

Exploration into the Effects of Recast Types on Advanced-Level Japanese EFL Learners' Noticing

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Abstract

It has been argued that learners have to notice the corrective intention of recasts by attending to the linguistic problems in their initial utterances, which means that when learners notice the gap between their erroneous utterance and the recast, learning can occur (Schmidt, 1990). This study examined the effectiveness of recasts on learners' noticing according to recast features, by conducting stimulated recall interviews. The effects of recasts were investigated in terms of error types of learner utterances (i.e. grammatical, lexical or phonological), degree of change in the recast (i.e. one change vs. more than one change), and length of the recast (i.e. short recasts with less than six morphemes vs. long recasts with more than five morphemes). Three advanced Japanese university students engaged in a picture description and a semi-structured interview, during which they received recasts to their erroneous utterances. Following stimulated recall interviews, the participants' noticing of recasts was measured and analyzed. Their verbal reports revealed that the rate of noticing was the highest with phonological recasts, followed by lexical recasts, and grammatical recasts showed the lowest noticing rate. No difference was discerned concerning the number of changes or recast length.

1 Introduction

As one particular type of oral corrective feedback, recast, defined as reformulation of all or part of the students' utterances (e.g. Lyster & Ranta, 1997), has been receiving considerable attention (e.g. Egi, 2007; Ellis & Sheen, 2006; Iwashita, 2003; Long, 1996; Lyster & Ranta, 1997; Lyster, 1998a, 1998b). In many previous studies, learners' correct reformulation of an error occurring immediately after recasts was counted as a "repair" in measuring the effectiveness of recasts (e.g. Lyster, 1998b; Lyster & Ranta, 1997). However, some researchers are skeptical about the view that learners' immediate reproduction after recasts is an indication of learning because of the possibility that learners can just repeat the recasts in a parrot-like fashion without understanding or noticing the corrective intention of recasts (e.g. Bao, Egi, & Han, 2011; Egi, 2010; Gass, 2003). Stimulated recall is a different approach in evaluating the effects of recasts and can probe learners' perception of recasts and the extent to which recasts can engage learners in a cognitive comparison, and noticing (Ellis, 1994). This approach has been widely used as a more reliable way in eliciting learners' commentaries as evidence of noticing in oral interaction (e.g. Egi, 2010; Mackey, Gass, & McDonough, 2000; Yoshida, 2010). Thus, this study explores three advanced-level Japanese learners' noticing of recasts according to recasts features through stimulated recall interviews.

2 Previous studies

2.1 Recasts

Recasts are, in general, considered to be implicit corrective feedback reformulating all or part of ill-formed utterances provided by teachers without changing the central meaning (Iwashita, 2003; Long, 1996; Lyster, 1998a, 1998b). They are often used as well as prompts by teachers, partly because recasts can sustain classroom interaction (Lyster & Mori, 2006). However, Ellis and Sheen (2006) argue that when the language is treated not for message conveyance but as an object, the recasts cannot be implicit but explicit. Analyzing the recasts from learners' perspective, they also argue that when learners establish metalinguistic awareness from the recast, this is due to their perceiving the recast as explicit correction. They conclude that recasts should not necessarily be regarded as implicit, but be taken as more or less implicit or explicit, depending on how recasts are given by the teacher and how they are perceived by the students. Thus, in this study, recasts are regarded as a type of corrective feedback regardless of whether it is implicit or explicit. The following is an example of a recast from the current study:

Example 1

Student1: I like childs very much.

Teacher: Oh, you like children very much.←recast

Student1: Yes. I like children very much, so I wanted to teach them how to play the piano.

In the above example, immediately after the student noticed the recast, she successfully repaired it and the talk continued. Long (2006) states that L2 research findings have shown that recasts in the L2 are as effective as in the L1. Other studies have also revealed that recasts are effective for learning, or can at least lead learners to repair as frequently as explicit correction in EFL settings (Loewen & Nabei, 2007; Lyster & Mori, 2006; Muranoi, 2000). However, some studies, for example, those conducted by Lyster and his colleagues (e.g. Lyster & Ranta, 1997; Lyster, 1998b; Lyster, 2004; Panova & Lyster, 2002), have demonstrated that recasts are less effective than explicit correction. In addition, Varnosfadrani and Basturkmen (2009), referring to the crucial role of attention in learning, have argued that explicit correction would induce learners' awareness more than implicit correction such as recasts.

As for the effectiveness of recasts measured by learners' successful uptake or repair (i.e. learners' correct reformulation of an error occurring immediately after a recast), it can differ by the recast type. It has been reported that learners are less likely to repair after grammatical recasts (i.e. recasts to grammatical errors) than lexical and phonological recasts (e.g. Kim & Han, 2007; Trofimovich, Ammar, & Gathbonton, 2007; Sato, 2009; Williams, 1999). Trofimovich et al. (2007) found that learners were more likely to detect lexical errors than grammatical errors when they received recasts, and in Egi (2007) and Sato (2009), it was observed that students were more likely to interpret lexical recasts as corrective feedback than when provided with grammatical recasts. The more facilitative effects of phonological recasts over grammatical recasts are attributed to their salience and unequivocalness (Lyster, 1998b); moreover, erroneous pronunciation can more seriously interfere with understanding than grammatical recasts, making phonological recasts more salient (Mackey et al., 2000; Saito & Lyster, 2012). Trofimovich et al. (2007) suggest that in order for learners to notice their own errors through recasts and to reformulate them after recasts, learners should already have knowledge of the form and that higher proficiency learners benefit from recasts more than lower proficiency learners. Sato (2009), which compared the effects of recast types on Japanese EFL learner repair, cautiously suggested that learners' explicit knowledge can be a precondition to respond successfully to recasts directed at grammatical errors, although stimulated recall data were not obtained for this study.

As for the effects of recasts, judging by the difference between learners' utterances and recasts, Philp (2003) concluded that recasts closer to learners' utterances may be more beneficial to learners, and Sheen (2006) showed that the number of changes from learners' utterances to recasts is an influential factor affecting learners' perception of recasts: the fewer the number of changes, the

better learners can repair. Sato's study (2009) also revealed the more conducive effect of single-change recasts compared to multiple-change recasts.

From the results of previous studies, it can be concluded that short recasts are more easily noticed by learners than long recasts, leading them to repair previous erroneous utterances (e.g. Egi, 2007; Philp, 2003; Sato, 2009; Sheen, 2006). Egi (2007) found, through a stimulated recall session, that learners failed to perceive long recasts as corrective and that this was not the case with shorter recasts. She concluded long recasts were less conducive. Philp (2003) explained that long recasts are difficult to retain in working memory as they may overload the time limitation of the phonological store. It can be summarized that long recasts are less effective due to the overloaded nature.

2.2 *Noticing*

Schmidt has introduced his own experience as a learner of Portuguese in Brazil to demonstrate the importance of attention by showing that almost all new forms that appeared in his spontaneous speech were consciously attended to previously in the input (Schmidt & Frota, 1986), and has argued that "subliminal language learning is impossible, and that noticing is the necessary and sufficient condition for converting input to intake" (p.129). According to his Noticing Hypothesis (Schmidt, 1990), nothing is learned without noticing. That is, for a learner to acquire some feature of language, it is not enough for the learner to be exposed to it through comprehensible input. The learner must notice what it is in that input that makes meaning (Schmidt, 1990, 1994).

2.3 *Measuring the effectiveness of recasts*

In a number of previous studies, learners' repair of their initial errors after recasts has been counted as a reliable measure of L2 learning (e.g. Egi, 2010; Ellis & Sheen, 2006; Loewen, 2005; Lyster, 1998b; Lyster & Ranta, 1997; Sato, 2009). However, doubts have been cast regarding learners' immediate reproduction after recasts as an indication of learning because of the possibility that learners can just repeat the recasts in a parrot-like fashion without understanding their corrective intention (e.g. Bao et al., 2011; Egi, 2010; Gass, 2003). It has also been reported previously that learners could not respond to proffered recasts only, because interlocutors often did not provide opportunities for learners to repair their utterances (e.g. Loewen & Philp, 2006; Oliver, 1995; Sato, 2009; Zhao & Bitchener, 2007).

Researchers argue that learners have to notice the corrective intention of recasts by attending to the linguistic problems in their initial utterances so that recasts can be effective for learning (e.g. Gass, 1997; Schmidt, 1990). This means that when learners notice the gap between their erroneous utterance and the recast, learning can occur (Schmidt, 1990). Stimulated recall is a retrospective method to elicit the thought processes involved in carrying out an activity and can evaluate the effects of recasts focusing on learners' cognitive processes when they are provided recasts. (Gass & Mackey, 2000). This method is intended to probe learners' perception of recasts and the extent to which recasts can engage learners in a cognitive comparison, or noticing (Ellis, 1994). By using a stimulus, such as an audio or a video recording, learners are asked to report what they were thinking at the time of the activity. This approach of eliciting learners' commentaries as evidence of noticing in oral interaction has been widely used (e.g. Egi, 2010; Mackey, et al, 2000; Yoshida, 2010). For example, Egi (2010) explored the relationship between uptake and noticing by using the stimulated recall approach and revealed that learners who perceived that the recasts had corrective intention were more likely to produce uptake after recasts. Yoshida (2010) investigated perceptions of corrective feedback using audio recordings and stimulated recalls of seven Japanese as foreign language (JFL) university learners and two JFL university teachers, and by analyzing the data, she concluded that learners' responses to corrective feedback, such as recasts, did not always indicate noticing or understanding of the corrective feedback.

3 The study

3.1 Purpose of the study

Previous studies explored the effects of recasts according to recasts-types (e.g. Kim & Han, 2007; Philp, 2003; Sato, 2009; Trofimovich et al., 2007; Williams, 1999). Some studies used stimulated recall interviews (e.g. Egi, 2010; Mackey, et al, 2000; Yoshida, 2010). However, the effects of recasts on Japanese EFL learners' noticing have not been fully investigated by the recast-type with a stimulated recall method. In addition, noticing of recasts by advanced-level Japanese learners has not been well researched yet. With this background, the following research questions have been formulated for this study:

- (1) What is the effect of recasts for advanced-level Japanese university students' noticing according to error types?
- (2) What is the effect of recasts for advanced-level Japanese university students' noticing according to the degree of differences in the recast?
- (3) What is the effect of recasts for advanced-level Japanese university students' noticing according to the length in the recast?

This study was also aimed at analyzing learners' noticing qualitatively through comments provided in the stimulated interviews.

3.2 Students

Three university students in the same national university of education in Japan, Kanako, Yuki, and Kouki (all names are pseudonyms), participated in the study, as they were qualified as advanced learners of English. Kanako was a graduate student majoring in music, who also held an English teaching license. In the same year, before the study was conducted (September, 2011), she had studied English teaching methodologies in Canada for 6 months. Yuki was a senior majoring in English education, who had studied abroad at an American university for 10 months, from September 2010 to July 2011. Kouki, who was majoring in English education, had studied at a South Korean university for 10 months, from September 2010 to July 2011. His decision to study abroad in Korea was motivated by his strong desire to learn a different Asian culture, which he thought would be useful in teaching English at Japanese junior high schools. At that university, he took a lot of English medium classes with other international students in which all of the communication was done in English, and used both English and Korean in his daily life there.

All participants had already passed the pre-first grade of the STEP Test¹ and were preparing to take the first grade of the STEP Test at the time of the study. As they were also able to use English almost correctly and fluently without having serious problems in communicating in English, they can be regarded as advanced learners of English. Ideally, more participants should have been needed, but they were the only students who were qualified for the study as advanced-level learners among those who were willing to participate in the study. The breakdown of the participants in the study is shown in Table 1:

Table 1. Breakdown of the students

Name	Major	Age	Gender	English Proficiency	Study Abroad Experience
Kanako	Music	23	F	pre-first grade STEP Test	Canada (6 months)
Yuki	English	22	F	pre-first grade STEP Test	America (10 months)
Kouki	English	22	M	pre-first grade STEP Test	South Korea(10 months)

3.3 Procedure

As Table 2 shows, this study involved two sessions, in which students had one-to-one interaction with the researcher, and both of which were recorded by a digital video camera and an audio recorder. In the first task of the first session, students were engaged in a picture description activity adopted from the pre-first grade STEP Test (see Appendix A). In the activity, students were given a horizontal sequence of four pictures, and were required to describe the story depicted. As the same four pictures were used for all three students, the expected descriptions were also similar, which could give rise to the students producing the same errors or mistakes² to which same feedback can be given by the researcher. The second task of the first session was a semi-structured interview in English, in which the researcher asked questions about the students' study abroad experience, as well as their daily life, covering topics such as hobbies, study, family, and future dreams. Although the first task was a structured activity, in which they were required to describe the pictures as correctly as possible, the second task was a more open, free activity, in which they were allowed to express their own experiences, opinions and so on. Several hours after the first session, stimulated recall interviews were conducted in Japanese, because the information they were asked to deliver was complex (e.g. Nabei & Swain, 2002). All recordings were transcribed and re-checked by the author to ensure their accuracy. Additionally, in a limited number of cases where there were unresolved transcription difficulties, individual participants were invited to help interpret the results.

Table 2. Sequence of procedures

	First session Oral tasks (Picture description, Interview)	Second session Stimulated recall
Ka-nako	44 minutes long (from 9:30, September, 30, 2011)	62 minutes (from 16:00)
Yuki	36 minutes long (from 10:00, October, 4, 2011)	44 minutes long (from 16:00)
Kou-ki	40 minutes long (from 9:00, October, 26, 2011)	51 minutes long (from 16:00)

3.4 Provision of recasts

In the current study, recasts were provided extensively and randomly without targeted specific features following Ellis and Sheen (2006), who argued that pre-selecting target forms for intensive recasts in research settings can be of little significance for practicing teachers seeking implications for actual teaching. In addition, it was thought that although the expected descriptions would be the same in the first task of the first session, different types of production would emerge in the second task.

Recasts provided in the study were: repetitions of all or part of the participants' initial utterances, plus reformulations of students' erroneous productions (mere repetitions of the participants' utterances were not considered as recasts); provided immediately after participants' erroneous productions; not additions or changes of any information from the participants' initial target-like utterances. After all the recasts, the participants were given opportunities to respond. In addition to the recasts, prompts (i.e. clarification requests, repetitions, metalinguistic clues and elicitation) and explicit corrections were also given, as is usually done in EFL classroom settings.

3.5 Stimulated recall

The stimulated recall interview was conducted on the same day after the first session, as previous studies suggest that learners can recall recent activity more accurately (e.g. Egi, 2008). As the information they were asked to deliver (e.g. what they were thinking or feeling at the time when recasts were given.) was complex, the stimulated recall was carried out in the students' L1, Japa-

nese (e.g. Nabei & Swain, 2002). The video recorded interactions between individual participants and the researcher was shown as a visual cue in order to elicit valid data. Before viewing the video, students were given the recall instructions (see Appendix B), which were adapted from previous studies (e.g. Egi, 2004, 2008), verbally in Japanese. Students received brief training in stimulated recall using the video of the small talk at the start of the first session. The video was paused after any recasts. It was also stopped randomly after other types of feedback with some correct utterances so that the participants would not know the purpose of the study (Al-Surmi, 2012; Egi, 2008). The picture used in the picture description activity was also presented to the students to facilitate recall of thoughts (Al-Surmi, 2012; Egi, 2008). The interviewer listened passively to the participants' recall without being a conversational partner who could ask leading questions (Egi, 2008; Gass & Mackey, 2000). The whole session was audio and video recorded, and all recordings were transcribed and re-checked by the author to ensure their accuracy.

3.6 Data analysis

Error types: Following Lyster and Ranta (1997), students' errors to which recasts were given were categorized as grammatical errors, lexical errors, and phonological errors: 1) Grammatical errors are errors in the use or lack of determiners, particles, verb forms, or word order; 2) Lexical errors include inappropriate, imprecise, or inaccurate choices of lexical items; and 3) Phonological errors address inappropriate, imprecise, or inaccurate pronunciation. In cases where a student produced an utterance with more than one type of error, it was coded as the error type on which the recast focused.

Degree of difference: The number of changes was counted and coded to examine the effects of the degree of difference between the learner's initial utterance and the recast, following Philp (2003). For this study, however, 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, 2009), 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.

Lengths: Based on previous studies (e.g. Philp, 2003, Sato, 2009), recasts were also classified as long or short according to the number of morphemes, and the entire recasts utterances with more than five morphemes were coded as long.

Noticing: 'Noticing' was coded when learners' comments obtained through the recall indicated that they had recognized the corrective intention of recasts and attended to the linguistic problems of their initial utterances (e.g. "The teacher said 'the child' and I realized I mistakenly used the plural form"). In a situation when a learner did not show repair after being given a recast, it was coded as noticing as long as the comment implied noticing had happened. This is based on Schmidt's Noticing Hypothesis (1990, 2001), which suggests that learning occurs when learners notice the gap between what they produced and the recasts received. The researcher conducted the coding using the transcriptions, and did it again a week after the first classification, following Alderson, Clapham, and Wall (1995), who assert that multiple rating sessions increase reliability. Intra-coder reliability was 94.3% (66/70), and where there were four cases of discrepancies between the two ratings, a second rater, a graduate student majoring in English Education, checked them. After discussion between the author and the second rater, the disagreements were resolved.

4 Findings and discussion

The first research question asked about learners' noticing according to error types. The interaction between the researcher and each of the participants in this study lasted 120 minutes in total and resulted in a total of 70 recasts. Tables 3, 4 and 5 show the frequencies, the percentages of noticing, and noticing rates by error types for each participant³:

Table 3. Error type, Kanako: Number of recasts, noticing, no noticing, and noticing rates

Type	Recast	Noticing	No noticing	Noticing rate
Grammar	15	6	9	40%
Lexical	5	4	1	80%
Phonological	1	1	0	100%
	21	11	10	52%

Table 4. Error type, Yuki: Number of recasts, noticing, no noticing, and noticing rates

Type	Recast	Noticing	No noticing	Noticing rate
Grammar	13	4	9	31%
Lexical	3	2	1	67%
Phonological	0	0	0	-
	16	6	10	38%

Table 5. Error type, Kouki: Number of recasts, noticing, no noticing, and noticing rates

Type	Recast	Noticing	No noticing	Noticing rate
Grammar	25	8	17	32%
Lexical	7	5	2	71%
Phonological	1	1	0	100%
	33	14	19	42%

To summarize the results, the individual frequencies for the three students were combined, and noticing rates were calculated, as shown in Table 6. As they shared similar English learning backgrounds and English proficiencies, this measurement was regarded as valid in this study.

Table 6. Error type, total: Number of recasts, noticing, no noticing, and noticing rates

Type	Recast	Noticing	No noticing	Noticing rate
Grammar	53	18	35	34%
Lexical	15	11	4	73%
Phonological	2	2	0	100%
	70	31	39	44%

The rate of noticing was the highest with phonological recasts, followed by lexical recasts, and grammatical recasts showed the lowest noticing rate. The facilitative effects of phonological recasts can be explained by their salience and unequivocalness (Lyster, 1998b).

Excerpt 1 (Kouki)

Kouki: I will “launch” (mispronounced as/ lántʃ/) my business.

Researcher: Pardon?

Kouki: “Launch” (repeated the same mispronunciation) my business.

Researcher: You want to “launch” your own business. ←recast

Kouki: Yes. I want to “launch, launch” (pronounced correctly) my business.

Kouki’s recall

When I heard the teacher pronouncing “launch,” I remembered the correct pronunciation of the word⁴.

This excerpt implies the role of explicit knowledge, knowledge about language that learners can report, in noticing and repairing phonological errors. In this excerpt, his remark, “I remembered ...” can imply that Kouki had explicit knowledge of the meaning of “launch” and partially acquired knowledge of the pronunciation, which did not make it very difficult for him to notice and correct his mistake⁵. In another example, Kanako noticed the recast but could not repair her pronunciation.

Excerpt 2 (Kanako)

Researcher: Do you think that competitive sports build characters in children?

Kanako: ... I was in the brass band club, but it was not "competitive" (mispronounced as/komp  rativ/).

Researcher: OK, it was not competitive? ←recast

Kanako: Yes. We were like good friends. We had to win the contest.

Kanako's recall:

I wanted to mean "competitive" and noticed my mispronunciation. But I did not correct it because I still did not know how to pronounce it.

In this excerpt, Kanako mentions that she did not know how to pronounce "competitive," which may imply her lack of explicit knowledge about the pronunciation of the word.

As only two phonological recasts were recorded in the study, the results should be cautiously interpreted. However, these two excerpts could imply that the noticing of phonological recasts may not be difficult, but that repair requires that learners at least possess partially acquired explicit knowledge of the pronunciation. Future study should examine the effectiveness of phonological recasts in further detail. Although beyond the scope of the current investigation, further study should also explore the roles of explicit pronunciation knowledge in noticing and its relation to repair.

Lexical recasts comprised 73% of the noticing recorded, but grammatical, only 34%, had the lowest noticing rates of all three. These results were compatible with previous studies that showed lower effectiveness of grammatical recasts compared to lexical and phonological recasts as measured by learners' successful uptake or repair (e.g. Kim & Han, 2007; Lyster, 1998b; Mackey et al., 2000; Sato, 2009; Trofimovich et al., 2007; Williams, 1999).

The students were advanced learners who had already passed the pre-first grade of the STEP Test, and therefore could be assumed to possess a lot of explicit knowledge or implicit knowledge of English grammar⁶. In a previous study, Sato (2009) speculated that explicit knowledge can lead to the noticing of grammatical recasts. This is supported by Saito and Lyster (2012), who argue that learners with "good grammatical knowledge" (p. 604) can monitor their utterances. However, in the current study, only 18 out of 53 (34%) grammatical recasts were noticed.

Excerpt 3 (Yuki)

Yuki: The student lived in the same dorm and she is seventeen.

Researcher: She was seventeen? ←recast

Yuki: Yes. Younger.

Yuki's recall:

I thought the teacher just wanted to confirm that the student was so young. I did not notice my mistake about tense.

Excerpt 4 (Kanako)

Kanako: If I were the teacher, I don't ... I don't scold the child.

Researcher: You would not scold. ←recast

Kouki: Yes. If I were her.

Kanako's recall

As I knew the rule, I used the subjunctive past, but I didn't notice that I had made a mistake then.

It is argued that recasts may not be very effective in drawing learners' attention to forms because of their ambiguity: learners may perceive them as seeking confirmation or additional information (e.g. Lyster: 1998, 2004; Lyster & Ranta, 1997). In this study, both recalls imply that learners are likely to perceive grammatical recasts as comments on content or as confirmation checks because of their unsalient and equivocal nature. Grammatical errors can less seriously interfere with understanding than lexical and pronunciation errors (Mackey et al., 2000), and in the current study, I, as a researcher, did not experience interference of understanding caused by these grammatical errors. This must have made these grammatical recasts unsalient and equivocal. It can

be interpreted that this equivocality or ambiguity made it difficult even for advanced-level learners to notice grammatical recasts.

The second research question examined whether there was a difference in learners' noticing according to the degree of difference between learners' erroneous utterances and the recasts (i.e. one change vs. more than one change). Tables 7, 8 and 9 show the frequencies, percentages of noticing, and noticing rate by the degree of difference for each person:

Table 7. Number of changes, Kanako: Number of recasts, noticing, no noticing, and noticing rates

Type	Recast	Noticing	No noticing	Noticing rate
One change	14	8	6	57%
More than one change	7	3	43	43%
	21	11	10	52%

Table 8. Number of changes, Yuki: Number of recasts, noticing, no noticing, and noticing rates

Type	Recast	Noticing	No noticing	Noticing rate
One change	9	4	5	49%
More than one change	7	2	5	29%
	16	6	10	38%

Table 9. Number of changes, Kouki: Number of recasts, noticing, no noticing, and noticing rates

Type	Recast	Noticing	No noticing	Noticing rate
One change	26	11	15	42%
More than one change	7	3	4	43%
	33	14	19	42%

To summarize the results, the individual frequencies for each student were combined, and then noticing rates were calculated, as shown in Table 10.

Table 10. Number of changes, total: Number of recasts, noticing, no noticing, and noticing rates

Type	Recast	Noticing	No noticing	Noticing rate
One change	49	23	26	47%
More than one change	21	8	13	38%
	70	31	39	44%

In total, the difference of percentages in noticing of the three participants between single and multiple change recasts was only 47% versus 38%, and Kouki noticed more multiple change recasts than single-change recasts. Philp (2003) maintains that recasts closer to learners' utterances, which in the present study corresponds with single change recasts, may be more beneficial for learners to notice and repair. However, the result can be interpreted as incompatible with Philp (2003) and other observational and introspective research which also showed that recasts with fewer changes were more likely to be noticed (e.g. Egi, 2007; Kim & Han, 2007; Philp, 2003; Sato, 2006, 2009; Sheen, 2006). It can be viewed that as the students in the study were advanced learners, they did not have any more difficulties in noticing multiple-change recasts than in single-change recasts.

As for the examination into the effect of length on noticing (RQ3), Tables 11, 12 and 13 show the frequencies, the percentages of noticing, and noticing rate by length for each participant:

Table 11. Length, Kanako: Number of recasts, noticing, no noticing, and noticing rates

Type	Recast	Noticing	No noticing	Noticing rate
Short	16	9	7	56%

Long	5	2	3	40%
	21	11	10	52%

Table 12. Length, Yuki: Number of recasts, noticing, no noticing, and noticing rates

Type	Recast	Noticing	No noticing	Noticing rate
Short	11	4	7	36%
Long	5	2	3	40%
	16	6	5	38%

Table 13. Length, Kouki: Number of recasts, noticing, no noticing, and noticing rates

Type	Recast	Noticing	No noticing	Noticing rate
Short	21	10	11	48%
Long	12	4	8	33%
	33	14	19	42%

To summarize the results, the individual frequencies for each of the three students were combined, and then noticing rates were calculated, as shown in Table 14.

Table 14. Length, Total: Number of recasts, noticing, no noticing, and noticing rates

Type	Recast	Noticing	No noticing	Noticing rate
Short	48	23	25	48%
Long	22	8	14	36%
	70	31	39	44%

As the following example shows, it is not surprising that short single-change recasts are likely to be noticed, because they do not require high working memory capacity.

Excerpt 5 (Yuki)

Yuki: I enjoyed.

Researcher: OK, you enjoyed yourself. ←recast

Yuki: Yes. I enjoyed myself.

Yuki's recall:

When my teacher added, "yourself," I remembered enjoy needs an object.

In total, the percentage difference in noticing of the three participants between short or long recasts was only 48% versus 36%, and Yuki's noticing rate for long recasts was higher than that of short recasts. This result can be interpreted as incompatible is with previous research which showed that, regardless of the noticing measure, shorter recasts are more noticeable (e.g. Egi, 2007; Lyster, 1998a; Philp, 2003; Sato, 2009; Sheen, 2006).

The following shows noticing of a long, multiple-change recast.

Excerpt 6 (Kanako)

Kanako: We ... our eyes should not watch the Internet over one hour. It damaged.

Researcher: You think our eyes can be hurt. ←recast

Kanako: Yes. Eyes can be easily hurt by watching it.

Kanako's recall:

When my teacher said, "can be hurt," I realized that I should have used the passive voice and that the subject should be "eyes."

Her comment implies that as she had no difficulty understanding the long, multiple-change recast, and that as she had explicit knowledge of how to use the passive voice, she noticed the gap and successfully repaired her utterance.

Excerpt 7 (Kouki)

- Kouki: If bought the ticket, I went there with them.
 Researcher: OK, if you had bought the ticket, you could have gone there. ←recast
 Kouki: Yes.

Kouki's recall:

I realized I should have said "If I had bought the ticket, I could or would have gone". I noticed that must be subjunctive past perfect when my teacher said, "If you had bought the ticket, you could have gone there".

In this excerpt, although Kouki did not repair but acknowledged by saying "yes," he noticed his erroneous utterance, when the recast was provided. In the later turn, he used the structure successfully as the following shows.

Excerpt 8 (Kouki)

- Kouki: I could have studied harder, if had taken the class.

The following shows how Yuki noticed a long, multiple-change recast.

Excerpt 9 (Yuki)

- Yuki: I have wanted to live a small city or town.
 Researcher: You had wanted to live in a small town. ←recast
 Yuki: Yes. But my town was very small and I liked it very much.

Yuki's recall:

I noticed I should have said "had wanted to," and missed "in" before "a small town." After this, I tried not to make the same mistake.

In this excerpt, although the recast did not lead Yuki to repair, she, at least, noticed it, which made her more sensitive about the structure of the past perfect tense. In the later turn, she tried to produce a sentence with the structure.

As regards the reasons why short single-change recasts appear to have more enhanced effect on noticing than long multiple-change recasts, Philp (2003) contends that long multiple-change recasts are beyond learners' proficiency levels, or learners are not developmentally ready to notice those recasts. Mackey and Philp (1998) have provided proof to claim that recasts are effective for advanced learners who have the knowledge and proficiency needed to notice recasts. Nabei (2005) summarizes that recasts are likely to be more effective for advanced learners by introducing previous studies which imply that learners' proficiency level and attention have an important role to notice recasts. It can be argued that learners in this study, who are higher-level advanced learners, are developmentally ready to notice long multiple-change recasts. Robinson (2005) points out that working memory, which is the temporary storage and manipulation of information and has a central role in L2 acquisition, is likely to be an important determinant of to what extent learners can notice recasts. This is just a speculation, but it can be assumed that learners in this study had enough working memory capacity to notice long multiple-change recasts. Further study is needed to confirm this interpretation.

5 Conclusion

This case study explored the effects of recasts on advanced-level Japanese learners' noticing according to recast features. Observations and comments made by Kanako, Yuki, and Kouki are insightful data for understanding how advanced-level learners perceive recasts. The quantitative data indicated the difficulty of noticing grammatical recasts compared to lexical and phonological ones, which is compatible with previous studies (e.g. Kim & Han, 2007; Sato, 2009; Trofimovich et al., 2007; Williams, 1999). As for the effects of the degree of difference and the length of recasts on noticing, however, the data indicated no big difference between them.

The results of the study can offer some significant pedagogical implications. First, the effectiveness of recasts, even for advanced learners' noticing, can vary according to the error types to which recasts are given. As learners are unlikely to notice grammatical recasts, teachers can think

of using other types of oral feedback such as explicit correction or metalinguistic feedback for learners' grammatical errors, especially when the main focus of the lesson is on accuracy. Second, although it is generally accepted that short, single-change recasts are more noticeable than long, multiple-change recasts, this study indicates that in providing recasts to advanced learners, teachers do not need to pay attention to the number of changes and the length of recasts. In addition, this study shows the crucial role of explicit knowledge in noticing recasts. EFL teachers may have to create a learning environment where learners can learn explicit knowledge first, and then after fully or partially acquiring the knowledge, learners would be more likely to notice and correct their errors using explicit knowledge.

However, because of the following limitations, these results should be applied cautiously. First, the number of the participants was admittedly small. Secondly, they were all advanced learners of English studying in a tertiary EFL environment. It can be argued that individual differences, such as proficiency level, working memory capacity, grammatical sensitivity, and motivation can interact with learners' ability to notice recasts (e.g. Revesz, 2012; Sagarra & Abbuhl, 2013; Sato, 2006; Yilmaz, 2013). Furthermore, phonological recasts were recorded only twice. As this case study was conducted only with three advanced-level Japanese EFL learners, future studies should be conducted with more participants of different English proficiency levels who are learning in different EFL environments. If further investigation supports the findings and analyses of the results presented herein, recasts may be put to more effective use in EFL classrooms.

Notes

¹ The STEP Test is an English proficiency test conducted by a Japanese non-profit organization, the Society for Testing English Proficiency, Inc. (STEP), and backed by the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT). The test consists of listening and writing sections followed by a speaking test, and has been generally regarded as one of the most reliable and valid English proficiency tests in Japan. MEXT requires Japanese secondary school teachers of English to possess at least pre-first grade scores on the STEP test.

² Ellis (1997) explains that errors occur, because the learner does not know what is correct, and that mistakes occur when the learner is unable to perform what he or she knows. In this study, however, the distinction between the two cannot be made, because each student's detailed developmental levels in English have not been fully examined due to practical constraints.

³ The raw frequencies and percentages were reported. Chi-square statistics were not used in the study. One key assumption of chi-square is that data must be independent: one participant should not contribute data to more than one cell (e.g. Hatch & Lazaraton, 1991). As the data in this study did not meet the assumption, the use of chi-square statistics was not considered appropriate (e.g. Takeuchi & Mizumoto, 2012). In the absence of statistical analyses, therefore, conclusions should be taken as tentative. However, as a number of previous feedback studies did not use inferential statistics (e.g. Lyster & Mori, 2006; Lyster & Ranta, 1997; Nassaji, 2009; Panova & Lyster, 2002) for the same reason, reporting the raw frequencies and percentages without inferential statistics was regarded as valid in the current study.

⁴ The original comments in the stimulated recall were all in Japanese.

⁵ As Kouki had an opportunity to repeat his error after the researcher's clarification request "Pardon," it could have been easier for him to notice the recast. The role of repetitions of errors for noticing should be researched in further study.

⁶ As the STEP test is not designed to measure only explicit knowledge, test-takers may use implicit knowledge in the test.

References

- Alderson, J. C. Clapham, B. J., & Wall, D. (1995). *Language test construction and evaluation*. Cambridge: Cambridge University Press.
- Al-Surmi, M. (2012). Learners' noticing of recasts of morpho-syntactic errors: Recast types and delayed recognition. *System*, 40, 226–236.
- Bao, M., Egi, T., & Han, Y. (2011). Classroom study on noticing and recast features: Capturing learner noticing with uptake and stimulated recall. *System*, 39, 215–228.
- Egi, T. (2004). Verbal reports, noticing, and SLA research. *Language Awareness*, 13, 243–264.
- Egi, T. (2007). Interpreting recasts as linguistic evidence: The roles of linguistic target, length, and degree of change. *Studies in Second Language Acquisition*, 29, 511–537.

- Egi, T. (2008). Investigating stimulated recall as a cognitive measure: Reactivity and verbal reports in SLA research methodology. *Language Awareness*, 17, 212–228.
- Egi, T. (2010). Uptake, modified output, and learner perceptions of recasts: Learner responses as language awareness. *The Modern Language Journal*, 94, 1–21.
- Ellis, R. (1994). *The study of second language acquisition*. Oxford: Oxford University Press.
- Ellis, R. (1997). *Second language acquisition*. Oxford: Oxford University Press.
- Ellis, R., & Sheen, Y. (2006). Re-examining the role of recasts in L2 acquisition. *Studies in Second language Acquisition*, 28, 575–600.
- Gass, S. (1997). *Input, interaction, and the second language learner*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Gass, S. (2003). Input and interaction. In C. Doughty & M. H. Long (Eds.), *The handbook of second language acquisition* (pp. 224–255). Oxford: Blackwell.
- Gass, S., & Mackey, A. (2000). *Stimulated recall methodology in second language research*. Mahwah, NJ: L. Erlbaum Associates.
- Hatch, E., & Lazaraton, A. (1991). *The research manual: Design and statistics for applied linguistics*. Boston: Heinle & Heinle.
- Kim, J-H., & Han, Z-H. (2007). Recasts in communicative EFL classes: Do teacher intent and learner interpretation overlap? In A. Mackey (Ed.), *Conversational interaction in second language acquisition* (pp. 269–297). Oxford: Oxford University Press.
- Loewen, S. (2005). Incidental focus on form and second language learning. *Studies in Second Language Acquisition*, 27, 361–386.
- Loewen, S., & Nabei, T. (2007). Measuring the effects of oral corrective feedback on L2 knowledge. In A. Mackey (Ed.), *Conversational interaction in second language acquisition* (pp. 361–377). Oxford: Oxford University Press.
- Loewen, S., & Philp, J. (2006). Recasts in the adult English L2 classroom: Characteristics, explicitness, and effectiveness. *The Modern Language Journal*, 90, 536–556.
- Long, M. (1996). The role of the linguistic environment in second language acquisition. In W. Ritchie & T. Bhatia (Eds.), *Handbook of second language acquisition* (pp. 413–468). San Diego: Academic Press.
- Long, M. (2006). *Problems in SLA*. Mahwah, NJ: Erlbaum.
- Lyster, R. (1998a). Recasts, repetition and ambiguity in L2 classroom discourse. *Studies in Second Language Acquisition* 20, 50–81.
- Lyster, R. (1998b). Negotiation of form, recasts, and explicit correction in relation to error types and learner repair in immersion classrooms. *Language Learning* 48, 183–218.
- Lyster, R. (2004). Differential effects of prompts and recasts 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 classroom. *Studies in Second Language Acquisition*, 19, 37–66.
- Lyster, R., & Mori, H. (2006). Interactional feedback and instructional counterbalance. *Studies in Second Language Acquisition*, 28, 269–300.
- Lyster, R., Saito, K., & Sato, M. (2013). Oral corrective feedback in second language classrooms. *Language Teaching*, 46, 1–40.
- Mackey, A., Gass, S., & McDonough, K. (2000). How do learners perceive interactional feedback? *Studies in Second Language Acquisition*, 22, 471–497.
- Mackey, A., & Philp, J. (1998). Conversational interaction and language development: Recasts, responses and red herrings? *Modern Language Journal*, 82, 338–356.
- Muranoi, H. (2000). Focus on form through interaction enhancement: Integrating formal instruction into a communicative task in EFL classrooms. *Language Learning*, 50, 617–673.
- Nabei, T. (2005). *Recasts in a Japanese EFL classroom*. Osaka: Kansai University Press.
- Nabei, T., & Swain, M. (2002). Learner awareness of recasts in classroom interaction: A case study of an adult EFL student's second language learning. *Language Awareness*, 11, 43–62.
- Nassaji, H. (2009). Effects of recasts and elicitations in dyadic interaction and the role of feedback explicitness. *Language Learning*, 59, 411–452.
- Oliver, R. (1995). Negative feedback in child NS-NNS conversation. *Studies in Second Language Acquisition*, 17, 459–481.
- Panova, I., & Lyster, R. (2002). Patterns of corrective feedback and uptake in an adult ESL classroom. *TESOL Quarterly*, 36, 573–595.
- Philp, J. (2003). Constraints on “noticing the gap”. Nonnative speakers’ noticing of recasts in NS-NNS interaction. *Studies in Second Language Acquisition*, 25, 99–126.

- Revesz, A. (2012). Working memory and the observed effectiveness of recasts on different L2 outcome measures. *Language Learning*, 62, 93–132.
- Robinson, P. (2005). Aptitude and second language acquisition. *Annual Review of Applied Linguistics*, 25, 46–73.
- Sagarra, N., & Abbuhl, R. (2013). Optimizing the noticing of face-to-face recasts via computer-delivered feedback: evidence that oral input enhancement and working memory help L2 learning. *Modern Language Journal*, 97, 196–216.
- Saito, K., & Lyster, R. (2012). Investigating the pedagogical potential of recasts for L2 vowel acquisition. *TESOL Quarterly*, 46, 387–398.
- Sato, R. (2006). Examining the effectiveness of recast for Japanese high school students. *Eigo Kyouiku* [English Education], 58(4), 5–12.
- Sato, R. (2009). Considering the effectiveness of recasts on Japanese high school learners' learning. *The Journal of Asia TEFL*, 6(4), 193–216.
- Schmidt, R. (1990). The role of consciousness in second language learning. *Applied Linguistics*, 11, 129–158.
- Schmidt, R. (2001). Attention. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 3–32). Cambridge: Cambridge University Press.
- Schmidt, R., & Frota, S. (1986). Developing basic conversational ability in a second language: A case-study of an adult learner. In R. Day (Ed.), *Talking to learn: Conversation in second language acquisition* (pp. 237–326). Rowley, MA: Newbury House.
- Sheen, Y. (2006). Exploring the relationship between characteristics of recasts and learner uptake. *Language Teaching Research*, 10, 361–392.
- Takeuchi, O., & Mizumoto, A. (2012). *Gaikokugo kyouiku handbook* [Handbook for research in foreign language teaching]. Tokyo: Shohakusya.
- Trofimovich, P., Ammar, A., & Gatbonton, E. (2007). How effective are recasts? The role of attention, memory, and analytic ability. In A. Mackey (Ed.), *Conversational interaction in second language acquisition* (pp. 171–195). Oxford: Oxford University Press.
- Varnosfadrani, A. D., & Basturkmen, H. (2009). The effectiveness of implicit and explicit error correction on learners' performance. *System*, 37, 82–98.
- Williams, J. (1999). Learner-generated attention to form. *Language Learning*, 49, 585–625.
- Yilmaz, Y. (2013). Relative effects of explicit and implicit feedback: The role of working memory capacity and language analytic ability. *Applied Linguistics*, 34, 344–368.
- Yoshida, R. (2010). How do teachers and learners perceive corrective feedback in the Japanese language classroom? *The Modern Language Journal*, 94, 293–314.
- Zhao, S. Y., & Bitchener, J. (2007). Incidental focus on form in teacher-learner and learner-learner interactions. *System*, 35, 431–447.

Appendices

Appendix A

Picture description activity of the pre-first grade STEP Test (the first second-stage interview test, conducted in 2007)



この問題カードは切り取って、本書の面接の練習用に使ってください。
質問は本文P47にありますので、参考にしてください。

問題カードA

You have one minute to prepare.

This is a story about a young businessman whose elderly

parents ran an apple farm.

You have two minutes to narrate the story.

Your story should begin with the following sentence:

One evening, a young businessman was working in his

office.

Appendix B

Instructions for the stimulated recall interview

“You are going to watch a video tape of the conversation session we had this morning. While the video is playing, I will occasionally pause the tape. When I pause the video, tell me in Japanese what you were thinking during the clip you just saw. I’m interested in what you were thinking about at the time the video was taken. Please try to recall what you were thinking about at the time the video was taken, not what you are thinking about now as you watch the video. If you do not remember what you were thinking at the time, you can say, “I don’t remember”. (Translated into English by the author)