to recasts (e.g. Braidi, 2002; Egi, 2010; Ellis, Basturkmen, & Loewen, 2001; Mackey & Philp, 1998; Lyster, 1998a, 1998b; Lyster & Ranta, 1997; Panova & Lyster, 2002; Sheen, 2004). Learners' responses to recasts have also been regarded as evidence that learners have notices recasts. Learners' responses to corrective feedback are often studied in terms of learners' uptake and modified output. In corrective feedback research, the term uptake is defined as "a student's utterance that immediately follows the teacher's feedback and that constitutes a reaction in some way to the teacher's intention to draw attention to some aspect of the student's initial utterance" (Lyster & Ranta, 1997, p. 49). Based on this definition, uptake can encompass a wide array of learners' reactions to corrective feedback ranging from simple meaning confirmation (e. g., OK, I see) to reformulation of an incorrect utterance (Egi, 2010). Modified output, on the other hand, refers to a learner's utterance following a corrective feedback in an

attempt to modify his or her original utterance. Thus, a learner's uptake can only be a modified output if an attempt is made by the learner to make his or her utterance more target-like. Otherwise, the uptake can't be considered as a modified output. According to Lyster and Ranta (1997), a learner's modified output is called a "repair" if it fulfills the intention of the corrective feedback which the learner's incorrect sentence has invited. If, on the other hand, the learner's modified output is still problematic, it is called "needs repair". Thus, it can be argued that modified output is a kind of uptake. While repair can be considered as target-like modified output, needs repairs cannot always be considered as modified output, because it is possible that the needs repair is not necessarily in response to the focus of the corrective feedback which in this case it is only an uptake rather than modified output. Some researchers consider learners' uptake or modified output as indicative of L2 development (e. g., Lyster & Ranta, 1997; Egi, 2010). Chaudron (1977), for example, suggested that "the main immediate measurement of effectiveness of any type of corrective reaction would be a frequency count of the students' correct responses following each type" (p. 440). The investigation of learners' uptake or modified output in corrective feedback research is mainly grounded in two theoretical frameworks. On one hand, it is believed that learners' responses to corrective feedback are reminiscent of learners' noticing of corrective feedback which can influence the effectiveness of corrective feedback. Such a view is premised on Schmidt's noticing hypothesis (Schmidt, 1990) which predicts that in order to convert input into intake, learners must pay attention or notice the target features in the input. Mackey et al (2000), and Egi (2010), for example, found a significant relationship between learners' uptake and noticing of corrective recasts. As it was noted before, a caveat to the efficacy of recasts is that learners may not perceive or notice recasts as corrective feedback. Thus, learners' uptake or modified output following recasts can be indicative of learners' perception and noticing of recasts which based on noticing hypothesis is important for benefiting from recasts. The second alternative framework which warrants the investigation of learners' modified output following recasts is rooted in Swain's output hypothesis (Swain, 1985, 1995, 2000, 2005). Swain's (1985) original idea was that output "pushed" learners from the "semantic processing" required for comprehending input to the "syntactic processing" needed for encoding meaning (p.249). Swain (1985) argued that producing the target language (TL) may serve as "the trigger that forces the learner to pay attention to the means of expression needed in order to successfully convey his or her own intended meaning" (p. 249).

Several empirical studies investigated the association between the efficacy of recasts and learners' uptake or modified output. Lyster & Ranta (1997), for example, conducted a study on four French immersion classrooms (grades 4 and 5) during subject-matter and French language arts lessons in which they investigated (a) the provision and frequency of different types of corrective feedback by teachers during classroom teacher-learner interactions, (b) the frequency of learners' uptake after each corrective feedback type, and (c) the relationship between different types of corrective feedback and learners uptakes. Among the six categories of corrective feedback identified (recasts, metalinguistic feedback, elicitation, explicit corrections, clarification requests, & repetitions), Lyster and Ranta found that while recasts were the most frequently used corrective feedback move by the teachers (55 % of corrective feedback provided), they were found to be least effective in eliciting learners' uptake (31%) and repair (18%). Lyster and Ranta concluded that recasts are not as effective as other types of corrective feedback such as elicitation or metalinguistic feedback because they don't encourage learners' uptakes or repairs following their errors which constitute negotiation of form. In another study, Lyster and Panova (2002) explored the patterns and frequency of recasts in an adult ESL classroom based on the categories of corrective feedback identified by Lyster & Ranta. The main findings of their study were the same as those of Lyster & Ranta: Recasts were found to be the most frequent corrective tool utilized by the teacher and learners' uptake and repair following recasts, on the other hand, were lowest among categories of corrective feedback.

As it was mentioned before, the utility of recasts in the above studies was questioned mainly on the ground that they don't trigger learners' modified output or negotiation of forms. This issue was more closely investigated by McDonough (2005), who was interested to see if negative evidence conferred by corrective feedback and learners' modified output following recasts are jointly or separately responsible for the development of L2 English question forms. The 60 participants were randomly assigned into one of the following treatment conditions: (a) enhanced opportunity for modified output, this treatment condition was operationalized by repeating learners' incorrect utterance with enhanced salience of the error to them in order to draw the learners' attention to the problematic feature of their previous utterance, (b) opportunity for modified output, this condition was operationalized by clarification requests following learners' errors. (c) feedback without opportunity to modify, for this treatment, the interlocutor enhanced the saliency of the learner's error through stress and rising intonation but didn't let the learners to modify his or her output, (d) in this situation the interlocutor didn't make any indication as to the learners error and only provided an answer to his or her question. The learners in all groups carried out communicative tasks with native speaker interlocutors in three sessions. Learners' development as a result of treatment tasks were measured via oral production tasks in which the learners were prompted to produce question forms. Learners'

interactions were coded for the amount of modified output and the presence of negative feedback (as stated by learners in learning journals which they filled during the tasks). Learners' oral production test data were also analyzed for the presence of higher stage question forms. Logistic regression was used to analyze the data. The analysis revealed that learners' modified output is the only significant determiner of learners' subsequent development.

Some researchers voiced their concerns regarding the use of uptake or modified output as a measure of recasts utility (e.g., Mackey & Philp, 1998; Han, 2002; Sheen, 2004). Sheen (2004), for example, indicated that learners' rates of uptake following recasts may be different in different instructional settings. More specifically, he compared the rate of modified output following recasts collected in different instructional settings from three previous published studies with his own. The previous studies included: (a) frequency data from Lyster and Ranta (1997); (b) frequency data from Panova and Lyster (2002) and (c) raw data (i.e., transcripts of form-focused episodes) from Ellis et al. (2001). In this way four different instructional settings involving communicative language teaching were compared with each other: immersion in Canada; ESL in Canada; ESL in New Zealand; and EFL in Korea. The results indicated that the rate of uptake in relation to recasts was substantially lower in Canada immersion and Canada ESL than in New Zealand ESL and Korea EFL. Sheen concluded that the rates of learners' modified output are greater in context where learners are oriented to well-formedness of their utterances than other situations where learners are more concerned for communication and meaning.

In an attempt to justify the use of learners' uptake as a valid measure of the effectiveness of recasts on learning, Egi (2010) examined the association between learners' uptake and modified output and their perceptions of recasts. The participants were 24 foreign language learners of Japanese who participated in some task-based activities with their interlocutors and received corrective feedback for their errors during interactions. The videotape of learners' interactions were shown to the learners in stimulated recall interviews in order to elicit their perceptions of recasts. Learners' perceptions were coded as *noticing* whenever they were able to identify the mismatch between their incorrect utterance and target form, *corrective feedback* when they recognized that they had committed an error for which they received a recast and *other* when they were not willing to identify the corrective intent of the recasts. The results indicated associations between learners' ability to notice the gap (Schmidt and Frota, 1986) and uptake, modified output and repairs. According to Egi (2010), the results partly explained why learners' uptake and repairs are indicative of L2 development. While the above studies especially that of Egi (2010) suggested some links between effectiveness of corrective feedback and learners' uptake or modified output.

The assumption that learners' responses to recasts promote L2 acquisition remains speculative as it is based on another assumption, namely learners' ability to recognize the mismatch between their incorrect utterance and target like forms promotes development. In order to demonstrate the beneficial effects of learners' uptake on L2 development studies which measure development are needed. As Lightbown (2000) argued, in order to show the effects of corrective feedback on L2 development, researchers must indicate that those effects remain over an extended period of the time. The current study aims at contributing to the current literature by investigating the effects of learners' ability to modify their incorrect utterance following recasts on L2 development. To this end, the following research question was formed:

Does learners' ability to modify their incorrect utterances following recasts promote the efficacy of recasts?

4. Method

4.1 Participants

60 Iranian EFL learners, randomly selected from two intermediate level EFL classes in Iran, constituted participants for this study. The learners were placed into these classes based on their performance on a simulated TOEFL test and an interview. The participants were 33 females and 27 males and between the ages of 20 to 35. They had received an average of 22 months of English instruction and had never lived in any English speaking country for more than three weeks. Beside the researcher, 3 EFL teachers were invited to the study to act as interlocutor along with the researcher (henceforth interlocutors) during treatment sessions. Prior to the study, the researcher met the interlocutors several times and informed them fully about the research objectives and procedures. Furthermore, in order to minimize the differences in the quality of recasts presented by different interlocutors, they practiced the provision of recasts during some preparatory sessions on a different group of learners.

4.2 Operationalization

Recasts were operationalized as a semantically contingent "reformulation of all or part of a student's utterance, minus the error" (Lyster & Ranta, 1997, p. 46). During treatment sessions, the interlocutors reformulated the participants' incorrect utterances. The following example indicates how recasts were operationalized in the current

study:

Example 1

Student: When you come back?

Teacher: When **do** you come back?

Example 2

Student: Where she go?

Teacher: Where **does** she go?

Modified output was operationalized as a learner's utterance following a corrective feedback in an attempt to modify his or her original utterance that invited a recast as in the following example:

Example 3

Learner: What the woman doing?

Interlocutor: What is the woman doing?

Learner: Yes, what is the woman doing?

It should be mentioned that the current study didn't differentiate between modified output moves which represent "repairs" with learner's modified output which is still problematic and is thus called "needs repair".

4.3 The Target Structure

Since this study made use of individualized (tailor-made) post-tests to assess learning associated with learners' uptake, it was impossible to create individualized tests which could differentiate between recasts episodes containing modified output and recasts episodes without modified output based on a single target structure. Thus, several linguistic targets were selected for the current study: two syntactic structures (question formation and articles), a morphological structure (present continuous tense) and also lexical items related to the tasks. The inclusion of syntactic, morphological, and lexical targets in the current study allowed us to create individualized test items which reflect gaps in learners' developing linguistic system. Furthermore, since the saliency of target structure is an important factor in the efficacy of corrective feedback (Leeman, 2003), different target structures with different levels of perceptual saliency can reveal any effect of a specific target structure on learners' uptake and the efficacy of recasts. Several syntactic operations are involved in question formation such as subject-verb inversion, do support, wh fronting as well as morphosyntactic competence for the use of verb inflections. Articles also pose difficulty for learners because they are not perceptually salient in the input and they have relatively low communicative value. Present continuous tense also draws on learners' morphosyntactic knowledge and also subject-auxiliary agreement.

4.4 Procedure

In order to elicit learners' responses to corrective feedback, the learners in the current study performed two different types of tasks with their interlocutors: Two picture description tasks and a spot the difference task. Each task was specifically designed to encourage learners to use a specific structure targeted in the current study. For each picture story task which consisted of six pictures learners were asked to make a story out of the pictures. The spot the difference task consisted of two sets of three picture cards one held by the learner and the other by her interlocutor. Learners were instructed to ask questions to find at least 10 differences between their cards and those of the interlocutor. The treatment sessions were held in three successive days and for each session learners performed one task. The following recast episode indicates how spot the difference task was used to elicit learners' utterances.

Example 4

Learner: What the woman doing?

Interlocutor: What is the woman doing?

Learner: Yes, what is the woman doing?

Interlocutor: In my picture she is sweeping the floor.

Learner: In my picture, she isum ...

Interlocutor: setting the table?

Learner: Yes, she is setting the table.

In the above example the learner was provided with a recast for her incorrect wh question. In response to the recast, the learner then modified her incorrect utterance. As a result of this recast episode, one difference was found

between the learner and the interlocutor pictures.

4.5 Tailor-made Post-tests

The current study made use of tailor-made post-test design to investigate learning gains associated with modified output. Following the treatment sessions, the recasts episodes which contained learners' errors followed by interlocutors' recasts were transcribed and used to create individualized test items. Two types of recast episode were identified: Recasts episodes which contained learners' modified output following recasts and recasts episodes which contained no modified output following recasts. In this way two types of individualized test items were created: test items which targeted recast episodes containing modified output, and test items which targeted recasts episodes with no modified output. The following examples represent how recasts episodes were used to create the above item types:

Example 5

Learner: Where they are going?

Interlocutor: Where are they going?

Learner: Yes, where are they going?

The above episode represents a recast episode which contains learner's modified output following the recast. Based on the above recast episode, a grammaticality judgment test item was created for the individual asking him to judge the acceptability of "where they are going".

Example 6

Learner: she opened the.....aaaa...

Interlocutor: opened what?

Learner: What isum.....I don't know its name.

Interlocutor: Curtains?

Learner: Yes, she opened curtains.

The above episode also represents a recast followed by learner's uptake. Based on the above recast episode a test item requiring the learner to label a picture of curtains was developed. The following example also shows a recast episode which doesn't include learner's uptake:

Example 7

Learner: Man is studying a book.

Interlocutor: The man is studying a book.

Learner: Yes, then, he eat breakfast.

Based on the above recast episode, a test item targeting the use of definite article in an obligatory context was created for that learner.

As a result, two types of item were created: Grammaticality judgment items for measuring syntactic and morphosyntactic targets, and picture labeling items for measuring lexical targets. Half of the grammaticality judgment items were grammatically correct and half were grammatically incorrect. For grammaticality judgment items, the learners were asked to choose whether the sentence is grammatically correct by choosing Yes or No and also to show the source of error by underlying the error. Three days following the last treatment sessions the learners completed the tailor-made test with items individualized for each learner to tap on learning gains associated with recasts episodes containing uptake and those without uptake. Those recast episodes that contained more than one incorrect form and for which the learner didn't provide any modified output were discarded from the analysis. However, those recast episodes which contained more than one error but the learner provided modified output for her incorrect forms were included in the analysis. For such episodes, each target error for which the learner provided modified output was considered for test items. Errors which were self-corrected by learners were also excluded.

In this way, for each learner two sets of items were developed:

- (1) items targeting learners' errors which were followed by a recast and the learner's modified output, and
- (2) items which targeted learner's error followed by a recast with no modified output.

4.6 Analysis

The Learners' performance in the tailor-made post-tests was rated with respect to the original interactions to

document evidence of development as a result of recast episodes describe above. The following example indicates a recast episode for learner I and the resultant tailor-made post-test item for that learner:

Example 8

Learner I: He is study.

Interlocutor: He is studying.

Learner: Oh, he is studying.

Tailor-made post-test for learner I:

The boy is study a book.

Yes No✓

Learner I correctly rejected the grammaticality of the above item by choosing No and underlined the error. This was considered as evidence of learning as a result of a recast episode which included the learner's modified output and thus the learner received one point for his answer.

Based on the two types of item created for each individual (items targeting recasts episodes with or without learners' modified output), two raw scores were obtained for each learner as a result of learners' performance in the tailor-made post-tests. Learners' raw scores were also obtained separately for each target structure. In order to compare learners' gains as a result of recasts episodes containing modified output with recasts episodes without modified output, learners' raw scores were submitted to a paired sample t-test. An alpha level of $p < .05$ was set to perform the analysis.

5. Results

Tables 2 and 3 present descriptive statistics for learners' performance on items which targeted learners' errors in recast episodes with or without learners' modified output.

As the tables indicate, there are moderate rates of learning for all structures for both types of items. However, recasts episodes with learners' modified output led to higher rates of learning than recasts episodes without learners' modified output. These findings are displayed by Figure 1.

In order to investigate the effect of learners' modified output on subsequent performance, learners' performance on items that targeted recasts episodes with modified output were compared with learners' performance on items that targeted recasts episodes with no modified output for each target structure via a paired sample t-test. Table 4 indicates the results.

As Table 4 indicates, there are significant differences in learning gains for all structure. In other words, recasts episodes which incorporated learners' modified output is significantly more associated with subsequent development than recasts episodes with no modified output.

6. Discussion

The current study investigated the effects of learners' modified output on the efficacy of recasts. Our research question asked: Does learners' ability to modify their incorrect utterances following recasts promote the efficacy of recasts? The results of descriptive statistics for learners' performance on tailor-made post-tests revealed that the rate of development in recasts episodes which were accompanied by learners' modified output was higher than those recasts episodes with no modified output. These accuracy rates turned out to be significant when submitted to paired t-tests. Furthermore, such a trend was observed for all four structures which were targeted in the current study. While not the focus of the study, the findings also revealed that recast episodes with or without learners' uptake was most effective when targeting learners' vocabulary errors. Furthermore, irrespective of learners' modified output, the results suggest that recasts can be effective for promoting L2 acquisition.

There are good theoretical reasons for why recasts followed by learners' modified output lead to higher rates of accuracy than recasts with no modified output. Two main theoretical frameworks can explain the major finding of the current study with respect to our research question. The first theoretical framework is based on Schmidt's noticing hypothesis (Schmidt, 1990) which predicts that in order to convert input into intake, learners must pay attention or notice the target features in the input. In this regard, it is believed that learners' responses to corrective feedback are reminiscent of learners' noticing of corrective feedback which is necessary for learners to benefit from corrective feedback. Mackey et al. (2000), and Egi (2010), for example, found a significant relationship between learners' uptake and modified output and noticing of corrective recasts. As it was noted before, a caveat to the efficacy of recasts is that learners may not perceive or notice recasts as corrective feedback. Thus, learners' uptake or modified output following recasts can be indicative of learners' perception and noticing of recasts which based on

noticing hypothesis is important for benefiting from recasts. In this regard, a number of researchers (Egi, 2007; Mackey, 2006) suggested that learners' identification of errors, especially noticing the gap between their incorrect utterance and target-like forms precipitates the integration of new forms introduced by corrective feedback into learners' developing system. According to Gass (1998), "An initial step in grammar change is the learner's noticing (at some level) of a mismatch between the input and his or her own organization of the target language" (p. 28). Thus, it can be argued that learners' who modified their output following recasts noticed the gap between their incorrect forms and target-like forms presented by recasts. The second alternative framework which warrants the investigation of learners' modified output following recasts is rooted in Swain's output hypothesis (Swain, 1985, 1995, 2000, 2005). Swain's (1985) original idea was that output "pushed" learners from the "semantic processing" required for comprehending input to the "syntactic processing" needed for encoding meaning (p. 249). Swain (1985) argued that producing the target language (TL) may serve as "the trigger that forces the learner to pay attention to the means of expression needed in order to successfully convey his or her own intended meaning" (p. 249). The four major functions of output as spelled out by the current version of output hypothesis (Swain, 1995, 2000, 2005) stem from its ability to promote (a) noticing, (b) hypothesis testing, and (c) metalinguistic reflection, and (c) fluency. According to Swain (1995, 2005), output can help learners notice the gap between their linguistic resources and target language system. Producing output may help learners notice the mismatch between their interlanguage as represented in their output and L2 system. Furthermore, learners' output may serve as their hypotheses regarding L2 system. As Swain (2000) states, "to test a hypothesis, learners need to do something, and one way to do this is to say or write something (p. 100). Finally, the metalinguistic function of language helps learners to reflect on the language system in order to deepen the knowledge of forms and their relation with the meaning that the forms convey. Finally, (modified) output provides opportunities for fluent and speedy use of language. Sharwood Smith (1986, 1993) characterized language development in terms of two dimensions: acquisition of knowledge and control. Thus, the fluency function of language helps learners gain control over their already acquired system.

7. Conclusion, Implications, and Directions for Further Research

The current study indicated that recasts can promote the accuracy of L2 knowledge particularly when they are followed by learners' modified output. In other words, the results of the current study revealed that recasts which are followed by learners' modified output are more effective than recasts with no modified output. The higher rates of accuracy on test items targeting feedback episodes which were accompanied by learners' modified output was explained with regard to Schmidt's noticing hypothesis and Swain's output hypothesis. One implication of the findings of the current study is that the efficacy of recasts can be enhanced by raising the saliency of recasts to learners which may in turn result in learners' modified output. Another pedagogical implication of the current study is that teachers should encourage learners to modify their incorrect utterances upon receiving corrective feedback from teachers or other learners.

The current study is limited in that no pre-test was assigned to learners and the items in the tailor-made post-test were emerged naturally based on learners' errors during task-based interactions. Therefore, it was impossible to determine learners' knowledge of target forms before the treatments. It is possible that some learners knew some target features before the treatment but made errors during treatment sessions due to communicative pressure imposed by treatments while testing involved less communicative pressure. It is therefore important to interpret the results with caution. Future research might address this issue by investigating the effects of modified output on the efficacy of recasts in a pre-test, pos-test design. The current study indicated that recasts episodes which incorporate learners' modified output is more effective than recasts episodes without learners' modified output. One significant explanation for this observation was that the former types of recasts were more salient to learners. Future research can further investigate this issue by comparing recasts episodes which are equally salient to learners but differ in whether or not they trigger learners' modified output.

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Table 1. Definitions of recasts (adapted from Ellis & Sheen, 2006)

Reference	Definition
Long (1996, p. 434)	Recasts are utterances that rephrase a child's utterance by changing one or more components (subject, verb, object) while still referring to its central meaning.
Lyster & Ranta (1997, p. 47)	Recasts involve the teacher's reformulation of all or part of learner's utterance minus the error.
Braidi (2002, p.20)	A response was coded as a recast if it incorporated the content words of the immediately preceding incorrect NNS utterance and also changed and corrected the utterance in some way (e.g., phonological, syntactic, morphological, or lexical).
Long (2006)	A <i>corrective recast</i> may be defined as a reformulation of all or part of a learner's immediately preceding utterance in which one or more nontargetlike (lexical, grammatical, etc.) items are replaced by the corresponding target language form(s), and where, throughout the exchange, the focus of the interlocutors is on <i>meaning</i> not language as an object.
Sheen (2006)	A recast consists of the teacher's reformulation of all or part of a student's utterance that contains at least one error within the context of a communicative activity in the classroom.

Table 2. Descriptive statistics for items targeting recasts with learners' modified output

	Articles	questions	present continuous	vocabulary
Total items	140	132	141	153
Mean correct (percent)	47.11	46.7	49.5	52
Standard deviation	5.3	5.7	5.1	6.2

Table 3. Descriptive statistics for items targeting recasts without learners' modified output

	Articles	questions	present continuous	vocabulary
Total items	133	148	155	138
Mean (percent correct)	42.2	42.4	44.7	47.7
Standard deviation	4.3	5.3	5.7	6.09

Table 4. Learners' scores in the two types of item

	t value	df	sig (two-tailed)
Articles	10.44	59	.000
questions	13.93	59	.000
present continuous	8.88	59	.000
Vocabulary	16.97	59	.000

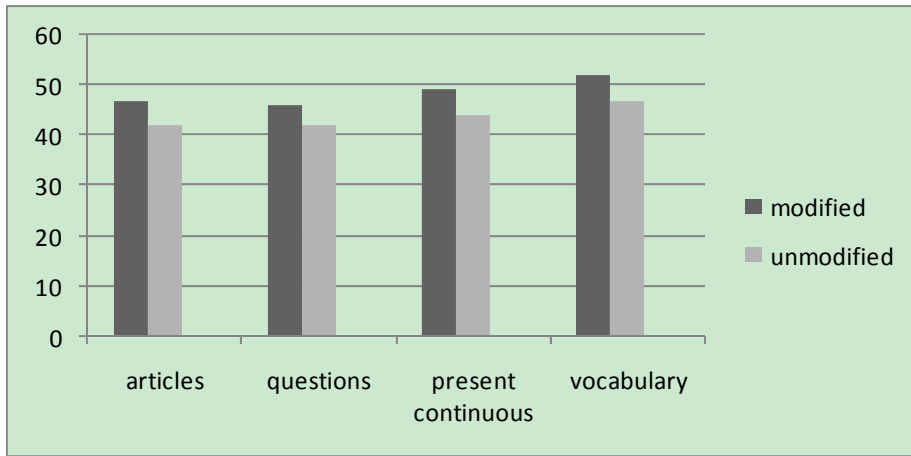


Figure 1. Learners' performance in items targeting recasts episodes with and without modified output