

## ***Considering the Effectiveness of Recasts on Japanese High School Learners' Learning***

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The recast is the most frequently used feedback in classroom settings. Previous research has shown the potential advantages of the recast, although some problems have also been suggested. A measurement that regarded students' corrective responses after receiving recasts as uptake indicated the low effectiveness of recasts as corrective feedback (Lyster, 1998b; Lyster & Ranta, 1997). This study attempts to examine the effects of recasts by using a measurement established after careful analysis of recasts and students' responses. Thirty-two intermediate Japanese high school students and a native speaker of English participated in the study, with the native speaker interviewing the students. In measuring the effectiveness of recasts "no opportunity" and "preferred recasts" were not included in the denominator, meaning that they were not coded as corrective recasts; "later incorporation" and "acknowledgement" were included in the numerator, meaning that they were coded as successful. The effects of recasts were also examined according to the error type, the degree of difference between students' initial utterances and the recasts, and the number of morphemes of recasts. The results showed the relatively high effectiveness of recasts on Japanese high school students' English learning. Discussion of the findings and pedagogical implications in providing recasts is also given.

**Key words: corrective recast, preferred recast, no opportunity, later incorporation, acknowledgement**

## INTRODUCTION

Previous research has shown that interaction plays a crucial role in the learning process by providing learners with input, feedback and opportunities for output, and this leads them to modify and adjust their output (e.g., Long, 1996; Swain, 1985, 1993). Despite teachers' concerns that feedback could interrupt communicative interaction, recent research has shown that "providing feedback 'in the heat of the moment' may be the most efficient and effective technique" (Lyster, 2007, p. 137). Feedback can be categorized into two types: positive evidence or negative evidence: The former is a model of what is grammatical and acceptable, and the latter is defined as input that provides evidence of what is ungrammatical and unacceptable (Long, 1996). As some have shown that providing only positive evidence or correct forms of the target language cannot develop the language (e.g., Long, 1996; Swain, 1985, 1993), corrective feedback, defined as responses to a non-target-like form produced by the learners (Iwashita, 2003), has been gaining attention. Among various types of teachers' corrective feedback, recasts, which are implicit corrective feedback reformulating all or part of ill-formed utterances provided by learners without changing the central meaning (Iwashita, 2003; Long, 1996; Lyster, 1998a, 1998b), are the most frequently used type of feedback (e.g., Lyster, 1998a, 1998b; Lyster & Ranta, 1997; Zhao & Bitchener, 2007; Zyzik & Polio, 2008). If recasts provided in communicative activities are proven to be effective for high school students' English learning, it would suggest one possible solution on how teachers could improve students' communicative abilities as well as grammatical and linguistic knowledge in English. Thus, it is important to investigate the effects of recasts with careful analysis of recasts and students' responses. This study examines and discusses the effect of recasts for Japanese high school learners' English learning.

## THEORETICAL BACKGROUND

The recast is defined by Long (1996) as an utterance that rephrases an utterance by changing one or more of its sentence components while still referring to its central meanings. Recasts belong to a type of implicit negative evidence or corrective feedback (Iwashita, 2003; Leeman, 2003). Recasts, which can also offer positive evidence providing a target reformulation (Leeman, 2003), are “by far the most frequently used feedback across a spectrum of classroom settings” (Lyster, 2007, p. 93). The following is an example of a recast from the current study:

### Example 1

Student1: I study English very hard tomorrow.

Teacher: Oh, you will study English tomorrow. ←*recast*

Student 1: Yes. I will study English, and I will watch TV.

Teacher: What TV program?

Lyster (2007) states that recasts help maintain the flow of communication, keeping learners’ attention on content and enabling them to participate in interaction in which their linguistic abilities can exceed their current level. As the facilitative features of recasts, Farrar (1992) has pointed out the roles of recasts in L1: they reformulate a syntactic element; they expand a syntactic element or semantic element or both; the utterance in the form of the recast is semantically contingent; and recasts immediately follow the learner’s utterance. Long (2006) concludes that L2 research findings have shown that recasts in the L2 are as effective as in L1. He states that recasts are not clearly necessary for acquisition but are facilitative and especially efficient for older, more proficient L2 learners in that they do not interrupt the flow of conversation, and thus keep learners focused on message contents.

However, some problems with recasts have also been suggested. One of the most noted problems with recasts as corrective feedback is ambiguity from a learner’s perspective, which may lead learners to perceive recasts as

merely alternatives, not modification (Chaudron, 1988). Recasts can also be perceived as confirmation, paraphrase or correction (Lyster, 1998a, 2007). Loewen and Philp (2006) summarize that the effectiveness of recasts is susceptible to (1) the classroom context such as the age of the participants and the extent of the language focus, (2) the context of the recasts within the discourse, and (3) variable elements of recasts. As problems for recast studies, Ellis and Sheen (2006) have pointed out: (1) definitional fuzziness, that is to say, there are many types of definitions for "recasts"; (2) contextual factors, which means that recast studies in lab settings cannot be equated with those in classroom settings.

Some previous studies showed that other types of feedback were more effective than recasts. In a quasi-classroom study, Lyster (2004) compared the effects of recasts and prompts (i.e., clarification requests, repetitions, metalinguistic clues and elicitation), and statistical analysis of the results of the written tasks revealed that students receiving prompts performed better than students receiving recasts. Varnosfadrani and Basturkmen (2009), referring to the crucial role of attention in learning, argued that explicit correction would induce learners' awareness more than implicit correction such as recasts.

Some researchers have paid particular attention to recasts in the Japanese EFL situation. Muranoi (2000) in a quasi-experimental study focusing on college-level students in Japan, investigated how recasts benefit the acquisition of English articles. He found that recasts helped the development of learners' interlanguage, both in written and oral tests. Loewen and Nabei (2007) examined how different types of feedback (i.e., clarification requests, metalinguistic clues and recasts) affect university students' interlanguage development, and found that all feedback was equally effective. Sakai (2004) examined whether recasts would contribute to university students' noticing and repairing language in later production, by comparing the effect of models. The results implied that recasts would have a more enhancing effect than models would, on noticing by Japanese learners of English.

Although the potential value and problems of recasts as an enhancement in

Japanese learners' L2 development have been researched and reported, only a limited number of studies have been conducted with high school learners. In one of these studies, Sato (2006) examined, in his descriptive small-scale classroom study, the effectiveness of recasts for low-level Japanese high school students while they were performing interactive communicative activities with a teacher. The results revealed that only a small proportion of the teacher's recasts was followed by well-formed output (repair) from students (16%). However, a qualitative analysis of the activities implied that some characteristics of the recasts led to this poor result. For example, recasts without any corrective purpose and recasts with multiple changes from the students' original utterances made it difficult for students to notice their errors or mistakes. When recasts with one change were provided with a corrective purpose, 62% of them were followed by repair. As recasts in a Japanese high school context have not been researched in much depth, it would be improper to draw any conclusions on their effects on learning English in the Japanese EFL classroom.

## **THE PURPOSE OF THE STUDY**

Sato (2006), which explored the effects of recasts on low-level Japanese learners of English without high motivation toward learning English, revealed that recasts were not very effective and were provided inefficiently by a Japanese teacher. As previous research indicates that recasts are more helpful for high and intermediate learners than for low-level learners (Philp, 2003), it is necessary to investigate the effects of recasts not only on low-level Japanese learners but also on intermediate ones. The current study examines the effects of recasts on intermediate high school learners, most of whom are college bound. This time, recasts are provided not by a Japanese teacher but by a native speaker of English. This study examines the effects of recasts according to the error type, the degree of difference between students' initial utterances and the recasts, and the number of morphemes of recasts.

This was motivated by previous studies which found some relationship of those factors with the effects of recasts (Lyster, 1998b; Philp, 2003; Sato, 2006). This study is designed to examine: How effective are recasts for intermediate high school students according to error types? (RQ1); the degree of differences? (RQ2); length ? (RQ3)

## **METHOD**

### **Context of the Study and Participants**

In Japan, English has long been taught as a knowledge-based subject and, for many students, passing of knowledge-based exams is the primary objective. Japanese students seem to have dual orientations for learning English: a practical, realistic goal related to examinations and grades, and a vague idealistic goal related to using English for international or intercultural communication (Yashima, 2000). It seems that most students have the former type of motivation (related to tests) more than the latter (related to communication) in the Japanese EFL situation (Yashima, Zenuk-Nishide, & Shimizu, 2004).

The participants of the study were: a native English teacher from Australia who had been teaching English as an assistant language teacher (ALT) for five and a half years in Japan; 32 second-grade college bound Japanese high school students (15 males and 17 females, aged 16 or 17). In the curriculum, the students were taking a general English II course and a writing course. Four English II classes and two writing classes were conducted in a week. A Japanese teacher taught all of the classes except one writing class which was taught by her and the ALT together, once in two weeks. In the writing class, students were engaged in communicative activities and tasks as well as writing activities. All of the students had passed the entrance exams for the academically higher level high school with relatively high scores in English. In the questionnaire conducted just before the study, 28 out of 32 students

(88%) answered that they liked the communicative English classes taught by the ALT. Thus, we regarded them as intermediated students with relatively high motivation toward learning English.

### **Procedure**

The English class for the study was not a formal teacher-centered class but was instead a series of interview tests of students, conducted by the ALT, David (this name is fictitious). In the interview, David and a student had a free conversation, which mainly took the form of David asking questions and the student answering about his/her daily life covering topics such as hobbies, study, family, future dreams and so on. There were no target structures for the study as this was a natural communication-based task. David had told students to do their best to communicate clearly and said he would evaluate students' English performances. David knew that their interactions would be recorded but did not know the purposes of the study. He had not been given any instruction on which types of feedback should be given to students. All recordings were transcribed and re-checked by the researcher to ensure their accuracy. Additionally, in a limited number of cases where there were still unsolved transcription difficulties, the original participants were invited to interpret. The database includes 32 interviews totaling 362 minutes.

### **Data Analysis**

#### *Error Types*

Student errors to which recasts were given were categorized as grammatical errors, lexical errors, phonological errors and unsolicited uses of Japanese, following Lyster and Ranta (1997): (1) Grammatical errors are errors in the use or lack of determiners, particles, verb forms, word order; (2) Lexical errors include inappropriate, imprecise or inaccurate choices of lexical items; (3) Phonological errors address inappropriate, imprecise or inaccurate

pronunciation; (4) Unsolicited use of Japanese is an instance where a student speaks Japanese instead of English. In cases where a student produced an utterance with more than one type of error, we coded it as the error type on which the recast focused. The following are examples according to error types.

Example 2 Grammatical recast.

S2: I go to Okinawa two years ago.

D: Oh, you went to Okinawa before. ←*recast*

S2: I was very happy. (Failed)

Student 2 failed to repair the utterance after David's grammatical recast, and was therefore coded as "Failed". In Example 3, student 3 succeeded in producing a repaired utterance and was coded as "Successful".

Example 3 Lexical recast.

S3: I will drink, drink medicine.

D: Yes. You will take medicine. ←*recast*

S3: Oh, Yes. Yes. Take medicine. (Successful)

In the following examples, students successfully responded to recasts.

Example 4 Phonological recast

S4: I had a headache (mispronounced as /hedeit/) )

D: Oh, you had a headache. ←*recast*

S4: Yes. Headache (pronounced correctly) headache. (Successful)

Example 5 Recast to unsolicited use of L1

S5: I want to be a... Kango- si?

D: Oh, you want to be a nurse. ←*recast*

S5: Yes, I want to be a nurse, nurse. (Successful)



Although students' unsolicited use of their L1 may not be erroneous, it is crucial for them to communicate without using Japanese. A response from the teacher can be interpreted as an explicit correction, but it is still corrective feedback changing only the use of the L1 without changing the speaker's central meaning. Thus, this type of feedback was regarded as a recast in this study.

### *Degree of Difference*

To examine the effects of the degree of difference between the learner's initial utterance and the recast, the number of changes was counted and coded following Philp (2003), but for the study, recasts were divided into two categories according to whether the recast had only a single change or more than one change. This decision was made referring to Sato (2006) which revealed that recasts with more than one change were less likely to be noticed by the learners. Conversion of the subject was not counted as a change and inversion counted as one change. Recasts in examples 2 to 5 were counted as a single change, and the recast in example 6 was coded as two changes (were, playing).

#### Example 6

S6: I... I'm ... play baseball last year.

D: OK, you were playing baseball last year. ←*recast*

S6: ... (silence) ... Yes. I play... (Failed)

### *Lengths*

Recasts were also categorized into long or short ones according to the number of morphemes, based on Philp (2003): recasts with more than five morphemes were coded as long. Example 7 was coded as short and Example 8, long.

Example 7

S7: I eat it.

D: Oh, you ate it. ←*recast*

S7: Yes, I ate it. (Successful)

Example 8

S8: I didn't know... what... should I do... study.

D: OK, you didn't know what you should study then. ←*recast*

S8:... (silence)... I ... lazy... (failed)

### Issues in Analyzing the Effects of Recasts

In analyzing the results, some crucial issues emerged that could affect the interpretation of the effects of recasting. Previous studies counted learners' correct reformulation of an error occurring immediately after recasts as a repair in measuring the effectiveness of recasts (e.g., Lyster, 1998b; Lyster & Ranta, 1997; Sato 2006). However, this measurement should be reconsidered. Long (2006) mentions that recasts do not always have immediate corrective effects and that learners' immediate reproduction after recasts is unreliable as an indication of learning since it might be just a "language-like" behavior (p.99). He introduces Mackey and Philip (1998), which showed that the existence of immediate response to feedback was not an indication of learning, and also that the absence of an immediate response did not mean learning had not occurred. This argument is convincing. Practicing teachers know that learners are more likely to respond immediately after teachers' models—if they are well trained to do so—and that some learners can learn without responding to teachers.

#### *Acknowledgement*

We found that in many cases (14 instances) students just responded to recasts by saying "yes," "mm", or nodding. In Lyster and Ranta (1997), these

learners' acknowledgments were categorized as "needs-repair" not "repair". However, we have to reconsider this categorization. Acceptance of the teacher's correct version means indication of what the learner really wanted to say, and understanding that the teacher's version is better than the learner's erroneous utterance. Even though the learner fails to repeat the correct form provided by the teacher, he/she must have made a cognitive comparison between the utterances, or at least the learner understood the feedback given. When acknowledgment occurs, it can be regarded as effective from the point of view of comprehension. Another reason that acknowledgement should not simply be regarded as failure is that agreeing with or replying to a recast by simply saying "yes" is more appropriate (Oliver, 1995; Pica, 1988). Pica's (1988) suggestion that the non-native speakers' (NNSs) response to native speakers' (NSs) feedback, other than acknowledgement, would be conversationally inappropriate, can be applied to the study. The interview test conducted by David definitely had a pedagogical purpose requiring students to speak correctly, but the test itself was meaning-focused interaction. We could assume that some students may have hesitated to produce repair because this would interrupt the flow of the conversation or simply be unnatural. As long as it is not elicitation feedback such as a clarification request, some students may have assumed it was unnecessary to modify their initial utterances, as it was more appropriate for them to simply acknowledge recasts to continue the conversation (Sato & Lyster, 2007). When students acknowledged, they may not have known which part of their utterance was wrong, but at least they must have learned that their utterance was incorrect (Kim & Han, 2007). Repair can be "evidence that learners are noticing the feedback" (Lightbown, 2000, p. 447), but the absence of a repair does not mean learners' noticing has not occurred.

#### *Later Incorporation*

In seven cases, students produced a reformulated version of their errors, not just after recasts but in later turns which they self-initiated to produce

correct forms. This type of self-initiated, modified repair, which came several turns after recasts in the current study, should be regarded as optimal for acquisition. Shehadeh (2001) argues that self-initiation means the NNS has realized that he/she needs to reformulate or modify output toward comprehensibility for successful transmission of the message. Lyster and Ranta (1997) argue that this attempt to produce more accurate and more comprehensible output will push learners to reprocess and restructure their interlanguage toward modified output. Ohta (as cited in Long, 2006) regards this type of later private speech from learners as evidence of the mental activity of cognitive comparison between their ill-formed output and recast. Sato (2008) found that it is difficult for low-level Japanese learners of English to self-initiate to reproduce their own errors. Gass (1997) argues that learners need to have further access to input so that they can show evidence that their interlanguage has changed, and she points out the possible delayed effect of negative feedback. Delayed self-initiated repair indicates that the learner has tested his/her hypothesis on the L2 form—previously produced erroneously—without being corrected immediately after a recast. It is assumed that hypothesis testing is happening (Swain, 1985, 1993) as one of the crucial functions in output. Thus, we may have to code students' later incorporation as successful uptake.

#### *No Opportunity*

In interactions between David and the students, 142 recasts were recorded, among which 43 (30%) did not provide students with opportunities to respond. In these instances David continued to speak after providing recasts, leaving no opportunity for students to show repair. The following is an example.

##### Example 9

S9 I play violin in junior high school.

D: You played the violin. OK. Was it difficult?

↑(No opportunity)

This phenomena has been reported previously, both in laboratory and classroom settings (e.g., Loewen & Philp, 2006; Oliver, 1995; Sato, 2006; Zhao & Bitchener, 2007). However, as Zhao and Bitchener (2007) claim, this “no repair” may not mean that students did not really understand the feedback provided as recasts in the current study. We could assume, as Oliver (1995) has argued, if students had been given the opportunity to respond, some of them could have done so successfully.

#### *Preferred Recast*

It has been reported that teachers tend to use non-corrective repetition in teacher–student interaction (e.g., Lyster, 1998a; Sato, 2006) to show, for example, acceptance, approval or confirmation (Lyster, 1998a). These non-corrective repetitions were not counted as recasts since they did not include rephrasing or changing of students’ utterances. However, a very similar phenomenon which could reduce the salience of “real corrective recasts” was reported in the study. On many occasions (40 instances were reported), David responded to students’ correct forms by providing recasts to show his preferences or to “edit discourse” (Mohan & Beckett, 2001, p.138 as cited in Long, 2006). In the current study, we decided to use the term “preferred recast” which showed David’s preference or inclination. The following is an example of a preferred recast

Example 10

S10: I like singing.

D: Oh, you like to sing.

In the current study, students did not show repair after preferred recasts. They only acknowledged the recast 13 times by saying “yes” or nodding; while 8 times they did not notice or ignored the recasts. In four cases, students responded by ill-formed output, as Example 11 shows.

Example 11

S11: I want to learn knowledge about history.

D: You want to be knowledgeable about history. (preferred recast)

S11: ... No, no. I'm not.

D: OK, so...

In the example, the student could not understand David's preferred recast and seemed to have been confused. In the rest of the cases of preferred recasts, opportunities to respond were not given.

*Measuring the Effectiveness of Recasts*

Taking into account the issues mentioned, a criterion was set up in measuring the effectiveness of recasts. When students acknowledged recasts, they served as comprehensible input because students' acknowledgement indicates their understanding of recasts given. In this situation, recasts were effective, at the least, at the level of comprehension. Acknowledgement moves should be regarded as potential evidence of the effectiveness of a recast for L2 learning (Zhao & Bitchener, 2007). In the case of students' repair in later turns, this is more overt indication of incorporation. When students are not given the opportunity to respond to recasts they consequently cannot do so. When they are given recasts to their correct utterances, students do not have to reformulate their original utterances. The measurement to examine the effectiveness of recasts taken was: "no opportunity" and "preferred recasts" were not included in the denominator; "later incorporation" and "acknowledgement" were included in the numerator, meaning that they were coded as successful.

Students produced 142 erroneous utterances which were given recasts by David. The two raters coded 20% (28) of total recasts to classify them according to error types, the number of changes, and the number of morphemes. Agreement on the coding was 25 out of 28 (89%). We considered that inter-rater agreement was high enough for the first rater to

continue coding. In the situation when students' errors included more than one error type and recasts included more than one change with more than one error type, we excluded them from analysis. There were only four instances like this and David did not give learners opportunities to respond to his recast.

## RESULTS

We recorded 20 repairs, 14 times of "acknowledgement", 7 times of "later incorporation", 43 times of "no opportunity" and 40 "preferred recasts". The calculation conducted was:  $(20+14+7) \div (142-43-40) = 69\%$ . A chi-square statistic was computed, which proved there was significant difference between the numbers of successful moves (41) and unsuccessful moves (18) ( $\chi^2 = 8.96$ ,  $df = 1$ ,  $p < .05$ ). The term "success rate" may not be the best one to use here, as acknowledgement may not always show the effectiveness of recasts, and the degree to which recasts have enhanced learning can differ by the three moves (i.e., repair, later incorporation, acknowledgement). However, the term is meaningful enough to distinguish the three moves from failures (i.e., recasts ignored or unnoticed), so it was decided to use it for the study.

### Error Types and Success Rate

Table 1 presents the number of recasts, successful moves and success rates according to error types. Recasts were given mostly to students' grammatical errors followed by lexical errors, phonological errors, and their unsolicited use of Japanese. The rate of success was highest with students' L1 use followed by lexical errors, phonological errors, and the rate of success with grammatical errors was found to be the lowest.

**TABLE 1**  
**Number of Recasts, Successful Moves and Success Rate by Error Type**

Type	Recast	Repair	Acknowledgement	Later incorporation	Success rate
Grammar	29	5	9	4	62 %
Lexical	13	6	3	1	77 %
Phonological	10	5	2	0	70 %
L1	7	4	0	2	86 %

### Degree of Difference

Table 2 shows the number of recasts with one difference, more than one difference between the learner's initial utterance, and successful moves. The results revealed that recasts with only a single change led students to successful moves better than recasts with more than one change. The acknowledgement move was more frequent and later incorporation was less with recasts having more than one change than with recasts having only a single change.

**TABLE 2**  
**Number of Recasts, Successful Moves and Success Rate by Degree of Change**

Differences	Recast	Repair	Acknowledgement	Later incorporation	Success rate
One change	33	15	5	6	79%
More than one change	26	5	9	1	58%

### Length of Recast

Table 3 shows the number of short recasts with 5 morphemes or less and long recasts with more than 5 morphemes, and successful moves. The distribution of long recasts was very low (10%). Although the result showed a higher success rate of long recasts, neither repair nor later incorporation was recorded. A successful move was confirmed only by acknowledgement.



**TABLE 3**  
**Number of Recasts, Successful Moves and Success Rates by Length of Recast**

Length	Recast	Repair	Acknowledgement	Later incorporation	Success rate
Short	53	20	8	7	66%
Long	6	0	6	0	100%

## DISCUSSION

In general, the results imply that recasts can facilitate learning, considering the high success rate (69%). Statistically, a successful move was more frequent than a failed move. However, some factors appeared to have impacted on the effectiveness of recasts. First, error types were revealed to have affected both the distribution and the effectiveness of recasts, as summarized in the following:

Distribution of recasts:

Grammar (49%)>Lexical (22%)>Phonological (17%)>L1 (12%)

Success rate:

L1 (86%)>Lexical (77%)>Phonological (70%)>Grammar (62%)

David provided recasts more frequently to students' grammatical errors than to any other error types, which is similar to previous studies (e.g., Kim & Han, 2007; Lyster, 1998b; Lyster & Ranta, 1997; Oliver, 1995; Zyzik, & Polio, 2008). In this study, neither the total number of students' errors by type nor other types of feedback produced by David were addressed, so the interpretation of David's preference for recasting with grammatical errors is a matter of speculation. However, referring to the results reported earlier (e.g., Lyster, 1998b; Lyster & Ranta, 1997), we could assume that David might have felt it appropriate to recast with grammatical errors because modifying students' grammatical knowledge through negotiation of form requires modifying complex system-driven rules. We could also assume that in the Japanese grammatical accuracy-oriented English classroom, he might have

felt it important to address grammatical correctness. Despite this, the success rate in grammar was the lowest, which is generally consistent with previous studies (e.g., Kim & Han, 2007; Trofimovich, Ammar, & Gatbonton, 2007; Williams, 1999). Trofimovich et al. (2007) found that higher proficiency learners benefited from recasts more than lower proficiency learners. They suggest that in order to notice their own errors through recasts and to reformulate them after recasts, students should already have knowledge of the form. In this study, some students must have lacked the explicit knowledge to benefit from the enhancing effect of recasts. Learners' explicit knowledge can be a precondition to respond to recasts directed at grammatical errors successfully, whether their response is in the form of immediate repair, acknowledgement, or later incorporation. That is to say, students should have knowledge about the target form, especially in showing immediate and later repair. Just to acknowledge recasts may not require this deeper knowledge, a comprehension level may be sufficient. The fact that among total success moves (18), acknowledgement was the most frequent move (9, 50%) implies that recasts directed at grammatical errors had a less enhancing effect than recasts directed at other types of errors.

Recasts addressed at students' L1 led to the highest rate of immediate repair or later self-repair. This is explained by the salience of the recast and the cognitive process students experienced when they decided to speak Japanese followed by the English equivalent (recast). As feedback was given immediately after students found interlanguage deficiencies, they could easily understand the corrective purpose of the recast, leading them to produce what they had wanted to say. Recasts were provided exactly when needed, as positive evidence. Without a doubt we can assume this "right thing done at the right time" approach enhanced learning.

The results revealed that recasts of lexical and phonological errors were noticed more by the students, showing they had greater effectiveness than those directed at grammatical errors, which is consistent with previous studies (e.g., Kim & Han, 2007; Oliver, 1995). The tendency of learners to concentrate on lexical meaning rather than on form, as research on interaction

has shown (e.g., Williams, 1999; Zhao & Bitchener, 2007), was confirmed in the study. Trofimovich et al. (2007) found that learners were more likely to detect lexical errors than grammatical errors when they received recasts. In this study, as was observed in Egi (2007), students were more likely to interpret lexical recasts as corrective positive evidence than when provided with grammatical recasts.

The slightly higher success rate of phonological recasts than grammatical recasts may be attributable to their salience and unequivocalness (Lyster, 1998b). A recast given immediately after an incorrect pronunciation clearly conveyed its corrective purpose, showing a model without requiring cognitive readiness. We could assume that in some cases students only had to imitate or repeat David's pronunciation, even when they did not have any knowledge to correct phonological errors. In addition, David, who had been teaching in Japan for years and did not have difficulty in understanding students' Japanese-accented pronunciation, provided phonological recasts only when the students made serious errors. This behavior of his must have made the recasts more salient.

As for the effects of recasts, judging by the difference between learners' utterances and recasts, the results supported Philp (2003) who mentioned that recasts closer to learners' utterances may be more beneficial to learners. The fact that later incorporation, which requires a complicated cognitive process such as hypothesis testing, was reported only once after multiple-change recasts, but six times after single-change recasts also shows the more conducive effect of single-change recasts compared to multiple-change recasts.

In interpreting the effects by length, we decided just to look at repair and later incorporation excluding acknowledgement because the total number of long recasts (more than five morphemes) was very small, and all of the successful moves after long recasts were acknowledgements automatically producing a 100 % success rate. The reason that students failed to repair either immediately or later is explained by Philp (2003) as being because long recasts are difficult to retain in working memory as they may overload the time limitation of the phonological store. In a stimulate recall session in

Egi (2007), which revealed that long recasts were less conducive, it was found that learners failed to perceive long recasts as corrective, but this was not the case with shorter recasts. We can assume that in the current study students also failed to repair, and could only acknowledge, due to the overloaded ambiguous nature of long recasts.

## CONCLUSION

The study, which examined the effectiveness of recasts for Japanese high school learners, implied that facilitating optimal effects of recasts for learning, showed a high success rate computed by the criteria which considered acknowledgement, later incorporation, no opportunity, and preferred recasts.

Analyses of the study offer some pedagogical implications. When recasts are given, they should be short with only a single change and should have 5 morphemes or less so that learners can notice them easily and use them to reformulate their original erroneous utterances. No opportunity and preferred recasts were found to reduce the optimal effects of recasts, indicating that only when learners had made errors should corrective recasts be given, followed by an opportunity for learners to reformulate. Recasts to students' L1 use are most effective, followed by lexical, phonological, and grammatical recasts. In deciding whether or not to give recasts and when choosing the types of feedback, it can be beneficial to keep this order in mind. Doughty (2001) has mentioned that while explicit correction is intrusive, breaking into learners' utterances, implicit correction such as recasts enables learners to integrate forms as the learner continues to speak. For learners who often have difficulty continuing communication in English, such as the Japanese high school students in the study, the unobtrusive quality of recasts is helpful even at the expense of other disadvantages. It was recorded that two students, who were not necessarily the most proficient in English, produced repair more than twice after corrective recasts. This implies that if students know the corrective purpose of recasts and are given the opportunity

to respond, they are more likely to do so. It is crucial for teachers to provide recasts at the right time in the correct manner so that students can notice recasts and thus reformulate their errors.

There are some limitations that need to be recognized. In this study, observable overt acknowledgement was coded as a successful move, which may raise some questions. We believe that acknowledgement, in general, is a learner's successful cognitive reaction to recasts, but there is the possibility that students misinterpreted corrective recasts as acceptance, response to contents, or confirmation. Acknowledgement implies that students have paid attention to recasts but they may not have noticed the negative evidence of recasts. In this study it was impossible to measure correctly the degree of learner noticing or the existence of correct interpretation of recasts through acknowledgement since it is not as well evidenced as repair or later incorporation. We have to admit that in some cases acknowledgement may not involve learning-relevant cognitive process. Related to this issue, students' erroneous responses to corrective recasts were coded as failed in this study. We could assume that the students may have noticed that their original utterances were incorrect and tried to produce more target like ones. It is necessary to explore the validity of the measurement employed in the study. We interpreted that students had to use existing explicit knowledge to respond successfully to grammatical recasts. However, as recasts can function as positive evidence as well as negative feedback, recasts may have the potential of being beneficial in the development of new language. We assume this can be the case when recasts intensively target some specific structure. Further study is needed to examine this. Another limitation of the study is its sample size. Ideally we should have had more students to be interviewed, and more interviewers to provide them with recasts. The results of the study, with only 32 students and one interlocutor engaged in the interview activity, may not be generalizable.

This small-scale study, as the first study to attempt to analyze the effectiveness of recasts with a measurement after scrupulous analysis of recasts and students' responses, should be seen as preliminary. To confirm

the findings of the study, further research on learners' cognitive reaction to recasts, with more samples, is needed.

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