Recast, Uptake, and Learners' Perception during Video-Based Mobile-Mediated Interaction

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Abstract

The current study investigated the relationship between learners' perception of recast and their modified output in video-based mobile mediated interaction. A one-shot case study design was employed as a type of pre-experimental research design. The participants (30 intermediate Iranian EFL students at B2 level-18 to 30 years old) were asked to retell three short stories. They received a recast on the use of definite and indefinite articles. Subsequently, as part of a video-based stimulated recall interview, they were asked if they had noticed the error in their speech. Then, video-taped mobile interactions were analyzed to find if the learners' perception of recast triggered them to modify their output. The results indicated that a great majority of the reformulated errors were generated after recast that had been perceived by the learners in a video-based mobile-mediated interaction. The results also revealed a high rate of modified output where the participants perceived the mismatch between their erroneous utterances and the recast. On the contrary, where the learners simply noticed the errors without being able to perceive the mismatch between them and the recast, the rate of modified output dropped significantly. Further, Chi–Square analysis confirmed that there was a significant relationship between learners' perception of mobile-mediated recast and their modified output.

Keywords: Corrective feedback, recast, uptake, learners' perception, modified output

Introduction

Recasts defined as "the teacher's reformulation of all or part of a student's utterance, minus the error" (Lyster & Ranta 1997, p. 46) are among the most frequently used types of corrective feedback (CF) in a series of previous studies (e.g. Bower &

Kawaguchi, 2011; Li, 2010; Loewen & Philp, 2006; Lyster & Mori, 2006; Sheen, 2004). Moreover, research has shown that learner's perceptions of recast play a significant role in understanding the efficacy of recasts (Amhrien & Nassaji, 2010; Egi, 2010; Han, 2002; Loewen & Philp, 2006; Lyster, 1998).

Corrective feedback, recast included, is a stimulus, in the sense that it often triggers a response, called 'uptake' in the literature on corrective feedback. However, uptake refers to a variety of response types, namely 'uptake with no modified output' and 'modified output'. The former could be realized as a form of acknowledgement such as *oh yes*, or various other forms. The latter may be 'target-like', i.e., reformulating the erroneous utterance to make it grammatical, or "non-target like", i.e., a response that is still incorrect grammatically. Many studies have investigated which type of output is more common under different circumstances. Yet, few studies have investigated whether 'modified output' in the sense described above is triggered by the perception of the error by language learners in video-based mobile-mediated interaction. Thus, the present study aimed to find out whether the perception of the error by language learners triggers modified output in video-based mobile-mediated interaction in an online EFL course. Though Rassaei (2019b) compared the issue in two instructional settings, we studied it without comparison between different instructional settings.
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Literature Review

Corrective feedback, recast, uptake, and L2 development

Corrective feedback refers to "any indication to the learners that their use of the target language is incorrect" (Lyster et al., 1999, p. 171). Identifying major types of corrective feedback, Lyster and Ranta (1997) contributed to this area of research significantly. Their early classification of corrective feedback consisted of recast, explicit correction, metalinguistic feedback, elicitation, repetition, and clarification request. Corrective feedback is called implicit, where the force is not overt and implicit but the correction is linguistically signaled (Lyster and Ranta, 1997).

The most frequently-used type of corrective feedback in a number of instructional settings is recast (Lyster & Ranta, 1997). As direct corrective feedback, recast takes place when the teacher identifies an error and provides the correct form (Bitchener et al., 2005). According to Lyste et al. (1999), recast consists of repeating the incorrect production of the learner, changing the necessary parts to turn it into a correct phrase or sentence. On a continuum of explicitness, recast ranks only the second. Other less explicit feedback types are called negotiation strategies. Negotiation strategies make the learner notice the error without being provided with the correct form (Bower and Kawaguchi, 2011).

A teacher's feedback may be responded to, acknowledged, or totally ignored by language learners. The most common labels to describe learners' reaction to feedback are 'no uptake' and 'uptake' (Ellis, 2012). The former refers to a situation in which the learner is either unable to comprehend the teacher or one in which he/she ignores the teacher's utterance for whatever reason. The latter refers to a situation in which the learner immediately responds/reacts to the teacher's utterance in some way (Lyster & Ranta, 1997). In addition to 'no uptake', uptake may take the form of 'repair' or 'needs-

repair' (Lyster & Ranta, 1997). As the names suggest 'repair' is a label for learners' successful fixing of their original error. The label 'needs-repair', however, signifies partial failure to do so.

According to Russell (2009), based on the assumption that uptake is a sign of some degree of awareness, different forms of it were thought to be valid means of measurement to gauge students' L2 learning. Loewen (2004) stated that successful uptake is a fairly reliable indicator of a learner's perception of the mismatch between the target-like structure and his/her problematic utterance. According to Lightbown (1988), "a reformulated utterance from the learner gives some reason to believe that the mismatch between learner utterance and target utterance has been noticed, a step at least toward acquisition" (p. 193). This claim, however, was questioned by a number of researchers. Questioning this claim Gurzynski-Weiss and Baralt (2015) pointed out that when "the learner repeats the recast exactly, it is difficult to know if they are engaging in analytic thinking about what the recast form means" (p. 1401).

A number of researchers (e.g. Egi, 2007, Havranek, 2002; Lochtman, 2002; Lyster and Ranta, 1997; Panova & Lyster, 2002; Pica et al., 1989; Sheen, 2004) have examined the effectiveness of recast based on the frequency of learners' uptake; however, their methodology has been questioned both theoretically (eg., Ellis, 2012) and empirically (e.g. Rassaei, 2017, 2019a, 2020). An alternative way to measure the effectiveness of recast is to rely on learners' introspection as a perceptive measure.

According to MacKey and Goo (2012), 'noticing' plays a crucial role in negotiation and feedback in L2 learning. As Mackey (2006) pointed out, the modified output is triggered by awareness. In other words, awareness of the form is necessary when L2 learning occurs. Researchers have been arguing about the level of awareness needed to facilitate modified output. According to Swain (2006), a high level of awareness and cognitive effort are needed for learners to use recast when they are given feedback whether their effort leads to a target-like modified output or a non-target-like one. Mackey (2007) stipulated that it is vital for the learners to make a cognitive comparison of the two forms .i.e., their own erroneous form and the target-like form. By contrast, unsuccessful uptakes do not require much cognitive comparison, and therefore do not impose much load on mental processing. A number of researchers (e.g., Long, 1996; Mackey, 2006; Rassaei, 2019a) have suggested that simply noticing the corrective function of recast is not a sufficient condition for the successful reformulation of the problematic part by language learners. Rather, it requires 'understanding' in the sense introduced by Schmidt (1990). There are two levels of awareness. When learners consciously register a form, their awareness is at the level of notice, and when they go beyond that by forming a rule or a pattern, their awareness is at the level of understanding (Schmidt, 1995).

Theoretically speaking, for L2 to be learned awareness is necessary, which raises the question of what teaching techniques teachers must adopt to promote learners' awareness. According to Long (1996) and Ellis (2008), positive evidence is not sufficient in itself to enable L2 development. In other words, negative evidence in the form of corrective feedback is also needed. Negative evidence can increase learners' awareness of the form. The modified output generated after the feedback serves as a form of rehearsal and conceptually drives the processing. According to Gass (1997), learners notice the gap between the grammatical system they are developing and the

target language they want to speak. Their output can encourage syntactic processing, and noticing a mismatch prompts them to resolve their language defects.

Learners' Perception of Recast and Modified Output

The term 'modified output' is sometimes used interchangeably with uptake by some researchers. According to Lyster and Ranta (1997) uptake "refers to a range of responses made by students following [corrective feedback]" (p. 171), including accurate or inaccurate learner responses. According to Long (1996), recast has four defining features as follows: (a) it involves reformulating the learner's problematic utterance, (b) it changes the learner's utterance in some form, (c) it retains the central meaning of the learner's utterance, and (d) it follows the learner's problematic utterance.

Likewise, the perception of feedback falls into some categories. In this article, three categories are proposed as follows: (a) 'noticed', i.e., those instances in which learners recognize that the teacher was making a correction but did not recognize the source of the error, (b) 'perceived as corrective feedback', i.e., those instances in which they recognize the source of the errors upon the teacher's correction and (c) 'perceived as non-corrective feedback' i.e., those instances in which they do not recognize their teacher's utterance as corrective feedback. To conclude, recast is said to have been perceived when learners recognize the teacher's intention while interacting with their teachers. Otherwise, it is said to not have been perceived (Rassaei et al., 2012).

Han (2002) argued that learners' perception of recast is contingent upon four criteria, namely individualized attention, a consistent focus on a single grammatical feature, the developmental readiness of the learners, and the intensity of the corrective feedback. According to Amrhein and Nassaji (2010), unless recast is perceived as corrective feedback, it may not be beneficial to language learners. Investigating the extent to which language learners perceive recast as corrective feedback on form, Lyster, (1998) and Lyster and Ranta (1997) found that recast on the form was often mistaken for feedback on content. Likewise, examining to what extent language learners mistook recast for repetitions, Carpenter, Jeon, MacGregor, and Mackey (2006) found that it was indeed the case. According to Kim and Han (2007), language learners perceived recast the best when they were given consistently.

A number of studies have investigated to what extent recast is followed by learner response. Investigating focus-on-form practice in New Zealand ESL classrooms, Ellis, et al. (2001) reported that recast led to the highest rate of learner uptake (71%), two-thirds of which were successful. Sheen (2004) reported that about two-thirds of corrective exchanges recast triggered repair in both EFL and ESL contexts in Korea, New Zealand, France, and Canada. She also reported that recast leading to uptake was about one-fifths more frequent in Korean EFL and New Zealand ESL contexts than in French immersion and Canadian ESL ones. Given that in immersion programs, the focus is largely on meaning rather than on form, she concluded that in the contexts where the focus is largely on form, recast is more likely to lead to uptake. However, later research showed that this conclusion was too simplistic. Lyster and Mori (2006) compared recast and uptake in language immersion programs in France and Japan. They found that uptake following recast in Japan was almost twice as much as those in France (61% in Japan vs. 32% in France). Linares and Lyster (2014) compared learner uptake in French and Japanese immersion programs with Spanish content and language

integrated learning (CLIL) classrooms. They found that uptake following recast was more frequent in content and language integrated learning (CLIL). Spanish and Japanese learners by far outperformed their French peers. They speculated that both Japanese and Spanish teachers were sensitive to their pupils' correctness, so they focused on language more than their French counterparts did. Milla and Mayo (2014) compared uptake following recast in Spanish-Basque-English EFL and CLIL classes. They found that students in EFL classes generated 20% more instances of uptake than those in CLIL classes. It is noteworthy that EFL classes are more form-focused than CLIL classes are.

According to Han (2002), recast is more advantageous for linguistic forms that are already being internalized than for those that are not familiar to language learners. Loewen and Philp (2006) used accurate immediate recalls to investigate learners' perceptions about recast in oral communication tasks between native speakers and non-native speakers. They found that although the overall rate of noticing was high, the learner's development level, the recast length, and the number of discursive moves involved in the corrective feedback were highly influential in the said process. According to Han (2002), recast promoted morpho-syntactic development only it was frequent and salient. Note that length, number of changes, and intonation all contribute to the salience of recast (Goldschneider and DeKeyser, 2001). Iwashita (2003) reported that recast was less frequent but more salient than other types of feedback in oral interactions during a task-based language learning context among a group of Japanese intermediate learners of English. The tension between salience and frequency of recast is a theoretical rebuttal of earlier claims that recast was ineffective despite their high frequency on the ground that they did not push modified output on the part of the learners (e.g. Panova & Lyster, 2002). Egi (2010) analyzed stimulated recall comments by learners of Japanese in communicative activities and reported that the majority of uptakes in general and target-like modified output, in particular, were generated by the learners who said they had noticed the corrective recast as such. Reaching the same conclusion; Mackey, Gas, and McDonough (2000) reported that two-thirds of the feedback events were noticed and followed by modified output.

Corrective Feedback in Distance Learning

Technological innovations are changing the way we work, communicate, and learn. For example, with the rapid growth in technology, distance learning has become increasingly popular. According to Bloche et al. (2002), "…Distance learning takes place when a teacher and student(s) are separated by physical distance, and technology (i.e., voice, video, data, and print), often in concert with face-to-face communication…" Today distance learning may take the form of a) voice via such technologies as telephone, audio-conferencing, tapes, and radio; b) video provided live or recorded; c) computer data such as pdf files; and d) print e.g., textbooks and study guides (Traxler, 2018). This study focuses on corrective feedback in interactive video communication in online EFL instruction. The rest of this section introduces the concepts of computer-mediated corrective feedback and mobile-mediated corrective feedback.

Research on corrective feedback cannot be limited to traditional face-to-face interaction, though recast has a much lower frequency of occurrence in computer-mediated interaction (Baralt, 2010; Smith, 2010). Computer-mediated corrective

feedback refers to explicit or implicit error correction given in synchronous or asynchronous computer-mediated communication. Corrective feedback in synchronous computer-mediated communication is subject to a number of limitations, which makes it different from traditional face-to-face feedback. First, turn-taking in SCMC is split in the sense that the error and feedback are rarely adjacent (Smith, 2003), which reduces the salience of feedback (Sauro, 2009). This is a source of concern as some studies suggest that non-contingent sequences of error feedback are less effective (Lai et al., 2008). The problem extends to asynchronous computer-mediated communication in instructional settings in which communication is deferred since the time gap tends to decrease the effectiveness of the error treatment. Nonetheless, at least in some types of grammar and vocabulary problems, recasts are often used in computer-based language teaching (Rassaei, 2019b).

The advance of mobile technologies has resulted in a growth of mobile-assisted language learning (MALL), which engages learners in language study with the help of mobile technology (Burston, 2015; Duman et al., 2015; Shadiev et al., 2017). What makes MALL more significant than Computer-assisted language learning (CALL) is its utility to be used everywhere by emphasizing continuity or spontaneity of access and interaction across different contexts of use (Chinnery, 2006; Kukulska-Hulme & Shield, 2008; Traxler, 2007). By employing recent developments in technologies like Web 2.0 and instant messaging tools, MALL could afford novel opportunities for L2 learning through various modes such as audio- and video-based communication also by permitting text, voice, and visual realia to be conveniently sent around the globe.

Due to the advancement of technology, it is worth examining the efficacy of CF provided during face-to-face interaction and CF delivered during computer-mediated interactions. There exists a rather considerable amount of literature investigating the effects of CF in CALL (e.g., Sachs & Suh, 2007; Shintani, 2016; Yilmaz & Yuksel, 2011; Yilmaz, 2012; Rassaei, 2017, 2019b). However, previous studies have almost exclusively focused on operationalizing CALL to examine the potentials of CF through text-based communication (e.g., Bower & Kawaguchi, 2011; Shintani, 2016; Yilmaz, 2012) and little attention has been paid to providing CF through other communication modes such as video-based and audio based. Yilmaz (2012) investigated the efficacy of recasts and explicit corrections in text-based computer-mediated and face-to-face communication while focusing on two target structures. The findings revealed that regardless of the modes of communication, both explicit and recast CFs were effective whereas the explicit one was slightly more effective. In another study, Rassaei (2017) examined the efficacy of recasts on L2 development through face-to-face and Skype-based video-conferencing. Considering the modes of interaction, the results exhibited no difference between computer-mediated and face-to-face recasts in terms of L2 development. Moreover, by analyzing learners' understanding of recasts via stimulated recall interviews, it was suggested that the difference between the two instructional modes regarding learners' interpretation of recasts was statistically insignificant.

Furthermore, there are some advantages of mobile-mediated language learning, which make this approach almost distinct from other approaches. First, because of the time constraints imposed on teachers in classroom settings they might find it impossible to provide each student with detailed and instant CF. However, through MALL, the teacher might have more time to actually consider the errors and provide a complete recount of the learners' mistakes. Second, since the teachers cannot afford to spend time

more than the class time with the learners another superiority of MALL over traditional classes is the ubiquity it yields (Xu & Peng, 2017). That is, mobile technology offers the learners a new approach that is permanent, mutual, accessible, and affordable. Generally speaking, recently, there have been a growing number of papers being published about the utilization of MALL in language learning domains (e.g. Chang & Hsu, 2011; Smith & Wang, 2013). Particularly in the area of CF and SLA though, the implementation of mobile technology for providing CF through audio- and video-based interaction is not well acknowledged. One exception is Xu and Peng's (2017) study in which they examined the role of mobile-mediated oral feedback among 13 learners of Chinese as a second language. The results displayed that the learners had positive perspectives toward mobile-mediated CF and they claimed that this approach facilitated their learning and enhanced their speaking skills. In another study, Xu et al. (2017) investigated Chinese EFL learners' perceptions of mobile-mediated oral feedback using WeChat mobile application. They reported the positive role of WeChat feedback in promoting the learners' speaking abilities. In the context of Iran, where the present study was conducted, Rassaei (2019b) investigated the impacts of recasts on L2 development through experimental design and stimulated recall method. The participants were 52 Iranian EFL learners who were randomly assigned into two groups: 1) two audio and video recast conditions that received recasts to their target structure errors and 2) two audio and video control groups who received no feedback to their target form errors. By administering a pre-test and post-test, it was revealed that both audio and video recast treatments were beneficial while recasts in audio sessions proved to have more positive impacts regarding L2 development than those recasts provided via video sessions. In terms of the learners' perception of recasts, the findings indicated that the participants had more accurate perceptions of their error via audio recasts and their responses included more target-like modified output, as compared with the video-based recasts.

Research Question

The purpose of this study was to find out if there is a relationship between students' perception of corrective feedback and the type of uptake, namely uptake with no modification, target-like modified output, and non-target-like modified output, they provide. In other words, the researchers intended to find out whether modification of the output in students' uptake is related to their perception of feedback. Thus, the following research question was posed:

- Does language learners' perception of mobile-mediated recast (as measured by stimulated recall interviews) trigger their modified output in video-based interaction?

Method

Design

One-shot case study design was employed in this study. It is a type of pre-experimental design in which a single group of participants is exposed to an experimental treatment, and then a single measurement is taken afterward (Ary et.al, 1996). In other words, this design only measures the post-test results and does not use a control group.

Participants

The participants were 30 intermediate Iranian EFL students at the B2 level. According to Little (2011), B2 users can communicate easily and spontaneously in a clear and detailed manner. Though they are not experienced speakers, B2 users can understand and be understood. The participants were selected from the existing population of 350 EFL learners in a private language institute in Shiraz, Iran through cluster sampling. Their age range was 18 to 30. The level of proficiency was controlled in this study through Oxford Placement Test. The participants had different educational backgrounds. Some of them had a Bachelor's degree, and the rest were college students. In addition to the researcher, another EFL teacher, who had resided in the US for 15 years, was invited and trained to act as the research assistant during data collection sessions.

Materials and Instrumentation

The material consisted of three fairy tales, namely *Little Red Riding Hood*, *Peter and the Wolf*, and *the Pied-piper of Hamelin*. The selection criterion was to provide the participants with interesting, simple, yet, rich texts to facilitate the learners' task and enable them to retell the stories conveniently. The difficulty level of the three passages was at an intermediate level. The word counts of the stories were 170, 240, and 300, respectively.

The instrumentation process involved story-retelling, which consisted of the transformation of a text presented to the learners to create an oral reproduction of it in a subsequent session. According to Muranoi (2007), "it is one of the most effective teaching techniques that can stimulate learners' learning outcomes and ultimately promote second language learning" (p. 67).

The researchers opted for definite and indefinite articles as the focus of corrective feedback, i.e., 'a' and 'the'. It is common knowledge that indefinite articles refer to non-specific nouns. Definite articles denote specific nouns. In formal Persian, there is no definite article, resembling 'the' in English. In practice, singular nouns are assumed to be definite, unless they are marked by a suffix that denotes both singularity and indefiniteness simultaneously. It is pronounced /i/. Likewise, plural nouns are assumed to be definite, unless pre-modified by specific quantifies. Non-count nouns follow a similar pattern. Spoken Persian is however a bit different (Abrahams, 2005). Thus, acquiring rules of article usage is problematic for most Iranian English learners (Ansarin, 2014).

Data Collection Procedures

In a part face--to--face and part online language course, 20 language learners received instruction on reading and listening. The whole semester lasted for 16 weeks, with eight online classes. The participants took part in synchronous video-based communication. Both the teacher and the students could see each other on their monitors. Each online class lasted for 50 minutes. As part of fluency-based tasks, the students were required to re-tell short stories they had heard before. No script of the stories was provided to the students. In a closed pair work task, the students retold the stories to their teacher, who provided them with corrective feedback (recast) only on the use of articles. All the sessions were recorded. The data, i.e., incorrect use of articles by the students in the storytelling task, were counted in the first phase of data collection and categorized into three classes, namely uptake without modified output, target-like modified output, and non-target-like modified output. According to Robin (2008), storytelling is a valuable teaching/research tool, which engages both teachers and learners. In the second phase of data collection, the recorded narratives of each of the participants were played to them. As they watched their own performance on video, the researcher stopped the episode momentarily wherever a correction was made by the teacher. The researcher asked the participants whether they noticed what the teacher was saying at the time it was said (noticing) and why (perception).

This procedure is known as the stimulated recall interview. The participants' responses were coded as (a) 'noticed', where the learner realized that his/her utterance was incorrect, but did not perceive the mismatch between his/her own utterance and the target-like form, (b) 'perceived as corrective feedback', where the learner realized what the source of error was and what the target-like form was, and (c) 'perceived as Non-corrective', where the learner did not understand why his/her speech was interrupted.

Data analysis

The data were analyzed through Chi-Square test to find out whether there was a statistically significant difference between the type of the participants' uptake, namely 'uptake without modified output', 'target-like modified output', and 'non-target like modified output' and their level of perception, namely 'noticed', 'perceived as corrective feedback', and 'perceived as non-corrective'. Thus, a three-by-three grid was created and Chi-Square test was run. The results are reported with a significance level of $p<05$.

Results

To answer the research question, both descriptive (frequency counts and percentages) and inferential statistics, i.e. Chi-Square tests, were employed in this study. The data obtained are tabulated and explained below.

Table 1
The frequency of the learners' uptake

Uptake without modified output	Non-target-like modified output	Target-like Modified output	Total
9: 6.83%	17: 12.87%	106: 80.30%	132

Table 1 illustrates descriptive statistics pertaining to the frequency of the learners' uptake. Note that 80.30 % of the uptakes were categorized as target-like modified output, 12.87 % of them as non-target-like modified output, and 6.83 % as uptake without modified output. In other words, target-like modified output was the most frequent type of uptake; On the contrary, uptake without modified output was the least frequent one.

The distribution of the types of uptake presented above was compared with that of the participants' perception of the mismatch between their utterances and the recast provided by their teachers. The participants confirmed their perception when they watched video footage of their performance in an online video-based class.

Figure 1
The distribution of the participants' perception of the mismatch between their utterances and the recast in a video-based mobile-mediated class
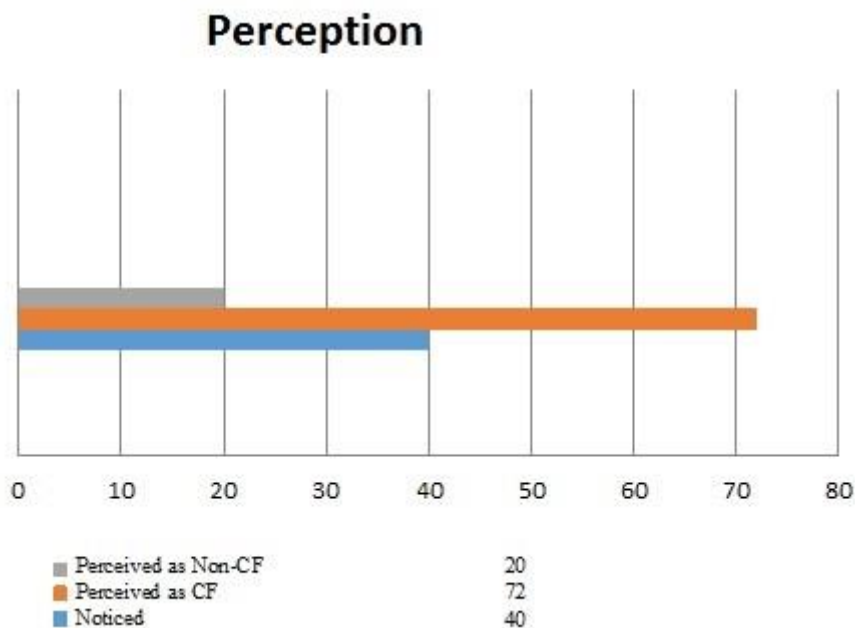
As Figure 1 shows, in the majority of corrective exchanges (54%), the participants did perceive the mismatch between their performance and the target-like form (72/132). In 15% of the corrective exchanges, they failed to even note that the teacher was giving them corrective feedback (20/132). In 30% of the corrective exchanges (40/132) the participants did notice that something was wrong with their utterances but failed to recognize the source of error.

In the next step, the data presented above i.e., the frequency of the different types of uptake were cross-tabulated against the frequency of the participants' perception of the mismatch between their problematic part and the target-like forms, namely 'noticed', 'perceived as CF', and 'perceived as NON-CF'.

Table 2
*Perception * forms of uptake cross-tabulation in a video-based mobile-mediated class*

		Uptake			
		Target-like modified output	Non-target like modification	Uptake without modification	Total
Perception	Noticed	29	10	2	41
	Perceived as CF	72	0	0	72
	Perceived as NON-CF	5	8	6	19
Total		105	18	8	132

The participants modified 29% of their errors (target-like and non-target-like modification) when they only noticed the recast without perceiving the mismatch between their utterance and the recast. They modified 54% of their errors when they perceived the mismatch between their utterance and the recast. The rate of modified output dropped to less than one percent when the participants perceived teachers' recast as non-corrective feedback.

In the next step, to test whether there was a statistically significant difference among the three conditions, namely 'noticed', 'perceived as CF', and 'perceived as NON-CF' in relation to the frequency of the participants' uptake, namely target-like, non-target like modification, and uptake without modification, Pearson's Chi‑Square test was employed.

Table 3
Modified output related to the perception of recast in a video-based mobile-mediated context

	value	df	Asymp.Sig (2-sided)
Pearson Chi^2	60.303*	4	.000
Likelihood Ratio	61.679	4	.000
Linear-by-linear association	7.675	1	.006
N of valid corrective exchanges	132		

The Chi‑Square test revealed that the differences among the frequencies of the three types of uptakes, namely, target-like, non-target like modified output, and uptake without modification were statistically significant $\chi2$ (4,132) = 60.303, p = .000, providing support to a strong association between the frequency of the participants' modified outputs and their perception of the mismatch between the recast and their own erroneous utterances.

Discussion

The current study sought to investigate whether modified output (target-like and non-target-like) was connected to accurate perception of recast in video-based mobile language learning interaction. It was found that learners' modified output was predicted by their accurate perception of recast. The results from data collected through stimulated recall interviews suggested that in instances where the learners perceived the mismatch between their errors and the recast given to them, they were more likely to modify their output, that is, to regress and reformulate the erroneous part. The following observations summarize the results. 1) Approximately four-fifths of the participants' uptake was categorized as 'target-like modified output', i.e., 80.30%, with only 6.83 percent being categorized as 'uptake with no modified output.' 2) In a bit more than half of the recasts, i.e., 54 percent, the participants perceived the mismatch between their performance and the acceptable grammatical form. Meanwhile, in about one-third of the recasts, i.e., 30 percent, the participants noticed that something was wrong with their utterance, though they could not say what the problem was. 3) When the mismatch between the utterances and the target-like form was not perceived by the participants through recasts, they attempted to modify their errors in approximately one-third of their uptake, i.e., 29%. In comparison, when the mismatch between their utterances and the target-like form was perceived through recasts, the participants attempted to modify their errors in a bit more than half of the uptakes, i.e., 54%. This figure (attempt to modify the error) fell to just one percent when the participants did not even realize that their teacher was pointing out their errors to them, i.e., no perception. 4) The differences mentioned above were all statistically significant. Output modification is simply an attempt to correct oneself whether successfully (target-like output) or not (non-target-like output). Output modification is evidence of noticing and a tool for language learning (Sheen, 2004). With the findings aforementioned, this study argues that output modification is possible only if learners can infer their teacher's intention through noticing the mismatch between their utterance and the ideal form. This finding is important especially in the medium of video communication because, unlike f2f interactions, in video communication, learners are more isolated in online classes. Therefore, they may simply regard themselves as passive recipients of information rather than active participants in communication, which discourages them from responding to corrective feedback. In fact, a recent study suggests a noticeable decrease in interaction and engagement in both video and audio-based online classes (Gillett-Swan, 2017).

The results also point to the importance of considering differences in learners' awareness level in eliciting modified output. Doughty (2001) argues that because recast does not interrupt communication flow, learners' cognitive resources could be free to allocate attention resources to the error in focus. Likewise, Long (2007) argues that recast can raise the learner's attention. Unlike the researchers who argue that recast is unable to help learners notice or perceive their corrective purpose (e.g., Egi, 2010; Li, 2010; Panova & Lyster, 2002), the results of the present study show that in the majority of cases it can do so. One possible reason for the good performance of the majority of the learners because of the nature of the tasks. i.e., story-retelling. This is a task with which most people are familiar already. Therefore, learners are not likely to find it intimidating. The findings suggest that retrospection can be a good measure of learners'

perception of recast. Perceiving the mismatches between the target-like forms and the incorrect ones helps learners to reject the non-target-like form in favor of the correct one. Most corrective exchanges of uptake without modified output belonged to the corrective exchanges where the learners did not recognize the function of the recast provided to them by the teacher. Logically speaking, there is no cognitive comparison of two forms when the learner fails to recognize the function of the corrective feedback.

Conclusion and Implications

The study was conducted in a video-based mobile-mediated context. Where the learners perceived the mismatch between their utterances and the recast provided by their teachers via video, they produced a high rate of modified output (83%). Where the learners were not able to perceive the mismatch between them and the recast, their production of modified output dropped to 29%. The Chi-Square test revealed that this difference was statistically significant. A limitation of the study was that in some categories the frequency of observation was below five, which is the minimum required for the Chi-Square test. It should also be acknowledged that the findings of the study may not be generalized to other error forms and contexts. Researchers are encouraged to further study what other factors facilitate modified output following recast in the context of mobile-mediated instruction. This study has implications for both teachers and researchers. While teachers may believe they have to provide learners with corrective feedback, they must remember that corrective feedback is effective only if the learner can perceive it accurately. Thus, corrective feedback should be given under appropriate conditions; for example when the learner is not stressed or under too much pressure. Furthermore, any corrective action is emotionally risky, as it may turn into a 'face-threatening act', further reducing its effectiveness. Thus, teachers may establish a so-called 'emotional bank account' with their students. This would allow them to withdraw from that account in due time. Researchers also need to know that corrective feedback must be seen as a discursive move on two planes, one that is observable i.e., corrective feedback followed by uptake and one that is not observable i.e., level of awareness. So, to reach sound conclusions, both planes must be scrutinized.

References

Abrahams, S. (2005). *Modern Persian: A course-book*. Routledge.

Amhrein, H., & Nassaji, H. (2010). Written corrective feedback: What do students and teachers think is right and why? *Canadian Journal of Applied Linguistics, 13*(2), 95-127.

Ansarin, A. A. (2004). Nongeneric use of the definite article the by Persian learners. *Journal of Faculty of Letters and Humanities, 47*(2), 2-13.

Ary, D., Jacobs, L. C., & Razavieh, A. (1996). *Introduction to research in education* (5th ed.). Forth Worth, TX: Harcourt Brace College.

Baralt, M. (2010). Task complexity, the cognition hypothesis, and interaction in CMC and FTF environments. Unpublished doctoral dissertation, Georgetown University.

Bitchener, J., East., M. & Cartner, H. (2010). *The effectiveness of providing second language (L2) writers with on-line written corrective feedback.* Wellington, NZ: AkoAotearoa.

Blocher, J. M., De Montes, L. S., Willis, E. M., & Tucker, G. (2002). Online learning: Examining the successful student profile. *Journal of Interactive Online Learning, 1*(2), 1-12.

Bower, J., & Kawaguchi, S. (2011). Negotiation of meaning and corrective feedback in Japanese/English eTandem. *Language Learning & Technology*, *15*(1), 41-71.

Burston, J. (2015) Twenty years of MALL project implementation: A meta-analysis of learning outcomes. *ReCALL*, 27(1): 4–20. https://doi.org/10.1017/S0958344014000159

Carpenter, H, Jeon, KS, MacGregor, D & Mackey, A. (2006). Learners' interpretations of recasts, *Studies in Second Language Acquisition, 28* (2), 209–236.

Chang, C. K., & Hsu, C. K. (2011). A mobile-assisted synchronously collaborative translation–annotation system for English as a foreign language (EFL) reading comprehension. *Computer Assisted Language Learning, 24*(2), 155–180. doi:10.1080/09588221.2010.536952

Chinnery, G. M. (2006) Emerging technologies: Going to the MALL: Mobile assisted language learning. *Language Learning & Technology*, 10(1): 9–16.

Doughty, C. (2001). Instructed SLA: Constraints, compensation, and enhancement. In C.

Doughty and M. Long, (Eds.), *Handbook of second language acquisition* (pp.256-310). Blackwell.

Duman, G., Orhon, G. & Gedik, N. (2015) Research trends in mobile assisted language learning from 2000 to 2012. *ReCALL*, 27(2): 197–216. https://doi.org/10.1017/S095834401400028

Egi, T. (2007). Interpreting recast as linguistic evidence: The role of linguistic target, length, and degree of change. *Studies in Second Language Acquisition, 29*, 511-537.

Egi, T. (2010). Uptake, modified output, and learner perceptions of recast: Learner responses as language awareness. *The Modern Language Journal 94*(1), 1–21.

Ellis, R. (2008). The study of second language acquisition. Oxford University Press.

Ellis, R. (2012). *Language teaching research and language pedagogy.* John Wiley & Sons.

Ellis, R., Basturkmen, H., & Loewen, S. (2001). Preemptive focus on form in the ESL classroom. *TESOL quarterly, 35*(3), 407-432.

Gass, S. M. (1997). *Input, interaction, and the second language learner.* Erlbaum.

Gillett-Swan, J. (2017). The challenges of online learning: Supporting and engaging the isolated learner. *Journal of Learning Design, 10*(1), 20-30.

Goldschneider, J., DeKeyser, R., (2001). Explaining the natural order of L2 morpheme acquisition in English: a meta-analysis of multiple determinants. *Language Learning,* (51), 1-50.

Gurzynski-Weiss, L., & Baralt, M. (2015). Does type of modified output correspond to learner noticing of feedback? A closer look in face-to-face and computer-mediated task-based interaction. *Applied Psycholinguistics, 36*(6), 1393-1420.

Han, Z. (2002). A study of the impact of recast on tense consistency in L2 output. *TESOL Quarterly, 36*, 543–572.

Havranek, G. (2002). When is corrective feedback most likely to succeed? *International Journal of Educational Research, 3*7, 255–270.

Iwashita, N. (2003). Negative feedback and positive evidence in task-based interaction: Differential effects on L2 development. *Studies in second language acquisition, 25*(1),1-36.

Kim, J., & Han, Z. (2007). Recast in communicative EFL classes: Do teacher intent and learner interpretation overlap? In A. Mackey (Ed.), *Conversational interaction in second language acquisition: A series of empirical studies* (pp. 269–297). Oxford University Press.

Kukulska-Hulme, A. & Shield, L. (2008). An overview of mobile assisted language learning: From content delivery to supported collaboration and interaction. *ReCALL, 20*(3): 271–289.

Lai, C., Fei, X., & Roots, X. (2008). The contingency of recasts and noticing. *CALICO, 26,* 70–90.

Li, S. (2010). The effectiveness of corrective feedback in SLA: A meta-analysis. *Language Learning*, *60*(2), 309-365.

Little, D. (2011). The common European framework of reference for languages: A research agenda. *Language Teaching, 44*(3), 381.

Lightbown, P. M. (1988). Educational Research and Theory in Language Policy: ESL in Quebec Schools. *TESL Canada Journal, (5)2,* 27-32.

Linares, A., & Lyster, R. (2014). The influence of context on patterns of corrective feedback and learner uptake: A comparison of CLIL and immersion classrooms. *The Language Learning Journal, 42*(2), 181-194.

Lochtman, K. (2002). Oral corrective feedback in the foreign language classroom: How it affects interaction in analytic foreign language teaching. *International Journal of Educational Research, 37*, 271–283.

Loewen, S. (2004). Uptake in incidental focus on form in meaning-focused ESL lessons. *Language Learning, 54*(1), 153-187.

Loewen, S., & Philp, J. (2006). recast in the adult English L2 classroom: Characteristics, explicitness, and effectiveness. *The Modern Language Journal, 90*, 536-56.

Long, M. (1996). The role of the linguistic environment in second language acquisition. In W. Ritchie and T. Bhatia (eds), *Handbook of Second Language Acquisition.* Academic Press, 413 – 468.

Long, M. H. (2006), *Problems in SLA.* Erlbaum.

Lyster, R. (1998). Negotiation of form, recast and explicit correction in relation to error types and learner repair in immersion classrooms. *Language Learning, 48*, 183-218.

Lyster, R. (2004). Different effects of prompts and effects in form-focused instruction. *Studies in Second Language Acquisition, 26*, 399–432.

Lyster, R., & Ranta, L. (1997). Corrective feedback and learner uptake: Negotiation of form in communicative classrooms. *Studies in Second Language Acquisition, (19)* 1, 37-66

Lyster, R., Saito, K., & Sato, M. (2013). Oral corrective feedback in second language classrooms. *Language Teaching, 46*(1), 1-40.

Lyster, R., Lightbown, P., & Spada, N. (1999). A response to Truscott's 'What's wrong with oral grammar correction'. *Canadian Modern Language Review, 55*(4), 457-467.

Lyster, R., & Mori, H. (2006). Interactional feedback and instructional counterbalance. *Studies in Second Language Acquisition, 28*(2), 269-300.

Mackey, A. (2006). Feedback, noticing and instructed second language learning. *Applied Linguistics,27*(3), 405-430.

Mackey, A. (2007). *Conversational interaction in second language acquisition: A series of empirical studies.* Oxford University Press.

Mackey, A., & Gass, S., McDonough, K. (2000). How do learners perceive interactional feedback? *Studies in Second Language Acquisition, 22*, 471-497.

Mackey, A., & Goo, J. (2012). Interaction approach in second language acquisition. *The encyclopedia of applied linguistics*. Oxford University Press.

Milla, R., & Mayo, M. P. G. (2014). Corrective feedback episodes in oral interaction: A comparison of a CLIL and an EFL classroom. *International Journal of English Studies, 14*(1), 1-20

.Muranoi, H. (2007). Output practice in the L2 classroom In R. DeKeyser (Author), *Practice in a second lnguage: Perspectives from applied linguistics and cognitive psychology*. Cambridge University Press. doi:10.1017/CBO9780511667275.005

Panova, I., & Lyster, R. (2002). Patterns of corrective feedback and uptake in an adult ESL classroom. *Tesol Quarterly, 36*(4), 573-595.

Pica, T., Holliday, L., Lewis, N., & Morgenthaler, L. (1989). Comprehensible output as an outcome of linguistic demands on the learner. *Studies in Second Language Acquisition,* 11, 63–90.

Rassaei, E. (2017). Video chat vs. face-to-face recast, learners' interpretations and L2 development: A case of Persian EFL learners. *Computer Assisted Language Learning, 30*(1-2), 133-148.

Rassaei, E. (2019a). Computer-mediated text-based and audio-based corrective feedback, perceptual style and L2 development. *System, 82*, 97-110.

Rassaei, E. (2019b). Recasts during mobile-mediated audio and video interactions: learners' responses, their interpretations, and the development of English articles. *Computer Assisted Language Learning,* 1-27.DOI: 10.1080/09588221.2019. 1671461

Rassaei, E. (2020). Effects of mobile-mediated dynamic and nondynamic glosses on L2 vocabulary learning: A Sociocultural Perspective. *The Modern Language Journal, 104*(1), 284-303.

Rassaei, E., Moinzadeh, A., & Youhannaee, M. (2012). Effects of recasts and metalinguistic corrective feedback on the acquisition of implicit and explicit L2 knowledge. *The Journal of Language Learning and Teaching, 2*(1), 59-75.

Robin, B. R. (2008). Digital storytelling: A powerful technology tool for the 21st century classroom. *Theory into Practice, 47*(3), 220-228.

Russell, V. (2009). Corrective feedback, over a decade of research since Lyster and

Ranta (1997): Where do we stand today. *Electronic Journal of Foreign Language Teaching, 6*(1), 21-31.

Russell, J., & Spada, N. (2006). The effectiveness of corrective feedback for the acquisition of L2 grammar. *Synthesizing research on language learning and teaching*, *13*, 133-164.

Sachs, R., & Suh, B.-R. (2007). Textually enhanced recasts, learner awareness, and L2 outcomes in synchronous computer-mediated interaction. In A. Mackey (Ed.),

Conversational interaction in second language acquisition (pp. 197–227). Oxford University Press.

Sauro, S. (2009).Computer-mediated corrective feedback and the development of L2 grammar. *Language Learning & Technology, 13*(1), 96-120.

Schmidt, R. (1990). The role of consciousness in second language learning. *Applied Linguistics. 11*(2). 129-158.

Shadiev, R., Hwang, W.-Y. & Huang, Y.-M. (2017) Review of research on mobile language learning in authentic environments. *Computer Assisted Language Learning, 30*(3–4): 284–303. https://doi.org/10.1080/09588221.2017.1308383

Sheen, Y. (2004). Corrective feedback and learner uptake in communicative classrooms across instructional settings. *Language Teaching Research,(8)*3, 263–300.

Shintani, N. (2016). The effects of computer-mediated synchronous and asynchronous direct corrective feedback on writing: a case study. *Computer Assisted Language Learning, 29(3)*, 517–538.

Smith, B. (2003). Computer-mediated negotiated interaction: An expanded model. *Modern Language Journal, 87*(1), 38–57.

Smith, B. (2010). Employing eye-tracking technology in researching the effectiveness of recasts in CMC. In *Directions and prospects for educational linguistics* (pp. 79-97). Springer, Dordrecht.

Smith, S., & Wang, S. (2013). Reading and grammar learning through mobile phones. *Language Learning & Technology, 17*(3), 117–134.

Swain, M. (2006). Languaging, agency and collaboration in advanced language proficiency. In H. Byrnes (Ed.), *Advanced language learning: The contribution of Halliday and Vygotsky* (pp. 95–108). Continuum.

Traxler, J. (2007). Defining, discussing and evaluating mobile learning: The moving finger writes. *The International Review of Research in Open and Distance Learning*, *8*(2): 1–12.

Traxler, J. (2018). Distance learning—Predictions and possibilities. *Education Sciences, 8*(1), 1-35.

Xu, Q., Dong, X., & Jiang, L. (2017). EFL learners' perceptions of mobile-assisted feedback on oral production. *Tesol Quearterly , 51*(2), 408-417. doi: 10.1002/tesq.3.

Xu, Q., & Peng, H. (2017). Investigating mobile-assisted oral feedback in teaching Chinese as a second language. *Computer Assisted Language Learning, 30*(3-4), 173-182.Doi: 10.1080/09588221.2017.1297836

Yilmaz, Y. (2012). The relative effects of explicit correction and recasts on two target structures via two communication modes. *Language Learning*, *62(4)*, 1134–1169.

Yilmaz, Y., & Yuksel, D. (2011). Effects of communication mode and salience on recasts: A first exposure study. *Language Teaching Research*, *15*(4), 457–477.

Appendix

First story: Peter and the Wolf

Once upon a time, there was a little shepherd who lived in a town near the woods. His name was Peter, and he always took care of his flock. He was often bored and alone on the field and he used to play alone and invented many games to entertain himself. One time he had an idea to have fun at the expense of his neighbors. One day, Peter started to shout- 'Help, Help. The alarmed neighbors ran out to help him but they just found Peter laughing at them- Ha-ha, ha, you are so silly, I was joking'. The neighbors were angry and went back home. The next day, Peter did the same- 'Help, help the wolf is coming. Some of the neighbors didn't pay any attention, but others ran out again to help Peter. But again, it was just a bad joke. Peter couldn't stop laughing and the good neighbors then decided to ignore him. The day after, Peter the shepherd was with his flock when a big wolf appeared and started to kill the sheep. Peter couldn't believe it, and he shouted again- Help, help a wolf is eating my sheep. But no one in the town ran out to help him. The wolf ate all the sheep and Peter felt really destitute. From that day on, he never lied again and he had to look for a job as he didn't have any sheep left to care for.

Second story: The pied piper of Hamelin

Once upon a time there was a little town called Hamelin, located among the mountains and surrounded by beautiful fields. One day, a lot of rats arrived in Hamelin. The rats ran around everywhere and so the terrified citizens went to plead with the town councilors to free them from this plague. The mayor was in his office trying to think of a plan, when a young man with a golden flute appeared, and offered to rid him and the town of rats in exchange for one million euros. "If you solve this problem I will pay you"- said the Mayor so, that night, a sound of a flute was heard throughout the streets of Hamelin. All the rats followed the pied piper as he marched down to the river and straight into the water behind him the swarm of rats followed him and every one of them was drowned and swept away by the current. Once back in town, the pied piper went to claim his payment- "did you really think that I was going to pay you one million Euros? Said the Mayor, - "I don't have that amount of money and besides anyone can do what you did". This made the pied piper really furious. He went out and started to play his golden flute again. Suddenly all the children started to follow him. Their parents were desperate because their children were running after the young man and the sound of his flute as if hypnotized. The pied piper of Hamelin took the children away and they were never seen again. The Mayor had learned his lesson and he never lied again, but he never found the children that had disappeared and so he had to shoulder the blame and suffer the consequences for the rest of his life.

Third story: Little Red Riding Hood

Once upon a time, there was a little girl called Little Red Riding Hood. One day, her mother said: "Little Red Riding Hood, take this basket full of cakes to your grandmother, she is ill. Don't distract on the way, the forest is dangerous and there is a wolf around.

"Yes Mum"- said Little Red Riding hood. Little Red Riding Hood walked happily to her grandmother's house, but suddenly, a wolf appeared.

-where are you going Little Red Riding Hood?

-to my granny's house, to give her these cakes.

The wolf convinced the girl to take a longer path while he took the short path, so he could arrive before her and eat her grandmother. Then he ate Little Red Riding Hood. Later, after eating them, the wolf fell asleep beside the river. Suddenly, a woodcutter saw him and took the little girl and her granny out of the wolf's stomach and saved their lives. Then he filled the wolf's belly full of big stones and threw him into the river.