Effects of recasts, clarification requests on suprasegment development of English intonation

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ABSTRACT: A total of 102 English as a Foreign Language (EFL) learners participated in the present study, which aimed to test how different types of corrective feedback-recasts and clarification requests-can differentially affect the suprasegment development of English intonation. All participants received 5 treatment sessions designed to encourage them to notice and practice the target feature in meaningful discourse; recasts or clarification requests were provided to the participants' untargetlike production, except those in the control group (n=34), who received comparable instruction but without corrective feedback. Acoustic analyses were conducted on 7 intonation features including words/IP, pause, anacrusis, lengthing, pitch reset, improper tonicity and tone selection elicited via pretest and posttest measures targeting trained instances and untrained instances. The results showed that 1) recasts are more effective than clarification requests on EFL learners' suprasegment development of English intonation; 2) recasts may not only lead learners to establish, reinforce and generalize their new phonological knowledge of English intonation that they had practiced during the treatments, but also help them transmit their attention from trained to untrained learning of foreign language input at a suprasegmental level.
Keywords: Corrective Feedback, Recasts, Clarification Requests, English Intonation

Refundición y solicitud de aclaración sobre el desarrollo supersónico tono inglés

RESUMEN: Un total de 102 estudiantes de inglés participan en este estudio a fin de probar diferentes tipos de retroalimentación correccional-refundición y solicitud de aclaración sobre el desarrollo supersónico tono inglés. Todos los sujetos reciben 5 intervenciones para alentarlos a prestar atención y practicar la estructura del lenguaje objetivo en discurso significativo. En las actividades, si los sujetos en dos grupos de experiencia producen estructuras no objetivas, se proporcionará refundición o solicitud de aclaración de dos tipos diferentes de retroalimentación correccional, mientras que el grupo de control (n = 34) participa en la misma actividad pero no acepta ninguna retroalimentación correctiva. Este estudio utiliza el método de prueba antes y prueba trás, para ejemplo entrenado y ejemplo no entrenado, se realiza el análisis acústico sobre las siete características tonales, incluidos palabras / ip, pausas, flashbacks, tonos largos, restablecimientos de tono, tonos incorrectos y selección de tono. Los resultados muestran: 1）La refundición es más efectiva para promover el desarrollo supersónico tono inglés que la aclaración; 2) La refundición no solo guía a los sujetos a establecer el tono, sino que también promueve el desarrollo supersónico tono inglés de

sujetos, fortalece y resume el nuevo conocimiento fonético de tono inglés practicado en la intervención de los sujetos, y también los ayuda a desplazar la atención de la entrada de idioma extranjero entrenada a la entrada de idioma extranjero no entrenada en nivel supersónico.
Palabras clave: Retroalimentación Correccional, Refundición, Solicitud de Aclaración, Tono Inglés

1. Introduction

Over the past 25 years, the questions about the role of corrective feedback (CF) in Second Language Acquisition (SLA) have been extensively examined (Lyster et al. 2013:1). Whereas previous relevant findings have been exclusively concerned with the morphosyntactic, lexical and pragmatic aspects of language, some recent studies have begun to investigate the role of CF in promoting Second Language (L2) pronunciation development (Saito et al., 2019:652). Notably, previous studies have examined the impact of one single type of CF-recasts in response to nontarget pronunciation (Saito & Lyster, 2012a:595, b:387; Saito, 2013a:499, b:377; Saito & Wu, 2014:647, Saito & Saito, 2017:589; Lee & Lyster, 2016a:35; Parlark & Zigler, 2017:257). Given the relative scarcity of studies teasing apart the effectiveness of various components of CF for helping L2 learners' pronunciation ability (Gooch et al., 2016:117; Lee & Lyster, 2016b:1), the present study aimed not only to examine the role of CF in L2 pronunciation development but also to disentangle composite functions of CF effectiveness, namely recasts and clarification requests for English yes-no questions intonation.

2. Literature Review

2.1. Recasts vs. Clarification Requests

Recasts and clarification requests are often investigated in pairs in interaction-driven research. Recasting is "the teacher's reformulation of all or part of a student's utterance minus the error" (Lyster & Ranta, 1997: 46). Recasts are considered to be an implicit form of CF and are by far the most frequent form of negative feedback in classroom of all kinds (Long, 2017). In comparison to recasts, the second feedback type is prompting, which, according to Lyster & Ranta (1997:37), comes in various shapes and types: clarification requests, repetitions, metalinguistic feedback and elicitations. They all emphasized for their attempts to ask L2 learners to self-correct their targetlike utterance via the opportunities for a second output. An ever-growing number of classroom and laboratory studies have compared the effects of recasts and clarification requests on L2 acquisition. Classroom-based studies commonly involve group interactions; therefore, feedback delivery is usually not intensive, since not all non-target like utterances are corrected by the researcher or teacher. In laboratory-based studies, interactions are usually dyadic and feedback is intensive and controlled. Due to the different characteristics of both environments, feedback has been reported to have differential effects in each of them. In laboratory settings, recasts and clarification requests have been shown to be equally effective (Loewen & Nabei, 2007:361; Lyster & Izquierdo, 2009:453), although there is also evidence suggesting that clarification requests might have an advantage (Carroll & Swain, 1993:357) and that recasts might be more effective for novel

structures or structures developed at a later developmental stage (Long et al., 1998:357). In classroom settings, clarification requests (sometimes operationalized together with other prompts) was demonstrated to be more effective than recasts (Ammar, 2008:183; Ammar & Spada, 2006:543; Dilans, 2010:787; Ellis, 2007:339; Ellis et al., 2006:339; Lyster, 2004:399; Sheen, 2007:301; Van de Guchte et al., 2015:246; Yang & Lyster, 2010:235). However, there is also some evidence suggesting no differences among those two feedbacks moves (Loewen & Philp, 2006:536; McDonough, 2007:323), and two studies found greater effectiveness of recasts over clarification requests (Li, 2013:634; Mifka-Profozic, 2013).

Therefore, recasts and clarification requests can be seen as complementary moves with different purposes for different learners in different discourse contexts. Recasts are ideal for facilitating the delivery of complex subject matter because they provide scaffold support, while serve to move lessons ahead when the target forms in question are beyond the learners' current abilities. At the same time, they can be expected to facilitate the encoding of new target representations when they occur in appropriate discourse contexts. Clarification requests, on the other hand, aim at eliciting modified output without providing any exemplar of positive evidence. This serves to improve control over already internalized forms by assisting learners in the transition from declarative to procedural knowledge.

2.2. Roles of CF in L2 Phonological Development

Notwithstanding the richness of the CF literature, a disproportionate number of studies have investigated the effects of CF on L2 phonological development. Satio (2012:842) took a first step toward examining the acquisitional value of segmental-focused CF by conducting a quasi-experimental study with a pre- and posttest design. Results revealed that segmental-focused recasts can be facilitative of L2 pronunciation development with medium-to-large effects, particularly within familiar lexical items that appeared during the instructional treatment. And then Saito & Lyster (2012a:595) found CF played a key role in the acquisition of /r/ and /a/. Based on the above two studies' research methodology, the following series of studies investigated the effects of CF on L2 speech production, showing overall positive effects of CF on L2 output (Saito & Lyster, 2012b:387; Saito 2013a:499, b:377; Gooch et al., 2016:117). As for speech perception, Lee & Lyster (2016a:35) demonstrated the effectiveness of CF provided during L2 speech perception training and concluded that CF provides learners with opportunities to retrieve, restructure, and consolidate their L2 phonological representations. In the same vein, a recent study by Lee and Lyster (2016b:1) investigated the effects of CF on L2 speech perception training and compared four different CF types. Overall, the CF treatment groups outperformed the control at the immediate and delayed posttests. By adopting the perception accuracy data by Lee and Lyster (2016b:1), Lee & Lyster (2016c:371) found that improvement in perception accuracy was a significant predictor of improvement in production accuracy.

However, the effectiveness of CF in L2 phonological development has also been questioned. To our knowledge, only two studies have examined the role of the acquisitional value of suprasegmental-focused CF (Saito & Wu, 2014:647; Parlar & Zigler, 2017:257). Saito & Wu (2014:647) examined how form-focused instruction (FFI) with and without CF as output enhancement facilitated L2 perception of Mandarin tones at both phonetic and

phonological levels, the results showed that adding CF to FFI as output enhancement was unclear. Parlark & Zigler (2017:257) investigated the impact of CF on the development of primary stress in a synchronous computer-mediated environment, the statistical analyses of the acoustic correlates did not yield significant differences. Following the mixed results, it is timely to call for more refined studies in order to probe whether CF and which type of CF would most benefit different aspects of L2 suprasegmental learning (intonation). Therefore, the following research question was formulated:

How do recasts and clarification requests differentially impact the L2 intonation learning of English?

3. Method

3.1. Participants

A total of 102 undergraduate learners of English as a foreign language (50 male and 52 female), aged from 17 to 19 years (age: M=18.1 years, SD=1.7 years) recruited from 2 intact English classes in school of electronical & information engineering. A one-way ANOVA was conducted with their English scores in College Entrance Exam, the results showed that there was no significant difference among the participants $F(4, 110.56)=3.24$, $p=.64$. They were randomly assigned to one of three groups: the recast-only group (n=34), the clarification request-only group (n=34) and the control group (n=34).

3.2. Ns baselines

A total of 10 English native listeners (5 males, 5 females) participated by taking the same tests. They were undergraduate students at an English-speaking university in Mississauga, Canada (age: M=18.3 years, SD=1.9 years). Their performance served as baseline data for comparison purposes.

3.3. Instructors

A total of 2 experienced instructors (one female Ns from Ottawa, one male Ns from Mississauga, Canada) who worked at university as their oral English teacher participated in this study, they had at least 5 years of EFL or ESL teaching experience and normal hearing.

3.4. Target Structure

English yes-no questions intonation was selected as the linguistic target for three reasons: First, previous studies to test the applicability of CF in L2 pronunciation development mainly focus on vowels (Lee & Lyster, 2016a:35, b:1, c:371), liquids (Saito, 2013 a:499, b:377) and syllable structure (Cardoso, 2011:29) rather than suprasegmental domains such as intonation. As a matter of fact, intonation is of great importance in daily communication, inappropriate use of intonation or insensitive perception of intonation may lead to communi-

cative failure (Chun, 2002). Second, teachers usually focus on the accurate pronunciation of phonemes and word stress in English classroom teaching, while intonation is rarely involved. Meanwhile, learners are mainly concerned with the syntactic and the lexical elements of their utterance (Verdugo, 2003:115). Third, results of previous studies show that Chinese EFL learners indeed have difficulty in intonation production. Moreover, the most convincing cross-linguistic differences are those seen in yes-no questions (Ortega-Llebaria & Colantoni, 2014:331). Thus, the students might have implicit knowledge of this structure and they were likely to get familiar with some English intonation patterns. Our purpose of this study was to examine whether it enabled learners to gain greater control over a structure they have already partially mastered.

3.5. Research Design and Procedures

This study employed a quasi-experiment using intact classes with a pre-test, 5 treatment sessions, an immediate post-test and a delayed post-test design. The study took place over 7 weeks. During the period of experiment, the English yes-no questions intonation had not been explicitly instructed in classrooms. The pre-test was taken on the first day, and 5 treatment sessions were taken in the following 5 days separately, immediate post-test has been taken one day after the last treatment phase. Delayed post-test which determined to exam learners' long-term development was taken 4 weeks later.

3.6. Testing Tasks

Before the beginning of the study, a pilot study was conducted with six students at the same English proficiency level from another class that was not part of the study to check if the content and vocabulary of all the treatment and testing instruments were suitable for the participants' proficiency level. Adjustments and revisions were made on the basis of the piloting results.

Three different versions of an Oral Production Elicitation Tool (OPET) were used as pretest, posttest and delayed posttest. The OPET was controlled oral production task. Each task consisted of 10 dialogues and 6 short conversations, and created 12 obligatory contexts for the use of the English yes-no questions intonation. All the dialogues and conversations were selected from English *900*, which is a theme-based textbook (e.g., hobbies, health, etc.) designed to practice and improve English learners' oral English with 15 standard sentence patterns in each unit. The first 5 dialogues and 3 short conversations were designed as trained target stimuli, whereas the remaining 5 dialogues and 3 short conversations were used as untrained target stimuli, to determine if participants could transfer intonational knowledge from trained to novel sentence. The trained sentences appeared in the training and testing sessions, whereas the untrained sentences were provided during the testing sessions only. Moreover, to prevent participants from noticing the target structure of the experiments, 1 set of distractors (e.g. 1 dialogue and 1 short conversation without yes-no questions) were also included. The immediate posttest and delayed posttest consisted of the pretesting trials but in a different order and also included 1 set of distractors that had nor appeared during the treatment sessions.

3.7. Treatment Tasks

Each of the 5 treatment sessions included guided oral production task that has a similar format to the tests. The task involved 5 dialogues and 3 short conversations of giving and asking for information found in our real life and in classroom discourse, and those dialogues and conversations were still selected from English 900.

In the treatment tasks, participants were instructed to accomplish a role-play with the researcher. They asked the questions that were given to them on the handout and filled out using the information the researcher provided, as outlined in Appendix A. Participants were divided into interaction and feedback group as well as interaction control group depending on whether or not feedback was provided during interaction. Therefore, the 102 young participants were equally divided into 3 groups among three treatment conditions through random assignment. Participants were divided equally into 3 groups, boys and girls are also distributed evenly.

3.7.1. CF with positive evidence (n=34)

In this group, only recasts were provided to learners for their non-target-like forms. The interviewer responded to learners' non-target-like forms by enhancing the salience of those forms through recasts, and paused for a short time to wait for learners' repair. If the learner could not provide a repair, interviewer would continue the conversation without pushing learners to produce a repair. In order to control the variables relating to recasts (Saito, 2013b:377), the recasts in this research were all full recasts.

E.g. Learner*: || IS computer || very IMportant || in finding a ↘JOB ||
T: || Is computer very imporTANT || in finding a ↗JOB|| (recast)
Learner: || Is COMputer very imporTANT || in finding a ↗JOB|| (a repair)

3.7.2. CF with opportunity to modify (n=34)

In this group, only clarification requests were provided to learners for their non-target-like forms. The interviewer responded to learners' non-target-like forms by requesting clarification using an open-ended clarification request but there was no correct language form provided.

E.g. Learner*: || IS computer || very IMportant || in finding a ↘JOB ||
T: En, could you read it again? (clarification request)
Learner: Oh, || Is COMputer very IMportant || in finding a ↗JOB|| (a repair)

3.7.3. Interaction control group.

In this group, no corrective feedback was provided for learners' non-target-like forms. The interviewer did not provide any responses to learners' non-target forms. In this treatment condition, learners did not receive any feedbacks from the interviewer.

E.g. Learner*: || IS computer || very IMportant || in finding a ↗JOB ||
Interviewer: Yes, it is. Er, next sentence.

In the above sentence, "||" stands for tone unit boundaries, prominent syllables are in upper case, and the arrow represents tone selection.

3.8. Coding of Tests & Treatment Sessions and Inter-rater Reliability

The 102 Chinese learners produced 8736 sentences from the pre-posttest sessions. All speech tokens were recorded using a Roland-05 Wave recorder at a 44.1 KHZ sampling rate and 16-bit resolution and a unidirectional microphone (DM-20SL) and normalizing for peak amplitude. Then, a Praat script was used to extract individual tokens from continuous speech and to save them as separate .wav files. All speech tokens were randomized and divided into 48 blokes (162 tokens per block).

In the present study, the target under concern was the subjects' intonation patterns of yes-no questions, Therefore, the intonation features including words/IP, the four acoustic cues of boundaries (pause, anacrusis, lengthing, pitch reset) and improper tonicity, as well as tone selection of each group are calculated and compared (Halliday, 1970). Related data were extracted on the basis of the annotation and pitch contours drawn with Praat as well as to find out the features of Chinese EFL learners' intonation patterns of yes-no questions more objectively and clearly. The numbers of IPs and the acoustic cues at boundaries in the production of NSs and Chinese EFL leaners were calculated and compared. Moreover, the tonicity of each IP was identified, and the pitch contours of target utterances were generated and compared.

The two instructors coded 100 percent of the target linguistic forms in order to assess participant' performance. Inter-rater reliability for these data was based on simple agreement. Where there was disagreement in coding data, the two would listen to the recorded audio carefully to review the data, and re-rated the data.

4. RESULTS

This section mainly tackles the issue of whether and to what degree learners receiving recasts or clarification requests performed better on the target structure than the learners who did not receive CF. If so, which type of CF would be more effective? Therefore, the values of the 7 intonation features were calculated by the value of each learner minus the value of native speaker. Results are divided into two main sections. The first section will detail the overall results from the trained instances. The second section will look at untrained instances and analyze trends in those groups. All the statistical analyses were conducted using IBM SPSS Statistics Version 23.

4.1. Trained Instances

As visually displayed in Table 1., it can be seen that all the groups differ from NSs significantly, namely, the three groups fail to be native-like greatly in the pretest. To find any preexisting differences according to group factors, a Welch ANOVA test was run on the 7 parameters respectively in pre-test data to establish the extent to which the three groups were comparable. Results showed that words/IP: F (2, 0.151)=0.220, p=0.803, pause: F (2, 70.995) =0.117, p= 0.890, anacrusis: F (2, 26.950)=0.426, p=0.654, lengthing: F (2, 0.171)=0.103, p =0.903, pitch reset: F (2, 99.676)=0.455, p=0.636, improper tonicity: F (2, 62.631)=0.043, p =0.958 and tone selection F (2, 179.759)=0.103, p=0.902, suggesting that the learners' pretest scores were comparable and, therefore, that any differences in their posttest scores could be attributed to the effects of the treatment they received.

Table 1. Descriptive results for learners' performance

Groups	*Tests*	*RG (n=34)*		*CRG (n=34)*		*CG (n=34)*	
		M	*SD*	*M*	*SD*	*M*	*SD*
Words/	Pretest	1.20	0.86	1.11	0.83	1.24	0.79
IP	Posttest 1	0.19	0.17	0.49	0.32	1.12	0.78
	Posttest 2	0.40	0.29	0.72	0.29	1.07	0.68
PAU	Pretest	43.06	25.7	42.24	23.75	40.25	24.43
	Posttest 1	4.57	3.28	15.16	9.97	34.34	22.14
	Posttest 2	11.84	8.36	25.96	16.72	32.87	20.63
ANA	Pretest	11.41	8.81	12.34	7.50	13.19	7.47
	Posttest 1	1.57	1.22	4.69	3.70	12.27	7.70
	Posttest 2	2.32	1.31	7.30	3.68	12.08	6.37
LEN	Prestest	1.89	1.25	1.94	1.18	2.03	1.43
	Posttest 1	0.29	0.20	0.77	0.58	1.79	1.29
	Posttest 2	0.63	0.47	1.11	0.90	1.74	1.05
PR	Prestest	27.10	14.8	27.17	13.84	24.17	15.73
	Posttest 1	5.11	3.34	11.63	6.98	22.77	13.61
	Posttest 2	9.55	8.00	19.43	10.71	22.10	13.39
IT	Pretest	63.47	34.7	63.21	38.74	65.68	40.43
	Posttest 1	10.93	7.71	27.19	16.58	55.49	35.20
	Posttest 2	23.02	14.8	40.94	29.43	52.81	34.24
TS	Pretest	66.29	38.9	70.88	42.67	68.34	43.35
	Posttest 1	11.65	6.97	31.76	24.18	63.61	36.28
	Posttest 2	20.83	15.3	46.72	35.83	56.51	30.93

Note. RG=recasts group; CRG=clarification requests group; CG=control group.

Next, the results were analyzed with a two-way ANOVA with Group as a between-group factor and Time (pre/posttests) as within-group factor. It yielded a significant main effect of Group, a significant main effect of Time, and a significant main effect of Group and Time interaction effect. Bonferroni multiple comparisons found significant improvement in the immediate posttest for the recast group and for the clarification request group. While in the delayed posttest, significant improvement over time was only manifested in recasts group.

Taken together, these results indicate the following patterns: (a) leaners from recasts group and clarification requests group manifested short-term development of English yes-no questions intonation, but only learners form recasts group sustained over time, (b) the learners from recasts group outperformed those from clarification requests group.

4.2. Untrained Instances

As visually displayed in Table 2., it can be seen that all the groups differ from NSs significantly, namely, the three groups fail to be native-like greatly in the pretest. To find any preexisting differences according to group factors, a Welch ANOVA test was run on the 7 parameters respectively in pre-test data to establish the extent to which the three groups were comparable. Results showed that words/IP: F (2, 0.090)=0.144, p=0.866, pause: F (2, 45.196) =0.066, p=0.936, anacrusis: F (2, 38.190)=0.591, p=0.556, lengthing: F (2, 0.770)=0.518, p =0.597, pitch reset: F (2, 80.663)=0.357, p=0.701, improper tonicity: F (2, 80.663)=0.357, p =0.701 and tone seletion F (2, 41.273)=0.103, p=0.978, suggesting that the learners' pretest scores were comparable and, therefore, that any differences in their posttest scores could be attributed to the effects of the treatment they received.

Table 2. Descriptive results for learners' performance

Groups	*Tests*	*RG (n=34)*		*CRG (n=34)*		*CG (n=34)*	
		M	*SD*	*M*	*SD*	*M*	*SD*
Words/	Pretest	1.24	0.78	1.21	0.79	1.14	0.79
IP	Posttest 1	0.27	0.20	0.93	0.70	1.10	0.75
	Posttest 2	0.46	0.37	0.96	0.68	1.05	0.60
PAU	Pretest	41.2	26.7	41.50	23.74	43.33	27.97
	Posttest 1	7.23	4.27	29.70	14.03	38.38	22.54
	Posttest 2	15.96	11.4	30.98	21.06	34.83	19.47
ANA	Pretest	13.57	7.98	11.50	7.82	12.93	8.30
	Posttest 1	2.67	1.89	8.89	7.46	10.97	6.07
	Posttest 2	5.42	3.44	9.14	6.80	10.38	6.13
LEN	Prestest	1.85	1.27	2.02	1.22	2.15	1.16
	Posttest 1	0.27	0.19	1.43	0.87	1.87	0.94
	Posttest 2	0.59	0.43	1.67	1.01	1.80	1.07
PR	Prestest	25.42	15.70	26.91	14.31	23.83	15.04
	Posttest 1	3.77	2.88	18.51	12.59	21.39	14.49
	Posttest 2	8.53	5.12	19.29	12.02	20.14	12.68
IT	Pretest	59.57	36.4	63.05	33.27	62.66	36.68
	Posttest 1	8.76	4.76	39.99	27.63	56.33	31.42
	Posttest 2	17.60	9.99	44.68	31.45	50.37	28.34
TS	Pretest	70.83	45.80	69.16	41.22	71.24	42.16
	Posttest 1	14.01	10.2	47.12	33.12	64.47	34.48
	Posttest 2	23.19	16.40	51.86	29.97	59.35	32.39

Note. RG=recasts group; CRG=clarification requests group; CG=control group.

Next, the results were analyzed with a two-way ANOVA with Group as a between-group factor and Time (pre/posttests) as within-group factor. The analysis yielded a significant main effect of Group, a significant main effect of Time, and a significant main effect of Group and Time interaction effect. Bonferroni multiple comparisons found significant improvement in the immediate posttest for the recast group, and the significant improvement sustained over time in the delayed posttest.

Taken together, these results indicate the following patterns: (a) only leaners from the recast group manifested short and long-term development of English intonation, (b) the learners from the recast group outperformed those from the clarification request group.

To summarize, the overall effect of recasts on the development of English intonation outperformed clarification requests.

5. Discussion

The present study is a contribution to provide a comprehensive understanding of how recasts and clarification requests facilitate L2 speech learning on the English intonation by L2 learners of English. The results of the statistical analyses show that among the groups in this particular study: 1) recasts are more effective than clarification requests on L2 learners' development of English intonation; 2) recasts may not only lead the learners to establish, reinforce and generalize their new phonological knowledge of English intonation that they had practiced during the treatments, but also help leaners transmit their attention from trained to untrained learning of L2 input at a suprasegmental level. The efficacy of phonological recasts can be ascribed to the following factors.

First of all, the primary reason that recasts are more effective than clarification requests is that recasts can provide learners with both positive and negative evidence as well as self-repair practice (Saito, 2013a:499). For one thing, the support of positive evidence in recasts which include explicit crosslinguistic information and input enhancement allows L2 learners to focus on dissimilarities of intonations in their L2 speech and the counterparts in the target language. Another advantage is that, with the support of negative evidence in recasts which includes signal of errors, learners' phonological knowledge is challenged and as a result, modification has to be made in their L2 phonological knowledge. Such modification urges L2 learners to notice the gap (Schmidt, 1990:128) between the correct forms in recasts and their own utterances and to restructure their existing knowledge toward target-like representations. The self-repair opportunities after receiving phonological recasts available in the present study cannot be overstated, either. The results of the implementation data showed that leaners in the present study produced 91.37% of self-repair following recasts. Through the procedure of recasts + repair sequence, the learners were provided with opportunities to reflect on and modify their phonological knowledge, and ample opportunities to test their hypothesis about their problematic contrast and confirm their phonological knowledge.

The second reason may be concerned with the fact that clarification requests used in this study seems to be more implicit than the corrective moves that fall into the categories of prompts such as metalinguistic cues, repetitions or elicitations. Although clarification requests give opportunities for the learners to reformulate their utterances, most of the learners would not know the correct intention by only being asked 'pardon', 'excuse me', or

'can you read it again' and such phrases and sentence might be considered as a request to repeat their previous utterance. As argued by Long et al. (1998:357), CF types in the form of clarification requests are likely to cause anxiety among learners, which, in turn, affects their attention to the targeted structures and reduces the effectiveness of the feedback. Similarly, given that they rarely had the opportunities to speak up in their English class, the learners in the clarification request group may felt threatened when pushed for output when they could not provide self-correction (Li, 2018:103). Therefore, some of them pay more attention to the accuracy of individual words or their pronunciation in their reformulation, and they need much more time to consume the input provided to them and fail to recognize their improper and inaccurate intonation.

Learners' age and performance level may also be a contributing factor. The 17-19-year-old participants in the present study performed at an intermediate level, they are developmentally ready and might be able to benefit from recasts (Mackey & Philp, 1998). At the same time, learners were eager and willing to respond to recasts in the process, with a high level of attention. In line with Skehan (1998), the active role following recasts can generate appreciation for receiving corrections and the required transformation into new output, arouse strong connections in memory and therefore may lead to subsequent learning.

It is important to mention here that the comparisons of the results between the immediate posttest and the delayed posttest show that the scores declined slightly in the recast group in the delayed posttest. As Long (2017) suggests, recasts have longer effects for learner's language development. He believes that learners who receive recasts are likely to obtain higher scores in the delayed posttest than in the immediate posttest. These contradictory remarks could be explained by the different linguistic environment learners have immerged in. Leaners in this research did not emerge themselves into an English-speaking environment, actually, apart from one and half hour English course each week, learners have no chance to practice/speak English in their daily life, thus they have no chance to practice the English intonation.

6. Conclusions

The present study took a novel step to investigate the effectiveness of recasts and clarification requests regarding English intonation. It found that 1) recasts are more effective than clarification requests on L2 learners' development of English intonation; 2) recasts may not only lead the learners to establish, reinforce and generalize their new phonological knowledge of English intonation that they had practiced during the treatments, but also help leaners transmit their attention from trained to untrained learning of L2 input at a suprasegmental level.

The present study has several limitations. First, variables such as length of recasts, pronunciation focus, type of change mode, the use of reduction have been controlled, but the body gestures like facial expression failed to control, which would have some influence on the outcome. Second, the current setting was laboratory-based. The treatment tasks and test tasks are felt like "tests" by learners, it is possible that the CF in treatment make learners anxious about possibility of making mistakes (Li, 2018:103). As a result, learners, in their posttest production tasks, are likely to be more careful and make more efforts in the use of

their conscious knowledge. It is necessary to make some investigations about types of CF and English yes-no questions intonation in more natural language setting (classroom setting and daily conversation). Third, the present study employed a narrowing testing aspect of L2. The treatment and testing tasks were intensive, in that tasks were designed to elicit high numbers of obligatory contexts, the feedback provided were consistent, and other non-target forms were ignored. Finally, the present study took a simple research method. It only controlled for production opportunities through treatment sessions, and the testing measure was also controlled production task. It would be more convincing to test a mixture of CF types in different aspects of L2 speech (e.g., perception, controlled and spontaneous production). A strong call was made to test the applicability of the CF to other areas of instructed L2 learning, such as vowels (Saito, 2012:842), liquids (Gooch et al. 2016:117), word stress (Parlark & Zigler, 2017:257), lexical tone (Saito & Wu, 2014:647), VOT (Offerman & Olson, 2016:45) with a range of L2 learners with different L1s, ages, proficiency, language aptitude and length of residence and instruction.

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9. APPENDIX

Guided Oral Production

Please read the following dialogues and conversations loudly and clearly.

Dialogues

(1) Jane: Is English very important in finding a job?
Jack: Sure, but fluent English alone can't guarantee you a job.

(2)* Stranger: Gosh, the water faucet is dripping badly again!
Maggie: You gotta have a huge bill.
Stranger: I know. I've got to get it fixed as soon as possible.

Short Conversations

(1) Grandma: Have you finished your homework?
Bill: Not yet. What's the matter?
Grandma: Your uncle is coming tonight. You must finish it by 9'o clock.
Bill: But there is too much, I'm afraid I can't finish it.
Grandma: That's what you said yesterday.

(2)* Mia: Ella, it's been such a long week. I'm ready to go out and party. Hey, let's go out for a night on the town.
Wendy: Gosh, you took all the word right out of my mouth. Let's go out and get crazy tonight.
Mia: Let's go to the new club on West Street.
Wendy: Sure, but what do I wear?
Mia: You can wear that pretty red dress.
Wendy: Great!