

Learners' Metanotes (Written Language) on Noticing Gaps and their L2 Proficiency

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Abstract

Although language use (language) has been identified to facilitate language learning, research on language has been mainly oral. Compared to well-researched oral language, little seems to be known about written language. In this context, this study investigates such language in the form of “metanotes,” that is, metatalk in a written modality, in a decontextualized setting. Two groups of 24 Japanese learners of English at two different levels were instructed to engage in language by taking metanotes while doing a translation task and subsequently checking a native speaker's model. An analysis of the metanotes revealed that the participants took metanotes upon noticing unexpected gaps the most frequently when they checked the model. The relationship between the participants' English levels and their metanotes was not identified clearly in terms of amount. Meanwhile, although statistically non-significant, quality of their metanotes indicated some difference. This paper examines these results in order to investigate the potential function of written language.

Key words: output, metatalk, language, metanotes

1. Introduction

Input had been second language acquisition (SLA) researchers' main focus until Swain (1985) proposed the output hypothesis. Investigating French immersion students' second language (L2) learning in Canada, Swain identified that these students generally attained native-level ability in reading and listening, but not in speaking and writing in spite of having received a sufficient amount of input and then argued that these students should have been given sufficient opportunities for output in order for

them to acquire native-level productive skills. Admitting the importance of input (Krashen, 1985), she emphasized the importance of producing language. More recently, Swain (2005) emphasized the significance of not only output from a task (i.e., primary output) but also language used to complete the task (i.e., metalinguistic output). Referring to this language use, Swain (2006) introduced the term “*linguaging*.” The concept of *linguaging* originates with the perspective of Vygotsky’s sociocultural theory (SCT) of mind, which claims that thinking is intimately related to language. Based on this concept, Swain (2006) defined *linguaging* as “a dynamic, never-ending process of using language to make meaning” (p.96), stating that it includes both speaking and writing. *Linguaging* in written modality will be the focus of this paper.

2. Background of the study

2.1. *Empirical evidence of the noticing function of linguaging*

Swain’s (1995, 1998, 2005) output hypothesis proposed three functions of output: the noticing, the hypothesis testing and the metalinguistic/reflexive functions. Of the three functions, this study focused on the noticing function as it is likely to be enhanced by *linguaging*. In his ‘noticing hypothesis,’ Schmidt (1990) claimed that conscious awareness (noticing) is essential for the development of L2, arguing that learners must notice the ways in which their own language use differs from target language (TL) use. Schmidt and Frota (1986) also explained that ‘noticing the gap,’ that is, learners’ awareness of the disparity between the input and their current interlanguage, enhances learning. Using the term noticing in the same sense as Schmidt and Frota (1986) did in explaining their “noticing the gap” principle, namely, “in the normal sense of the word, that is consciously” (Schmidt & Frota, 1986, p. 311), Swain and Lapkin (1995) stated that output could be “one of the triggers for noticing” (p.373) a gap. If so, double output, namely, not only primary output but also *linguaging*, seems to enhance the noticing function.

Thus far, many SLA studies (e.g., Storch, 2008; Swain, 1998; Swain & Lapkin, 1998, 2007) have provided evidence to support Swain and Lapkin’s (1995) statement that output can trigger noticing (see Swain, 2005 for a review). For example, in Swain’s (1998) study, learners were encouraged to engage in metalinguistic talk, or “*metatalk*” to use Swain’s term, while they listened to a text twice and took notes, on which they reconstructed the text in pairs (i.e., dictogloss). An examination of the *metatalk*, namely, “talk about the language of the text they were reconstructing,” (p. 70) revealed that the learners noticed and solved many

of their problems by metatalking to each other.

Similarly, in Swain and Lapkin's (2007) study, the learners were given a dictogloss, during which they were asked to metatalk. An analysis of this talk illustrated the learners' problem-solving processes. For example, while solving her problem by verbalizing it, one student exclaimed, "Oh, I get it now!" The researchers thereby concluded that language use could contribute to learning, maintaining that language use enables us to notice what it means and of what it consists. Although verbalization did not solve all their problems, it seemed to help the students to notice their linguistic problems and to reflect on the language that they were producing, leading them to L2 learning.

As the terms such as "metatalk" and "verbalization" demonstrate, languaging examined thus far has been mainly oral (e.g., Storch, 2008; Swain, 1998; Swain & Lapkin, 1998, 2007). Although Swain (2006) introduced the alternative term "languaging" and emphasized that languaging includes both speaking and writing, written languaging seems to have been under explored (e.g., Suzuki, 2012; Suzuki & Itagaki, 2007, 2009), which may be because the act of writing tends to be regarded as "physically demanding and time-consuming" (Hanaoka, 2007, p. 463). Nonetheless, given the popularity of blogs and Twitter, learners seem to be used to expressing their thoughts in writing. Moreover, Suzuki (2012) stated written languaging can be advantageous in two ways, (1) in that it allows learners longer processing time, freeing them from the pressure of simultaneous processing often required for oral languaging, and (2) that it enables them to reflect on their written languaging as an external memory (see Suzuki, 2012, for a review). Given this, written languaging seems to be worth investigating.

Thus far, SLA research has examined languaging in relation to various factors, such as task types (e.g., Suzuki & Itagaki, 2009), quality of languaging (e.g., Storch, 2008; Swain et al., 2009), and learners' proficiency (e.g., Kim & McDonough, 2008; Qi & Lapkin, 2001). From among these, this study focuses on learners' proficiency since its potential impact on written languaging seems to have been under explored.

2.2. Learners' level of L2 proficiency and their languaging

In their study on written languaging, Suzuki and Itagaki (2009) instructed Japanese learners of English with two different levels to write "whatever they had thought about... what they had struggled with, how they had arrived at their eventual solution, and so on" (p. 221) (i.e., written languaging) in their first language (L1) while they worked on either an English-Japanese or a Japanese-English translation task and checked the

model translation afterward. The analysis of these written languaging episodes (WLEs) revealed that grammatical WLEs were the majority in both tasks and groups, and that the higher-level participants languaged more and produced more grammatical episodes than the lower-level participants in both tasks. Referring to these results, the researchers explained that lower-level participants might not have as much attentional resources to engage in grammatical analysis as the higher-level participants.

On the other hand, Ishikawa (2012a) examined the role of metanotes as a facilitator of L2 learning with a two-stage Japanese-English translation task (translation and comparison with a model stages). Following Swain's (1998) interpretation of metatalk, "metanotes," a term coined in Ishikawa, was defined as any language used by learners to reflect on their language use while they work on a task, with or without metalinguistic terminology. The participants were instructed to take metanotes during the task. The effect of metanotes was analyzed by comparing the results of these participants' pre- and post-tests with those of participants who performed the same task without taking metanotes. The analysis of the metanotes demonstrated that the lexis-related notes were majority in both stages, supporting the former research findings (e.g., Hanaoka, 2007; Williams, 1999), but contrasting those of Suzuki and Itagaki's (2009) study. Given that the higher-level participants languaged more and produced more grammatical episodes than the lower-level participants in their study, the participants' levels were assumed to have contributed to this result. Moreover, it was found that the participants did not take metanotes on the target form (tense consistency) as much as expected although all the sentences in the task were on it. Meanwhile, examining the reflective function of metatalk, Storch (2008) identified that learners whose levels were high enough to be accepted to study at a university in Australia paid the most attention to the grammatical items targeted by the task. These findings also seem to suggest that learners' levels were at play.

Furthermore, they seem to suggest the importance of examining not only type and amount but also quality of learners' languaging, which has also been demonstrated by previous SLA research findings. For example, Swain and Lapkin (1995) examined the LREs of students who were individually assigned to write an article (drafting phase) and edit their work (editing phase) while thinking aloud; they identified that the most proficient students produced far more LREs (47) than the least proficient students (20) in the drafting phase, but not so in the editing phase (21 and 20 for the most and least proficient students, respectively). Furthermore, an examination of these LREs in the editing phase revealed that the most

proficient students produced a higher proportion of grammatical episodes (48%) than their least proficient counterparts (15%), despite having similar amount of LREs.

Meanwhile, Qi and Lapkin's (2001) study produced somewhat contradictory results. Two learners at different levels were instructed to engage in a three-stage writing task (drafting, comparison with a reformulation, and revision stages) while thinking aloud. The less proficient learner was found to have produced more LREs in the second stage. Moreover, an analysis of these LREs according to their type showed that the less proficient learner produced more grammatical episodes (15) than the more proficient learner (8). Nonetheless, a further analysis demonstrated that all of the advanced learner's LREs showed higher quality of substantive noticing (i.e., noticing with a reason), whereas most of the less proficient learner's LREs were perfunctory (i.e., noticing only). Given that higher-level learners have potentially more linguistic resources (VanPatten, 1990), this finding does not seem surprising. Similarly, analyzing the quality of a high and a low language learner's language units, Knouzi, Swain, Lapkin, and Brooks (2010) identified that a high language learner self-scaffolded more by linking new and prior knowledge and stated that the learners' zone of proximal development (ZPD) might have been different.

2.3. Research questions

This study attempted to investigate if learners take metanotes when they notice gaps. In addition, the relationship between the taking of metanotes and learners' proficiency was examined. This is part of a project that was conducted to explore potential function of written language and the data used in the current study is from Ishikawa (2012 b, c). Hereafter, the term "metanotes" is used to refer to written language. The research questions addressed are below:

1. Do learners take metanotes when they notice gaps?
2. If so, how does their L2 proficiency influence their metanotes?

3. Method

3.1. Participants

The participants were 24 (19 male and five female, aged 18-19, average 18.4) Japanese EFL learners, all of whom are business administration majors at a university in Japan. They were enrolled in two of my required freshman English classes that focused on the Test of English for International Communication (TOEIC) and volunteered to participate in

this study. Half of them (eight male and four female) belonged to the highest-level class and the other half (11 male and one female) belonged to the lower-middle-level class, where they were placed on the basis of the result of a placement test given at the beginning of the school year. In this study, these two groups of participants are called the higher level group (HG, n = 12) and the lower level group (LG, n = 12).

3.2. Task and linguistic target

The task used in this study was a modified version of a translation task used in Ishikawa (2012a). It comprised five Japanese sentences in a target structure. The rationale of using a translation task was to facilitate the participants' cognitive comparison between output and input by having control over the content. For this purpose, a translation task was deemed more appropriate than other tasks, such as picture description (Hanaoka, 2007) and essay writing (Izumi & Bigelow, 2000), which tend to produce varieties in terms of content.

The targeted structure in this study, tense consistency, was chosen as inconsistent verb tense use had been observed in both classes, which could be due to their L1 influence. Unlike English, Japanese does not always make a clear distinction between present and past; the present tense can be used to express what happened in the past (Mizutani, 1989). For example, the Japanese translation of one of the task sentences, "She *knew* that... Karen *could not* attend." is "*kanojyo wa* (she)...*Karen ga* (Karen) *syusseki dekinaito* (cannot attend) *shitteimashita* (knew)." This native language-target language difference is likely to contribute to tense inconsistency (Gass et al., 2003). Thus, translation task comprised sentences which asked the participants to use past tense unlike in their L1 was employed.

3.3. Procedure

The experimental sequence of the study was conducted over a period of four weeks using the last part of regular class time. As not many grammatical metanotes were produced in Ishikawa (2012a), which could have been due to the insufficient amount of practice (just one 10-minute session), two metanotes practices were given for a period of 15 minutes one per week for two weeks.¹ Metanotes were taken in Japanese. Attention is identified to play an important role in L2 learning (Schmidt, 1990, 1993, 2001). Therefore, an explicit statement of the rules and the use of metalinguistic terminology were included in the demonstration in order to help heighten the participants' attention to form.² While translating two Japanese sentences into English on an overhead projector, I wrote down questions and problems regarding form. For example, one of the sentences

was *Mike wa golf wo suruyori miru houga sukidesu*, (=Mike prefers watching golf to playing it). After writing the verb “prefer,” I wrote *Sanninsho tansuu dakara s hitsuyou?*, (=third person, singular...so is an ‘s’ necessary?) while speaking it aloud. After the demonstration, the participants were given a sample translation task that also comprised two Japanese sentences and they practiced taking metanotes silently while translating the sentences.

The practice sheets were collected after the first practice and examined. As the participants were not used to taking metanotes, even after the demonstration, some participants did not seem to have grasped the idea of expressing their thoughts on paper and were more concerned about the performance of their translation than about taking metanotes. Thus, feedback from Practice 1 was given to the participants in Practice 2.

In the third week, again for a period of 15 minutes, a grammar test on the target form was given in order to verify the difference of levels between the HG and LG. The test comprised recognition and production questions on the target form (12 each). The maximum possible score was 24. No time limit was set and the participants were allowed to stay after class to finish; however, most of them finished it in 10 minutes, with a range of seven to 13 minutes. The average score for the HG was 17.2 ($SD = 1.8$) and that of the LG was 10.1 ($SD = 2.4$). A t -test showed significant differences between these groups ($t(22) = -8.1, p < .01$), thereby confirming a difference in their respective levels.

The treatment was conducted the following week, in a 30-minute period. The participants were given a translation task, followed by a native speaker's model; they were instructed to take metanotes while they translated and checked the model. Finally, an exit questionnaire was given.

3.4. Treatment

Each participant was given an envelope that contained three sheets of paper, all numbered from one to three in the top right corner. Then the procedure was explained briefly in order to familiarize the participants with the sequence of the treatment. First, the participants were instructed to take out the first sheet. Nine minutes were allotted for this phase in which the participants were asked to translate the underlined sentences into English while taking metanotes (Stage 1). After returning the sheet to the envelope, they were asked to take out the second sheet, which had the native speaker model translation. Five minutes were assigned for this phase and the participants were requested to take metanotes on whatever they noticed while checking the model (Stage 2). The time allotted for these two phases was determined on the basis of the pilot test, which had

been conducted with a similar population beforehand. Finally, the participants were asked to return the second sheet to the envelope and to take out the third sheet: an exit questionnaire. No time limit was allocated for this final phase (Stage 3).

3.5. Analyses of metanotes

First, all the metanotes for each group were counted and the tally was taken. Then, of all the metanotes taken in Stage 2, the ones that were taken when the participants noticed gaps, namely, when they noticed their unexpected mistakes upon checking the model, were counted and categorized as NM2-notes (for expected mistakes, see Ishikawa, 2012 c). Moreover, the quality of these NM2-notes was examined on the basis of the participants' understanding. The NM2-notes that indicated the participants' understanding upon checking the model were categorized as "U-notes," while the ones that did not were called "NU-notes." Below are examples of each note and their English equivalent which I translated:

Example of U- note:

Souda, doushi wo kakokei ni kaeru beki datta.

Yeah, I should have changed the verb to a past form.

Example of NU-note:

"Can" wo "could" ni kaerunowa kyouchou ka nanika?

Is changing "can" to "could" emphasis or something?

I coded all the NM2-notes and my colleague coded approximately 50% of the data. The inter-rater agreement was 94.6%.

4. Results

As a preliminary analysis, the percentages of correct translations were calculated. The percentages for the HG and the LG were 55.1% and 26.2%, respectively. Moreover, the amount of their metanotes was examined. Overall, the HG took more metanotes than the LG in both stages, and the total numbers of metanotes increased in Stage 2 in both groups (Table 1).

Table 1. Summary of metanotes taken in Stages 1 and 2

	Stage 1	Stage 2
	Tot	Tot
HG	101	111
LG	88	109

^a Tot = Total, HG = higher group, LG = lower group

When NM2-notes were examined, they turned out to be the most-frequently taken notes by both groups in Stage 2: 50.1% (56 NM2-notes out of 111) and 63.3% (69 NM2-notes out of 109) for the HG and LG, respectively (Table 2). A *t*-test identified no statistically significant difference between these groups ($t(22) = 2.4, p > .05$).

A further analysis of the NM2-notes based on the participants' understanding revealed that 21 (30.4%) out of the 69 NM2-notes by the LG were categorized as NU-notes, whereas in the HG, the ratio was lower at 17.9% (10 out of 56). Despite this percentage gap, a *t*-test identified no statistically significant difference between the ratios of NU-notes of both groups ($t(22) = 1.6, p > .05$).

Table 2. Summary of NM2-notes

	U	NU	Tot
HG	46 (82.1)	10 (17.9)	56 (100)
LG	48 (69.6)	21 (30.4)	69 (100)

^a () = % of each note, U = U-note, NU = NU-note, Tot = Total, HG = higher group, LG = lower group

5. Discussion

The current study investigated the participants' metanotes upon noticing gaps during the grammar exercise and their proficiency level. The findings will be discussed below by providing responses to the research questions.

The first research question asked if the participants would metanote when they noticed gaps between their output (translation) and the subsequent input (model). As identified above, more than half of their metanotes in Stage 2 turned out to be NM2-notes, demonstrating that the participants take metanotes when they find unexpected gaps despite its potential disadvantages of the taking of metanotes (Hanaoka, 2007).

The second research question pertained to the relationship between the participants' proficiency level and their metanotes. Although higher-level learners are supposed to notice gaps more than their lower-level counterparts (Qi & Lapkin, 2001; VanPatten, 1990) and to take more metanotes, it was found that the LG took NM2-notes to a higher degree than the HG. Given that the percentage of correct translations for the LG was rather lower than that of the HG, the LG's having taken more NM2-notes does not seem to be surprising. Namely, they simply might have more mistakes to notice. In summary, although it was identified that the

participants take metanotes when they notice gaps, no statistically significant relationship was identified between the participants' proficiency level and their metanotes in terms of amount.

On the other hand, although statistically non-significant again, probably because of small numbers of the data, the quality of NM2-notes which was examined on the basis of the participants' understanding indicated a rather evident difference. Though the LG took more NM2-notes, an analysis of these metanotes revealed that almost one-third of them went not understood, ending up as NU-notes, which may be compared with Qi and Lapkin's (2001) report regarding quality of noticing. Due to the LG's less attentional capacity (Van Patten, 1990), they might not have used the model and the taking of metanotes as effectively as the HG, indicating the necessity of teachers' facilitation for lower-level learners.

Although taking metanotes did not always solve problems, an examination of these metanotes seems to illustrate the participants' cognitive processes while they engaged in the task. For example, as given in Section 3.5, one LG participant took an NM2-note saying, "Is changing "can" to "could" emphasis or something?" which was categorized as NU-notes. (His translation in Stage 1 showed tense inconsistency.) Although he did not seem to have understood tense consistency just by checking the model, this experience as well as taking a metanote on it is likely to have triggered him to search for a solution. Given Swain's (2006) explanation of languaging as "a process which creates a visible or audible product about which one can language further" (p. 97), this participant's metanote seems to be a clear example of languaging, revealing the process of his search. In summary, the analysis of the participants' metanotes appears to have revealed that learners do engage in the taking of metanotes when they notice gaps despite its potential disadvantages. The relationship between the participants' proficiency level and their metanotes was not identified in terms of amount, but of quality to some extent.

6. Conclusions

The current study investigated learners' metanotes when they find gaps and its relationship with their L2 proficiency level. It was found that they take metanotes when they notice gaps regardless of their levels. Taking metanotes does not always guarantee that learners will find solutions, as is the case with oral languaging (Swain & Lapkin, 2006). Nonetheless, metanotes seem to function as an impetus for learners to reflect on their language use and to search for solutions, both of which can be regarded as meaningful steps in L2 learning. Moreover, metanotes may have an

advantage in that learners are generally allowed to engage in languaging at their own pace and consult their metanotes as an external form of memory (Suzuki, 2012). Thus, it seems worthwhile to further explore metanotes, especially in EFL settings in which learners do not have much opportunity for oral languaging, particularly in collaborative situations.

Finally, some implications should be mentioned. First, given that NU-notes were taken in both groups, providing level-appropriate tasks as well as relevant and timely feedback seems to be crucial, particularly for lower-level learners. Second, considering that the participants' sensitivity is likely to be heightened because of output-input sequence as well as taking metanotes, providing extended opportunities for them to be exposed to further target-like input as well as to learn cumulatively appear to be essential (Izumi & Bigelow, 2000).

Notes

1. Knouzi et al. (2010) suggested that "teachers model successful languaging activity" (p. 46) for learners to understand the concept of languaging.
2. Swain (1998) stated that "the demonstration of metatalk that included the explicit statement of rules and the use of metalinguistic terminology succeeded... in capturing students' attention" (p. 77).

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