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# *Examining the efficacy of oral corrective feedback on Japanese language learners through action research: Cognitive effects of metalinguistic feedback*

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Abstract

This classroom-based action research examines the effects of oral corrective feedback (OCF) on intermediate Japanese language learners in higher education. The main purpose of this research was to find how pedagogical practices of feedback support learners' utilization and retention of previously learned knowledge most effectively. The study employed three different types of OCF in order of implicitness, that is, recast, elicitation, and metalinguistic feedback, in order to address the following research questions: (1) Of the three types of oral corrective feedback chosen for the study, that is, recast, elicitation, and metalinguistic feedback, which one works best for language learners in terms of repair rate?, and (2) What types of linguistic errors, that is, conjugation, particle, and vocabulary, are most likely to be targeted by oral corrective feedback? A total of 21 undergraduate students were observed during two semester-long courses. Audiotaped interactions between the participants and the instructor were analyzed for errors in utterances during one-on-one conversations in a well-controlled research environment. In the end, the study discovered that the third mode (metalinguistic feedback) was more effective than the others by a large margin, and lexical errors were corrected the most. The outcomes suggest that metalinguistic feedback involving human cognitive process is beneficial for language learning, particularly for vocabulary acquisition.

*Keywords:* action research; human cognitive process; Japanese; language pedagogy; oral corrective feedback

## 1. Introduction

The purpose of this study was two-fold: to compare the effectiveness of three different types of oral corrective feedback (OCF), that is, recast, elicitation, and metalinguistic feedback, among Japanese language learners, and to determine which types of linguistic errors, namely, conjugation, particle, and vocabulary, are most effectively corrected using each of the three types of OCF among these learners. Individual differences in out-of-class second language (L2) learning and preferences related to L2 learning were also analyzed. This study adopted the action research approach to ensure that all participants benefitted from the same treatment which was the opportunity to receive feedback and react to it.

The term *feedback* is defined as "information about reactions to a product, a person's performance of a task, etc., which is used as a basis for improvement" (Stevenson, 2010, p. 640). When such feedback is used in L2 courses and other academic settings, it is called corrective feedback. According to Lightbown and Spada (2013), corrective feedback is defined as "an indication to a learner that his or her use of the target language is incorrect" (p. 216). In other words, corrective feedback is a frequent practice in learning, and usually involves students receiving either formal or informal comments on their performance in various tasks by their teachers or peers. Interestingly, teachers habitually use such a pedagogical technique to draw learners' attention to erroneous utterances with or without overtly identifying errors that they make. That is, whether oral or written, corrective feedback is an integral part of language teaching (Ellis, 2009).

There is a distinct difference between oral and written corrective feedback related to the timing of correction. The former is provided on the spot in the course of interactions, while the latter is not because there is a delay before learners receive it. A number of researchers have examined differential effects of both modes occurring in learning contexts. Some specialists (e.g., Lyster et al., 2013) claim that corrective feedback is most likely to be more effective when provided within sustained communicative interaction, whereas others (e.g., Krashen, 1994; Truscott, 1996) assert that feedback is useless and even harmful because it could be a source of stress for learners. However, from a pedagogical perspective, corrective feedback has been considered "an important tool in promoting language development" (Pawlak, 2013, p. 5), but this depends on what type of feedback teachers use and how learners perceive it.

Narciss (2013) makes an interesting point concerning corrective feedback, arguing that "even the most sophisticated feedback is useless if learners do not attend to it or are not willing to invest time and effort in error correction" (p. 13). Recent studies (e.g., Gurzynski-Weiss & Baralt, 2015; Han & Hyland, 2015; Sato & Loewen, 2018) also give us information on student attention and indicate that engagement

with feedback is crucial to L2 learning. This shows that feedback is a two-way process but a one-way progression and that the feedback teachers provide is as important as that which learners receive. At the same time, learners need to develop the will and desire to correct (i.e., repair) their errors. As Krashen (1982) has observed, if the recipients do not pay attention to the feedback, there will be no correction.

The reason for using OCF rather than written error correction in the present study is that the course in which this research was conducted centered on oral communication. It is expected that this study can inform educators not only about the most effective types of OCF but also show how to use such feedback effectively to help students make better progress in language learning, thus enhancing their performance. As will be discussed in detail, this study also focuses on closing two gaps found in past studies. First, researchers were not present in the classroom in which these studies were conducted. As a result, learners' interactions were recorded or videotaped and OCF was provided randomly by instructors who were teaching language courses. The problem is that when researchers completely rely on recorded materials, they have no choice but to take what they see and hear at face value. Second, researchers have often separated learners into groups to manipulate which group(s) receive a specific treatment. Since the present study also values individual data, it is important to ascertain that all participants have the same opportunity to receive feedback and react to it.

## 2. Literature review

### 2.1. Types of oral corrective feedback

To date, numerous studies (e.g., Fujii, Ziegler, & Mackey, 2016; Rassaei, 2015; Sato & Lyster, 2012) have demonstrated that OCF can facilitate L2 development. There are six different types of OCF used in language learning environments (Ellis et al., 2009). Below are the definitions of each type in the order of explicitness along with examples (source of definitions: Lyster and Ranta, 1997, pp. 46-48). Note that T is teacher who gives feedback to learner's incorrect utterance "I major on linguistics."

- *Explicit correction*: The teacher provides the correct form indicating what the student had said was incorrect.
  T: You should say "major in."
- *Metalinguistic feedback*: The teacher provides comments related to the well-formedness of the student's utterance, without explicitly providing the correct form.
  T: Please use the appropriate preposition.
- *Clarification request*: The learner is asked to clarify their meaning without any indication of the presence of an error.
  T: Pardon?

- *Repetition*: The teacher repeats the learner's utterance, including any error(s).
  T: You major on linguistics?
- *Elicitation*: The learner is prompted to reformulate his/her utterance. Teachers elicit completion of their own utterance by strategically pausing to allow students to "fill in the blank."
  T: You major…?
- *Recast*: The teacher reformulates all or part of a student's utterance, minus the error.
  T: You major in linguistics.

## 2.2. Observational studies on oral corrective feedback

Employing all the types of OCF, past studies (e.g., Elam, 2014; Esmaeili & Behnam, 2014; Suzuki, 2004) have provided interesting insights into the effectiveness of error correction (see Table 1). Elam (2014) conducted research with 10 Japanese university students who had neither studied abroad nor formally studied English for more than ten years. During the study, she recorded 4 different oral communication courses the participants attended for a total of 3 hours over a 5-week period. The researcher reported that explicit correction was the most frequently used feedback type while elicitation produced the best effect in terms of repairing the errors. Esmaeili and Behnam (2014) examined a total of 29 Turkish learners attending an English language institution in Iran based on a total of 400 minutes of audiotaped classroom interaction from three elementary classes. The researchers concluded that recasts were utilized the most by teachers despite the fact that they yielded the least repair rate, and metalinguistic feedback worked best for the learners based on their repair rate.

Table 1 Distribution of feedback types and repair rate in percentage

| | | Explicit Correction | Metalinguistic Feedback | Clarification Request | Repetition | Elicitation | Recast |
|---|---|---|---|---|---|---|---|
| Elam | Distribution | 45% | 5.5% | 14% | 14% | 18% | 3.5% |
| | Repair Rate | 46% | 45% | 32% | 67% | 69% | 29% |
| Esmaeili & Behnam | Distribution | 9.5% | 17% | 9.5% | 11% | 14% | 39% |
| | Repair Rate | 34% | 70% | 30% | 40% | 64% | 18% |
| Suzuki | Distribution | 2% | 1% | 30% | 2% | 5% | 60% |
| | Repair Rate | 100% | 50% | 37% | 40% | 17% | 65% |

*Note.* Data are from Elam (2014), Esmaeili and Behnam (2014), and Suzuki (2004). Distribution is the number indicating how many times each feedback was provided. Repair rate is the number indicating how many times learners made corrections after receiving the feedback. Suzuki (2004), for instance, if a total of 100 feedback was used during the study, explicit correction was given twice to the learners and they repaired the errors that they made each time.

Generally speaking, the distribution of various types of OCF should be different depending on the teachers. This is because some of them could be more

passionate about correcting learners' errors and thus provide more explicit types of feedback, while others, concerned with interrupting conversations, might give more implicit types of feedback or none at all. On the other hand, it can be said that some participants received a type of feedback with which they were unfamiliar and immediately noticed it better than other types. For example, Suzuki (2004) investigated 31 adult ESL (English as a second language) students attending a US institution. The database consisted of 21 hours of audiotaped interaction between the students and three ESL teachers in the classroom. The researcher concluded that the type of OCF that led to repair the most was explicit correction (100% repair rate as shown in Table 1). This might be a case in which the participants reacted to the corrective move because it was new to them, and thus consciously corrected their errors. However, taking a close look at the data in Table 1, it is clear that this particular type was only employed 2% of the time while recast was used 60% of the time. Therefore, regardless how often each type of feedback was used, all the aforementioned studies reached a conclusion about which type of feedback worked best for L2 learners based on the repair rate they attained. In sum, in order to achieve authentic results of repair rates, OCF needs to be provided similarly to each participant.

### 2.3. Experimental studies on oral corrective feedback

To compare different effects of OCF, participants are often randomly assigned to two or more groups. Some recent studies (e.g., Rassaei, 2015; Sato & Loewen, 2018) have utilized experimental design and juxtaposed two types of OCF chosen for the study. For example, in the quantitative study by Rassaei (2015), the researcher studied the impact of OCF on students with high language learning anxiety. High-anxiety learners, as measured by a questionnaire, in upper intermediate EFL (English as a foreign language) courses that focused on definite and indefinite articles were given recasts or metalinguistic feedback or were in a control group. Both types of feedback had a positive impact on the learners' language development; however, recasts were more effective than metalinguistic feedback for high anxiety students.

In a classroom-based study conducted by Sato and Loewen (2018), two types of OCF, recasts and clarification requests, were targeted at third person singular "s" and possessive determiners in English. The study aimed to investigate the moderating effects of these types for both input and output. The participants were EFL learners at the university level in four classes assigned to four different conditions: metacognitive instruction plus input-providing recasts, input-providing recasts only, metacognitive instruction plus output-prompting clarification requests, and output-prompting clarification requests only. The positive results of OCF show that specifically clarification requests were more effective than recasts.

It is interesting that many studies (e.g., Li et al., 2016; Rassaei, 2015; Sato & Loewen, 2018) using this type of research design have a tendency to employ the most implicit type of OCF – a recast – to compare with another. This is not surprising because it is the most frequently used feedback type in classroom settings (Lyster, 2007). Furthermore, when conducting an experiment, participants are randomly assigned to be in one of the groups: treatment or control. However, groups may not be comparable in some cases when the subjects are grouped by chance. In other words, due to the differences in many factors such as learners' ages, their motivation for learning, and the like, one group may be more responsive to incoming information (e.g., oral corrective feedback) than other groups.

## 3. The study

### 3.1. Rationale and research questions

The present study is motivated by the aforementioned studies that collected data through either observational or experimental means. But none of the previous studies (e.g., DeKeyser, 2007; Ellis, 2009; Gass & Selinker, 2001; Long, 2014; Nassaji, 2015; Panova & Lyster, 2002; Russell & Spada, 2006; Sheen, 2004) that examined the effects of OCF elucidated whether all the participants had the opportunity to receive feedback and react to it. In addition, the participants in the control group did not receive any feedback because they were randomly assigned to that group. Therefore, in order to add a new dimension to the existing research, this study collected data from all participants without separating them into groups.

Moreover, the present study recognized the importance of what types of linguistic errors are most likely corrected by OCF. If L2 teachers are aware of their students in this way, they can strategically employ such pedagogical techniques when the components of the target language (e.g., lexicon, morphology) are introduced in class. Although every project has different aims and objectives, only a few studies (e.g., Brown, 2016; Suzuki, 2004) have investigated such a case. For instance, Suzuki (2004) provides meaningful data showing when teachers unconsciously tended to give OCF to their students. As a result, they corrected phonological errors the most followed by grammatical and lexical ones. However, again, even though her study had three different teachers and 31 participants, it is impossible to know if the outcomes she obtained were collected from such a situation in which all the subjects received and consequently reacted to the feedback given. To this end, on condition that all participants had the same treatment which was the opportunity to receive feedback and react to it, the research questions for this study were the following:

1. Of the three types of oral corrective feedback chosen for the study, that is, recast, elicitation, and metalinguistic feedback, which one works best for language learners in terms of repair rate? (RQ1)
2. What types of linguistic errors, that is, conjugation, particle, and vocabulary, are most likely to be targeted by oral corrective feedback? (RQ2)

## 3.2. Method

### 3.2.1. Participants

A total of 21 (9 female and 12 male) undergraduate students studying Japanese at an intermediate level took part in this research project. The research project was approved by the IRB of the university and informed consent was obtained from each participant. All participants were assigned a number. The numbers were used for such purposes as linking students with their answers on a questionnaire, which they filled out at the beginning of the semester regarding their thoughts and opinions on the Japanese language and feedback. This was done to analyze the relationship between data collection and personal factors including learning style and previous experience with the language that might influence their reactions to feedback provided.

### 3.2.2. Design and procedure

The data set consisted of two semester-long observations along with audiotaped interactions between the participants and the instructor in the classroom collected by the instructor. This maximized inter-rater reliability of the class environment so that appropriate OCF was deliberately provided similarly to all students when they made errors. Consequently, it was possible to compare the repair rate achieved by different types of OCF provided under controlled conditions. Unlike other studies conducted in the past, this study utilized an action research method. According to Loewen and Reinders (2011), action research is conducted by teachers in their own classroom to address questions that are particularly relevant to their own teaching contexts. Selecting the best method for the research was a crucial aspect that ensured the acquisition of relevant and valid data.

Each participant individually had a one-on-one conversation with the instructor on three different occasions as part of an oral test. The purpose of the following procedures was to see if there is a significant difference in effects of the three OCF types, determine if participants notice the given feedback and utilize it appropriately in their subsequent oral task, and examine which type of OCF works best. The step-by-step procedure of the study including a detailed description of how subjects participated was as follows (Steps 1 to 3 as one research unit):

- Step1: Each participant individually had a one-on-one conversation with the instructor for approximately 10 minutes based on a topic that they previously learned in class.
- Step 2: The instructor provided OCF as participants made errors in utterances.
- Step 3: At a later time, the instructor asked them the same or similar question that they previously made errors on. Note: During this step, new errors for which OCF were not given in the previous step were ignored because the present study sought to determine whether participants made corrections to previous errors after receiving OCF.

Participants were not allowed to use any external resources such as a dictionary and/or notes during Steps 1 through 3 since the present study was concerned with their pre-existing knowledge. Each research unit was repeated three times for each type of OCF during the designated week (recast for research unit 1, elicitation for research unit 2, and metalinguistic feedback for research unit 3). The reason for the order of the use of OCF was to correspond to the order of implicitness of the three feedback used in the present study. This is due to the fact that a gradual change in implicitness would help prevent each feedback type from degrading the genuine effect on learners. If metalinguistic feedback, which is the most explicit among the three, was used first they would be more conscious of receiving feedback, and consequently their reaction to the given feedback would no longer be spontaneous.

Of the six types of OCF, the present study attempted to employ an approximately equal number of recasts, elicitations, and metalinguistic feedback. This was to create a research environment in which all participants received each and reacted to it and to obtain unbiased data. Regarding the choice of these three types of OCF, the main reasons for this were not only time constraints associated with the course in which the research was conducted but also closely related to cognitive psychology as will be discussed hereafter. First, according to Lyster and Ranta (1997), explicit feedback has nothing to do with promoting language learners' cognitive development since it is a technique that provides the correct form for them. Second, recast is the only feedback type that helps learners' transfer knowledge from working memory into declarative memory (Gimeno, 2003). Moreover, there is a clear tendency for most teachers to unconsciously use recast in classroom settings. That is, incorporating recast into this study is useful to examine its actual effects. Third, comparing elicitation to clarification request and repetition, it is quite apparent that elicitation is most likely to lead to learner uptake (i.e., responses to feedback), while the others may allow the learner to repeat the same error. Additionally, it is a "fill in the blank" type of feedback, and thus the student is required to retrieve the knowledge stored

in their memory system. Lastly, the effectiveness of metalinguistic feedback has been supported by many studies (e.g., Myhill, 2012; Serafini, 2013) that show its relationship to cognitive processing. For these reasons, the study strategically used recast, elicitation, and metalinguistic feedback.

Below sample reactions to each OCF are given. This is to show how the effectiveness of each type of feedback is measured and how linguistic errors are detected. For the latter, only errors in the use of prrepositions are provided for demonstration purposes. Note that actual conversations were carried out in Japanese, and the English *prepositions* are equivalent in function to the Japanese particles. X is participant and R is researcher.

*A reaction to recast*

Recast is a technique used in language teaching that the teacher reformulates all or part of a student's utterance, minus the error.

X: I am going to Florida with my friends on four days.
R: With your friends for four days. (Recast provided to the error in preposition)

At a later time, R asks X a similar question that s/he previously made an error on.

R: How long will you stay in Florida with your friends?
X: For four days. (Corrected after recast was provided)

or

R: How long will you stay in Florida with your friends?
X: On four days. (Not corrected after recast was provided)

*A reaction to elicitation*

Elicitation is a technique used in language teaching that the learner is prompted to reformulate his/her utterance. Teachers elicit completion of their own utterance by strategically pausing to allow students to "fill in the blank."

Scenario 1:
X: I am going to Florida with my friends on four days.
R: Going to Florida with your friends? (Elicitation provided to the error in preposition)
X: For four days.

At a later time, R asks X a similar question that s/he previously made an error on.

R: How long will you stay in Florida with your friends?
X: For four days. (Corrected after elicitation was provided)

or

R: How long will you stay in Florida with your friends?
X: On four days. (Not corrected after elicitation was provided)

Scenario 2:
X: I am going to Florida with my friends on four days.
R: Going to Florida with your friends? (Elicitation provided to the error in preposition)
X: On four days.
R: Going to Florida with your friends? (Elicitation provided to the error in preposition)
X: On four days.

*Note:* A few attempts can be made until X produces the correct form. If not (i.e., X continues to make the same error), the researcher needs to move on in order not to put him/her under pressure. Hence, this is not counted as an error since learner uptake never took place.

*A reaction to metalinguistic feedback*

Metalinguistic feedback is a technique used in language teaching that the teacher provides comments related to the well-formedness of the student's utterance, without explicitly providing the correct form.

Scenario 1:
X: I am going to Florida with my friends on four days.
R: Please use the appropriate preposition. (Metalinguistic feedback provided to the error in preposition)
X: Oh, going to Florida with my friends... for four days.

At a later time, R asks X a similar question that s/he previously made an error on.

R: How long will you stay in Florida with your friends?
X: For four days. (Corrected after metalinguistic feedback was provided)

or

R: How long will you stay in Florida with your friends?
X: On four days. (Not corrected after metalinguistic feedback was provided)

Scenario 2:
X: I am going to Florida with my friends on four days.
R: Please use the appropriate preposition. (Metalinguistic feedback provided to the error in preposition)
X: Oh, going to Florida with my friends... in four days.
R: Please use the appropriate preposition. (Metalinguistic feedback provided to the error in preposition)
X: Oh, going to Florida with my friends... to four days.

*Note:* A few attempts can be made until X produces the correct form. If not (i.e., X continues to make the same error), the researcher needs to move on in order not to put him/her under pressure. Hence, this is not counted as an error since learner uptake never took place.

### 3.3. Analytical method for oral corrective feedback

Table 2 below is an example summary of the results generated by participant X. Note that all numbers are randomly given to demonstrate how the repair rate is calculated based on his speech production after receiving each feedback. For instance, during the cycle of recast, the participant corrected errors 10 times (five times for each error in C and V) out of 15 (five times each for C, P, and V). This is expressed in fraction form: 10/15.

Table 2 Summary of the results of participant X

| Feedback type | Total number of corrections made | Total number of feedback instruction | Fraction | Repair rate in % |
|---|---|---|---|---|
| Recast | 10 (C5, P0, and V5) | 15 (C5, P5, and V5) | 10/15 | 66.66 |
| Elicitation | 6 (C2, P2, and V2) | 15 (C4, P6, and V5) | 6/15 | 40.00 |
| Metalinguistic | 8 (C3, P4, and V1) | 15 (C5, P4, and V6) | 8/15 | 53.33 |

*Note.* C = conjugation, P = preposition/particle, V = vocabulary

Therefore, it can be concluded that recast works best for participant X followed by metalinguistic feedback and elicitation. However, this is only an individual case, which feedback works best overall is determined by the data collected from all participants. In the next section, the analysis of variance (ANOVA) is used to compare group means wherein the significant level was set at .05.

## 4. Results

### 4.1. Research question 1

RQ 1 was as follows: Of the three types of oral corrective feedback chosen for the study, that is, recast, elicitation, and metalinguistic feedback, which one works best for language learners in terms of repair rate? Table 3 shows the results of OCF given to all participants during each task. Participant 1 (P1), for example, made corrections twice after receiving recast five times during research unit 1 (recast). Thus, the fraction is 2/5. This is followed by Table 4 displaying statistical data using ANOVA with repeated measures.

Table 3 Results of oral corrective feedback given to all participants during each research unit

| | Recast | Repair rate in % | Elicitation | Repair rate in % | Metalinguistic | Repair rate in % |
|---|---|---|---|---|---|---|
| P 1 | 2/5 | 40.00 | 3/5 | 60.00 | 4/5 | 80.00 |
| P 2 | 3/3 | 100.00 | 2/3 | 66.67 | 3/5 | 60.00 |
| P 3 | 1/2 | 50.00 | 3/5 | 60.00 | 6/7 | 85.71 |
| P 4 | 3/6 | 50.00 | 1/3 | 33.33 | 5/5 | 100.00 |
| P 5 | 2/5 | 40.00 | 2/6 | 33.33 | 7/9 | 77.78 |
| P 6 | 2/2 | 100.00 | 2/2 | 100.00 | 1/1 | 100.00 |
| P 7 | 1/6 | 16.67 | 0/3 | 0.00 | 3/6 | 50.00 |
| P 8 | 3/7 | 42.86 | 3/5 | 60.00 | 3/4 | 75.00 |
| P 9 | 1/7 | 14.29 | 3/6 | 50.00 | 6/7 | 85.71 |
| P 10 | 2/3 | 66.67 | 1/2 | 50.00 | 1/3 | 33.33 |
| P 11 | 2/6 | 33.33 | 4/5 | 80.00 | 7/8 | 87.50 |
| P 12 | 2/5 | 40.00 | 2/4 | 50.00 | 5/7 | 71.43 |
| P 13 | 3/5 | 60.00 | 3/4 | 75.00 | 7/7 | 100.00 |
| P 14 | 3/7 | 42.86 | 1/4 | 25.00 | 8/11 | 72.73 |
| P 15 | 1/5 | 20.00 | 3/4 | 75.00 | 10/12 | 83.33 |
| P 16 | 1/5 | 20.00 | 7/11 | 63.64 | 8/9 | 88.89 |
| P 17 | 3/7 | 42.86 | 7/8 | 87.50 | 4/4 | 100.00 |
| P 18 | 2/6 | 33.33 | 5/7 | 71.43 | 8/8 | 100.00 |
| P 19 | 2/4 | 50.00 | 3/6 | 50.00 | 3/3 | 100.00 |
| P 20 | 5/7 | 71.43 | 4/7 | 57.14 | 7/9 | 77.78 |
| P 21 | 3/3 | 100.00 | 3/6 | 50.00 | 4/6 | 66.67 |

Table 4 Descriptive statistics generated by one-way ANOVA with repeated measures for oral corrective feedback

| Feedback Type | *N* | *M* | *SD* |
|---|---|---|---|
| Recast | 21 | 49.25 | 26.00 |
| Elicitation | 21 | 57.05 | 22.32 |
| Metalinguistic | 21 | 80.76 | 17.91 |

As shown in Table 4, the mean values for each feedback type are recast 49.25, elicitation 57.05, and metalinguistic 80.76 ($F(2, 60) = 14.30$, $p < .05$). That is, metalinguistic feedback worked best in terms of enabling them to make corrections after receiving it. Furthermore, there are statistically significant differences between recast and metalinguistic ($F(1, 40) = 18.57$, $p < .05$), and between elicitation and metalinguistic ($F(1, 40) = 28.42$, $p < .05$). However, this only tells us the overall significance and therefore the following post-hoc test was performed for the purpose of multiple comparisons of means.

Table 5 details the significance level for differences between OCF types. The results show no significant difference between recast and elicitation ($p > .05$), but there were significant differences between recast and metalinguistic ($p < .05$) and between elicitation and metalinguistic ($p < .05$). This confirms that metalinguistic feedback worked best for the learners. Since this feedback is most

closely associated with cognitive processing as many studies (e.g., Myhill, 2012; Robinson, 2013; Serafini, 2013) have stated, it may have effectively assisted the participants in retrieving knowledge stored in their memory system.

Table 5 Pairwise comparisons generated by the Bonferroni post hoc test for oral corrective feedback

| Feedback Type | | *SE* | Sig. |
|---|---|---|---|
| Recast | Elicitation | .063 | .693 |
| | Metalinguistic | .073 | .001 |
| Elicitation | Recast | .063 | .693 |
| | Metalinguistic | .044 | .001 |
| Metalinguistic | Recast | .073 | .001 |
| | Elicitation | .044 | .001 |

## 4.2. Research question 2

RQ2 was as follows: What types of linguistic errors, that is, conjugation, particle, and vocabulary, are most likely to be targeted by oral corrective feedback? Table 6 shows the results of OCF given to each linguistic error. The numbers are given in the same manner as before. This is followed by Table 7 displaying statistical data using ANOVA with repeated measures.

Table 6 Results of oral corrective feedback given to each linguistic error

| | Conjugation | Repair rate in % | Particle | Repair rate in % | Vocabulary | Repair rate in % | Average repair rate in % |
|---|---|---|---|---|---|---|---|
| P 1 | 2/5 | 40.00 | 3/5 | 60.00 | 4/5 | 80.00 | 60.00 |
| P 2 | 4/5 | 80.00 | 0/1 | 0.00 | 4/5 | 80.00 | 72.73 |
| P 3 | 5/6 | 83.33 | 2/5 | 40.00 | 3/3 | 100.00 | 71.43 |
| P 4 | 4/4 | 100.00 | 2/6 | 33.33 | 3/4 | 75.00 | 64.29 |
| P 5 | 6/11 | 54.55 | 4/8 | 50.00 | 1/1 | 100.00 | 55.00 |
| P 6 | 1/1 | 100.00 | 1/1 | 100.00 | 3/3 | 100.00 | 100.00 |
| P 7 | 2/6 | 33.33 | 1/7 | 14.29 | 1/2 | 50.00 | 26.67 |
| P 8 | 3/7 | 42.86 | 5/8 | 62.50 | 1/1 | 100.00 | 56.25 |
| P 9 | 5/10 | 50.00 | 2/5 | 40.00 | 3/5 | 60.00 | 50.00 |
| P 10 | 3/5 | 60.00 | 1/2 | 50.00 | 0/1 | 0.00 | 50.00 |
| P 11 | 5/8 | 62.50 | 6/7 | 85.71 | 2/4 | 50.00 | 68.42 |
| P 12 | 2/7 | 28.57 | 4/6 | 66.67 | 3/3 | 100.00 | 56.25 |
| P 13 | 2/4 | 50.00 | 10/11 | 90.91 | 1/2 | 50.00 | 76.47 |
| P 14 | 6/12 | 50.00 | 6/10 | 60.00 | 1/1 | 100.00 | 54.55 |
| P 15 | 4/8 | 50.00 | 9/11 | 81.82 | 1/2 | 50.00 | 67.67 |
| P 16 | 6/11 | 54.55 | 10/14 | 71.43 | 1/1 | 100.00 | 64.00 |
| P 17 | 3/4 | 75.00 | 9/12 | 75.00 | 2/3 | 66.67 | 73.68 |
| P 18 | 7/8 | 87.50 | 7/11 | 63.64 | 1/2 | 50.00 | 71.43 |
| P 19 | 2/3 | 66.67 | 2/6 | 33.33 | 4/4 | 100.00 | 61.54 |
| P 20 | 5/7 | 71.43 | 9/12 | 75.00 | 2/4 | 50.00 | 69.57 |
| P 21 | 2/4 | 50.00 | 8/10 | 80.00 | 0/1 | 0.00 | 66.70 |

Table 7 Descriptive statistics generated by one-way ANOVA with repeated measures for linguistic category

| | *N* | *M* | *SD* |
|---|---|---|---|
| Conjugation | 21 | 61.44 | 20.26 |
| Particle | 21 | 58.74 | 25.31 |
| Vocabulary | 21 | 69.60 | 31.41 |

As shown in Table 7, the mean values for each linguistic category are conjugation 61.44, particle 58.74, and vocabulary 69.60. Although there is no statistically significant difference between each type ($F(2, 60) = 0.96$, $p > .05$), it can be concluded that "vocabulary" was remedied the most by OCF during this study.

### 4.3. Individual data

One-on-one conversation with each participant was essential in order for all of them to receive each feedback type and react to it. This allowed achieving detailed results shown in Table 3, and to reveal the actual influence of OCF at the micro-level. However, none of the previous studies (e.g., Li et al., 2016; Rassaei, 2015; Sato & Loewen, 2018) could provide this type of data because they had a larger sample size in their research or a different purpose. As a consequence, they obtained outcomes from classroom interaction as a whole. It goes without saying that it is beneficial to language teachers to have some idea of what types of OCF work best at the macro-level, but this study put more emphasis on the necessity for data collected from each individual for the purpose of further analyses to follow.

Different from the aforementioned studies, the present study intended to value each participant's performance and thereafter appraise of the entire picture to make pedagogical suggestions. Hence, further analysis was conducted based on the questionnaire each subject answered. Not to mention, it is crucial for L2 learners to notice the gap between their incorrect utterance and the correct form provided via OCF. This is due to the fact that even a meaningful input will not become learner uptake unless it is noticed (Schmidt, 2010). While analyzing individual data, what kind of L2 learners will more than likely benefit from such pedagogical technique will be discussed.

To analyze how participants viewed feedback and language learning in general, a questionnaire completed by all the participants at the beginning of the semester was examined. Table 8 details the questionnaire while Table 9 shows the answers to all the questions and the mean scores of individual repair rate. This is followed by figures showing the outcomes of the questionnaire graphically.

Table 8 Questionnaire responses

| | |
|---|---|
| Q1 | When having a conversation in Japanese with a native speaker, which would you prefer? |
| | 1: Having him/her make corrections when you make a mistake even if it interrupts the flow of conversation<br>2: Having a conversation flow without such interruptions, even if you are making some mistakes |
| Q2 | When you make a mistake, what kind of feedback do you want your instructor to provide? |
| | 1: Feedback that is clear and very direct about what needs to be corrected<br>2: Feedback that helps you determine the correct answer yourself<br>3: Feedback that provides the correction without comment on the error(s) made<br>4: No feedback |
| Q3 | What do you do outside class to improve your Japanese skills? |
| | 1: Meet and talk with professors/tutors, classmates, or friends who speak Japanese<br>2: Talk to friends using media such as Skype, Facebook, and the like<br>3: Watch Japanese anime, live action movies, TV dramas, etc.<br>4: Self-study (please describe exactly what you do)<br>5: Other (please explain) |

Table 9 Answers to Q1, Q2, and Q3 from the questionnaire and mean scores of individual repair rate after receiving oral corrective feedback

| | Answer to Q1 | Answer to Q2 | Answer to Q3 | Average Repair Rate in % |
|---|---|---|---|---|
| P 1 | 1 | 1 | 4 | 60.00 |
| P 2 | 2 | 2 | 1 | 72.73 |
| P 3 | 2 | 1 | 4 | 71.43 |
| P 4 | 1 | 1 | 3 | 64.29 |
| P 5 | 1 | 1 | 4 | 55.00 |
| P 6 | 2 | 1 | 2 | 100.00 |
| P 7 | 2 | 1 | 4 | 26.67 |
| P 8 | 1 | 2 | 4 | 56.25 |
| P 9 | 2 | 1 | 3 | 50.00 |
| P 10 | 1 | 1 | 3 | 50.00 |
| P 11 | 1 | 1 | 1 | 68.42 |
| P 12 | 2 | 1 | 3 | 56.25 |
| P 13 | 1 | 1 | 1 | 76.47 |
| P 14 | 1 | 1 | 3 | 54.55 |
| P 15 | 1 | 2 | 3 | 67.67 |
| P 16 | 1 | 1 | 3 | 64.00 |
| P 17 | 1 | 5 | 1 | 73.68 |
| P 18 | 1 | 2 | 1 | 71.43 |
| P 19 | 2 | 2 | 5 | 61.54 |
| P 20 | 1 | 1 | 3 | 69.57 |
| P 21 | 2 | 2 | 3 | 66.70 |
| | | | | 63.60<br>(average overall repair rate) |

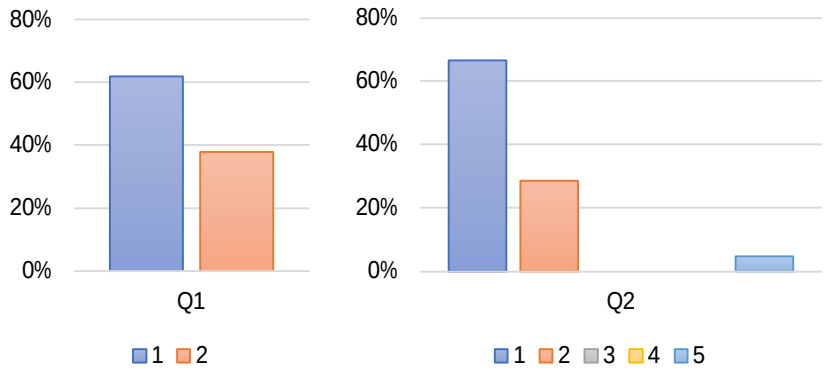


Figure 1 Answers to question 1 and 2 from the questionnaire

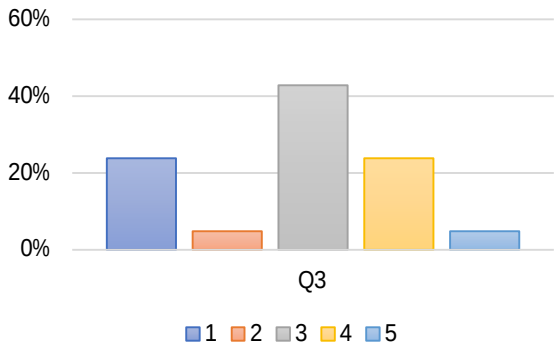


Figure 2 Answers to question 3 from the questionnaire

First, Q1 asked whether participants appreciated receiving feedback during conversation. 8 out of 21 answered indicated 2 in response to Q1. In other words, they preferred to carry on a conversation without interruption. But the present study found no significant relationship between their perceptions of feedback and individual performance (i.e., repair rate) based on the results achieved by the *t*-test. Next, Q2 asked about what type of feedback the students would like to receive in class. Each answer was intentionally created to represent metalinguistic feedback for 1, elicitation for 2, and recast for 3. The outcomes indicated that the participants preferred more explicit feedback, and this corresponds to the finding that metalinguistic feedback worked best, followed by elicitation, for correcting errors. But, here again, there was no clear evidence demonstrating any significant relationship between perceptions of feedback and individual performance according to ANOVA with repeated measures.

Then, Q3 explored links between outside activities and overall repair rate. This question answers whether the students were used to interacting with others

in Japanese. While answers 1 and 2 indicated that they used Japanese in a communicative way outside class, the other responses implied that there was no such interaction. Interestingly, all participants who answered either 1 or 2 scored beyond the average overall repair rate. In other words, they were used to both receiving input and producing output (i.e., receiving feedback and making corrections accordingly). At the same time, the rest of the participants might not be used to carrying out two-way conversations, as was done in the present study. They may have been more accustomed to receiving input than producing output. Conceivably, there are several other reasons including students' personality, learning style, motivation and previous experience with the language that may have been confounding variables. All things considered, however, the results presented in Table 9 suggest that for L2 learners to notice the gap between their incorrect utterance and the correct form provided via OCF, they should proactively involve themselves more in communicating with others in the target language outside class.

## 5. Discussion

The main purpose of this study was to find how pedagogical practices of feedback support learners' utilization and retention of previously learned knowledge most effectively. Therefore, OCF in the form of recast, elicitation, and metalinguistic feedback was selected as a powerful teaching tool for promoting language proficiency development. Each kind of feedback was provided for the errors learners made on their utterances at different times. Results showed that metalinguistic feedback worked best followed by elicitation and recast, which corresponded to their degree of implicitness. Furthermore, after receiving OCF, participants repaired their own errors in vocabulary the most followed by errors in conjugation and particle. Although there was no statistically significant difference between each type, it can be assumed that feedback provided regarding vocabulary was more noticeable. In general, conjugation requires a number of linguistic steps at the cognitive level to produce the correct form, and the Japanese particle system as a whole is complex (Pierson, 2013). This may also be related to the outcomes the study achieved. Since we now know that L2 learners are liable to make more grammatical than lexical errors (see Table 7), using metalinguistic feedback in situations in which new grammar is being introduced will be beneficial for both L2 teachers and learners. All of the above outcomes were attained because the present study recognized the importance of the following crucial facets of conducting successful research.

First, according to the data from previous studies (see Table 1), the most and least used feedback types are: explicit correction 45% and recast 3.5% in Elam's study (2014), recast 39% and both explicit correction and clarification

request 9.5% in Esmaeili and Behnam's study (2014), and recast 60% and metalinguistic feedback 1% in Suzuki's study (2004). These percentages are an importnat indication of the frequent use of OCF in the classroom which surely had a significant impact on learner uptake and repair. The fact that the researchers were not present in the classroom led to a situation in which OCF was provided randomly by the instructors who were teaching language courses. This means that the researchers had no control over how feedback was given to the learners or how many times each feedback was employed because the instructors provided such feedback spontaneously and at random. However, as was done in the present study, in order to achieve authentic results of repair rates and accomplish the stated goal "which type of oral corrective feedback works best," OCF needs to be distributed impartially.

Second, there are two major research designs that have been used for studies of corrective feedback: experimental and descriptive. The former involves the process by which a researcher separates learners into groups to manipulate which group(s) receive a specific treatment. In the case of OCF, there are typically two types of groups: treatment and control. While the former receives a particular type of feedback, the latter receives no feedback. In the past, various studies (e.g., Rassaei, 2015; Sato & Loewen, 2018) used the experimental design when researching OCF. In contrast, the descriptive design involves the process by which data is collected without changing or manipulating the research environment. Instead of dividing learners into groups, the present study adopted the latter design in order to create a learning environment in which all participants had the same opportunity to receive OCF. This is also why the study followed the action research method and included one-on-one conversations with each participant to systematically provide the three types of OCF to every individual, which made it possible to delve into individual data to see what kind of L2 learners would more than likely benefit from this pedagogic technique.

## 6. Conclusion

In academic classroom settings, what we typically see is a learning environment in which language teachers often point out errors their students make by unconsciously providing recast because it is pedagogically expeditious and time-saving (Loewen & Philp, 2006). This is one consistent finding that many studies (e.g., Esmaeili & Behnam, 2014; Hatasa & Fujiwara, 2012) have reported. In the present study, however, no participant answered either 3 (recast) or 4 (no feedback) to Q2 as shown in Table 9. That is, all the participants were willing to invest time and effort in error correction. The results of this study show that even though it may be more time-consuming, language teachers should deliberately

use metalinguistic feedback more often with their language learners. From a psychological perspective, as learners who receive such feedback are urged to come up with the correct form (e.g., please use the appropriate particle), this mode involves more human cognitive activities than recast and elicitation. Thus, it helps learners push correct knowledge into their memory system for future use.

Although the limitations to the study include a focus on one Japanese language class with one instructor, the results provide insights into how a controlled classroom environment with focused OCF can impact students when they make errors. Unlike other studies conducted in the past, this study utilized the action research approach to ensure that all participants had the same treatment which was the opportunity to receive feedback and react to it. Future studies on OCF should build on this by comparing other foreign languages and including other language levels.

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