

How Do Learner Variables Affect the Provision and Uptake of Recast in NS-NNS and NNS-NNS Dyads?*

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The purpose of the study is to investigate the roles of learner variables in provision and uptake of negative feedback in second language communication dyads with a focus on recast. Eighty dyads participated in second language communication by performing the interaction tasks with the NS and the NNS interlocutors, and all the communication dialogues were recorded, transcribed, and analyzed. The findings are as follows: more significant differences were found in the amount, nature, and uptake of recasts provided according to the level of learner variables in the NS-NNS dyads than in the NNS-NNS dyads; recasts were consistently provided with the opportunities for modified output, and utilized both in the NS-NNS dyads and in the NNS-NNS dyads. Based on the findings of the study, it is concluded that the learner variables affect the provision and uptake of recast differently in the NS-NNS and the NNS-NNS dyads with the pedagogical implications that learner variables should be considered in L2 classroom interactions.

I. INTRODUCTION

Learner affective variables such as motivation, anxiety, and willingness to communicate (WTC), and perceived competence have been studied in two research areas: in second language acquisition and speech communication. Recently, some second language researchers (e.g. Hashimoto, 2002; MacIntyre & Charos, 1996; Yashima, 2002) have tried to combine them to study the roles that the variables play in L2 communication by examining the relationships among the variables and self-reported L2 communication frequency. L2 communication frequency has been believed to lead to the possible contribution to L2 development. Therefore, the relationships between the variables and the real communication warrant further study since the research may confirm the effects of

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affective variables on language development. The present study was intended to research how these variables play a role in a real communication situation.

Since the interaction hypothesis (Long, 1983) was proposed, second language researchers (Doughty, 1993; Gass & McDonough, 2000; Lyster, 1998a, 1998b; Lyster & Ranta, 1997; Mackey, 1999; Oliver, 1995, 2000; Ortega & Long, 1997) have studied interaction in second language acquisition with a focus on forms of negative feedback to confirm its roles in interaction. One that has been intensively researched is recast. As the substantial evidence from the previous studies indicates, recast may play a role not only as negative evidence but also as positive evidence both of which have been argued to be necessary and contributing to second language acquisition. With some controversial issues related to roles or functions of recast such as whether it functions as positive or negative evidence, the effect of this form of negative feedback in second language development has been established in second language settings. Research on recast has been performed in different ways in relation to different variables such as different contexts, different subjects, different learner variables, in different research settings. One of the variables concerned is the context, that is, the interlocutor type in interaction. The interlocutor type may directly affect L2 learners in terms of the patterns of interaction including negative feedback in face to face communication settings (Mackey, Oliver, & Leeman, 2003) by affecting L2 learners' communication-related affective variables such as motivation, anxiety, and perceived competence. In this context, the present study was designed to investigate the relationship between these affective variables and the recasts provided and utilized in the interaction situation with the native speaker (NS) interlocutor and the nonnative speaker (NNS) interlocutor.

II. RESEARCH BACKGROUND

1. Recasts and Second Language Acquisition

Second language acquisition and second language communication are closely related since communication is the means by which language is acquired and communication itself is the target objective which a language learner is supposed to obtain. Researchers have argued that by participating in the interaction, language learners can be provided input as positive evidence of language acquisition necessary for the improvement of their language proficiency (Seliger, 1977). In addition, learners can produce output also necessary for acquisition since they can notice and compare the difference between their output and the target form (Long, 1996; Pica, 1994; Swain, 1998; Swain & Lapkin, 1995). That is, interaction provides learners with exposure to negative feedback, helping them notice the

gap and modify their output. Since language use or participation in interaction contributes to learners' developing their proficiency in this way, it is an essential condition for successful language acquisition.

Negative feedback provided to the learners by a proficient speaker or interlocutor in interaction includes explicit negative feedback directly informing the learner that his or her utterance is nontargetlike (e.g. explicit error correction) and implicit negative feedback indirectly signaling to the learner that the utterance is not acceptable (e.g. clarification request, confirmation check, recast, or communication breakdown). Since in a natural communication setting explicit feedback is rarely given and considered inappropriate and since in communicative L2 classrooms implicit feedback is widely preferred, SLA researchers have focused on the effects of implicit negative feedback. Research on negative feedback in interaction, including recast, has been performed by examining the patterns of feedback according to the communication context or the interlocutor type, the learner's L2 proficiency or age, or the learners' error types (e.g. Mackey et al., 2003; Morris, 2002; Oliver, 2000).

Among the forms of the implicit negative feedback, recast has been the focus of the research. This form of negative feedback has a twofold function, semantic and syntactic, as can be seen in the following episode (Nicholas, Lightbown, & Spada, 2001):

(1) S: The boy have many flower in the basket.

T: Yes, the boy has many flowers in the basket.

One function is that it confirms the meaning of the learner's utterance, that is, the learner's intent or message without stopping the communication but helping him or her continue the interaction. Another function is that it offers the target form of the utterance to the learner. Due to this double function, recast is preferred as negative feedback in communicative language classrooms (Nicholas et al., 2001).

In the research on the effects of the affective variables on the provision and uptake of recasts in interaction, one consideration should be included. As mentioned above, research on recast has been conducted in different ways in relation to different variables, and one of the variables concerned in the present study is the interlocutor type in interaction. In a face to face communication setting, the type of the interlocutor whom the L2 learners face and interact with to get across their message and get the message from may affect them in terms of the patterns of interaction including negative feedback such as recasts by affecting their communication-related affective variables.

2. Motivation, Anxiety, WTC, and Perceived Competence

Learners' affective variables such as language anxiety, motivation, and perceived

competence, have been researched in relation to second language proficiency or achievement (e.g. Clément, Dörnyei, & Noels, 1994; MacIntyre, 1992). The results of the research have shown that the variables correlate with proficiency or achievement and may affect the process of second language acquisition. These variables and, recently, WTC have also been investigated in relation to frequency of second language communication (e.g. Gardner, 1985; Hashimoto, 2002; MacIntyre & Charos, 1996; Yashima, 2002). The findings of the studies have indicated that the variables affect frequency and that some variables affect others, and are being affected.

Among the variables, motivation has been studied in terms of two types: integrative and instrumental. According to Gardner's socio-educational model (1985), integrative motivation affects language learning outcomes which in turn signify frequency of participation. In his model, integrativeness or desire to learn to communicate with the members of the target language community and attitudes toward the learning situation including the language teacher or the language course contribute to the level of the learner's motivation. This tripartite cluster, called integrative motivation, in turn, affects the activity level of the learner in learning situations. The role of motivation has been evidenced as an important variable causing individual differences in language acquisition (Gardner, 1988; Gardner & MacIntyre, 1993).

Besides motivation, language anxiety has been considered to play an important role in second language acquisition (Horwitz, Horwitz, & Cope, 1986; Horwitz & Young, 1991; MacIntyre & Gardner, 1991, 1994). Language anxiety is a kind of apprehension caused in a situational context where second language is used. It is reported that anxiety has a negative correlation with receiving, processing, and producing second language information (MacIntyre & Garder, 1994) and is stimulated in second language communication (Horwitz et al., 1986; MacIntyre & Garder, 1991). The findings of research on language anxiety show that it has stronger correlation with perceived competence than with actual competence (Clément et al., 1994; MacIntyre, 1992). The higher the learners' anxiety is, the more likely it is that the learner will underestimate their proficiency, and the lower the learners' anxiety is, the more likely it is that they will overestimate their competence (MacIntyre, Noels, & Clément, 1997).

The negatively reciprocal correlation between language anxiety and perceived competence has also been proven in the research on the relationships among these variables and WTC (Hashimoto, 2002; MacIntyre & Charos, 1996; Yashima, 2002). L2 WTC is a learner's tendency to initiate communication and it is a situational trait depending on the specific situation based on the learners' communicative competence or communication context (MacIntyre, Clément, Dörnyei, & Noels, 1998). MacIntyre and Charos (1996) investigated the relationships among motivation, language anxiety, perceived competence, WTC, and self-reported frequency of second language communication of language learners in bilingual

context in Canada. They deduced a L2 WTC model showing the interrelation of the variables: anxiety negatively affects perceived competence, WTC and motivation, perceived competence positively affects WTC and frequency, and motivation positively affects frequency. Hashimoto (2002) and Yashima (2002) also examined the relationships among the variables and frequency with ESL and EFL learners respectively, and found similar results even though some paths from perceived competence or motivation to frequency were slightly different.

According to the previous research, these variables are closely related to second language communication affecting frequency of communication even though there are slight differences in relationships among some variables and frequency. These differences can be due to the fact that different groups of subjects learning in different situations were studied. Also the relationships among the variables may differ according to the stages of acquisition process (MacIntyre & Charos, 1996). Despite the differences in relationships, it is clear that the variables affect self-reported frequency, which implies that they may affect the learners' interaction or real frequency of communication. Based on this line of reasoning and the findings of the studies on the relationship between the variables and the proficiency, it is reasonably logical to hypothesize that the learners' affective variables may affect how negative feedback such as recast is provided and utilized in communication.

3. Research Questions

Based on the above speculation, three research questions were raised as follows:

- 1) Do learner variables affect the amount of recasts provided in NS-NNS and NNS-NNS dyads?
- 2) Do learner variables affect the nature of the recasts provided in NS-NNS and NNS-NNS dyads in terms of opportunities given for modified output?
- 3) Do learner variables affect the production of modified output in response to recasts in NS-NNS and NNS-NNS dyads?

III. METHOD

1. Participants

Forty Korean EFL learners participated in this study, all from one English class taught by the author at a university in a city located in Choongnam. They were English major sophomores, thirty six females and four males, aged from nineteen to twenty one years.

Their speaking ability was rated by their native interlocutor and their English lecturer on a 1-4 scale, where 1 represented beginning, 2 low intermediate, 3 high intermediate, and 4 advanced. The rating showed a range of scores from 1-3, and the mean was 2.43.

One English native speaker and one nonnative speaker whose native language is Korean also participated in the study as their interlocutors. The former was a male English lecturer at the university with a TESOL certificate and one and a half years of teaching experience in Korea. Prior to the study, he had not taught and was not teaching the subjects during the period of the study. The latter was a female English major junior with low intermediate English speaking ability as the majority of the subjects. It was confirmed that the interlocutor had no personal relationships with any of the subjects, and they had not taken any English major courses together. Therefore, during the period of the study, the subjects conversed with the people whom they did not know well.

2. Materials

1) The Instruments

In the present study four instruments were administered: twenty items from McCroskey (1992) to measure willingness to communicate, twelve items from MacIntyre and Charos (1996) to measure perceived competence, twelve items from MacIntyre and Charos (1996) to measure communication anxiety, and twelve items from Yashima (2002) to measure motivation. Among the twenty items of McCroskey (1992), eight were filler (dummy) items and twelve were genuine to measure WTC. Three sets of instruments to measure willingness to communicate, communication anxiety, and perceived competence respectively consist of items regarding the communication situations, that is, the types of the interlocutors (friends, acquaintances, or strangers), the number of the interlocutors (one, around five, around ten, or around thirty), the types of situation (private or public). The subjects were to indicate the percentage of time they would choose to communicate when completely free to do so, the percentage of time they would feel nervous, and their self-assessed competency, in each situation by using a figure between 0 and 100 as were the subjects in the original studies. The instrument used to measure motivation consists of six items regarding motivational intensity (taken from a research by Gardner & Lambert, 1972, cited in Yashima, 2002) and another six items (defined under the rubric from Gardner & Lambert, 1972, cited in Yashima, 2002) asking about desire to learn. The subjects were asked to rate the degree to which they agreed to each statement by using 7-point scales.

2) Interaction Tasks

To examine the amount of recasts provided, the nature of recasts, and the amount of production of modified output, the subjects were asked to perform the interaction tasks where they were supposed to converse with their interlocutor in dyads. It was a one-way interaction task where each subject was asked to describe the people in the pictures given in terms of their clothing, appearance, and actions, to the interlocutor who faced the subject. The subjects were not allowed to show the pictures to the interlocutors. The pictures were chosen from several commercial English conversation books and they were all in color. Some pictures were drawn by the artists and others were photos.

3. Procedure

1) Interaction Task Procedure

Forty students were categorized into eight groups: five high motivation learners, five low motivation learners, five high anxiety learners, five low anxiety learners, five high WTC learners, five low WTC learners, five high perceived competence learners, and five low perceived competence learners, according to the results of measuring their learner variables. Since each student had to converse with two interlocutors (NS and NNS), each performed two dyadic interactions with a different interlocutor. Therefore, forty students were assigned to form forty NS-NNS dyads and forty NNS-NNS dyads, forming eighty dyads in total as shown in Table 1.

After forming all the dyads, the scheduling for each dyad was made based on each participant's personal schedule. Since the study was concerned with one-on-one communication, all the communication tasks had to be performed in a quiet place outside the classroom so that the researcher could record the conversation between two participants without any other noise. The schedule was made where the interlocutors were supposed to randomly meet any subjects from any dyad types of learner variables and each subject was supposed to randomly meet either type of the interlocutors. Therefore, the chronological order had no effect on the study.

In each session of interaction, the interlocutor and each subject met in the researcher's office and performed the task facing each other for thirty minutes with a five minute break. Before they started the task, the subject was given three minutes to look at the pictures. All the interaction was recorded and later transcribed.

TABLE 1
Dyads Formation for Interaction Tasks

		NS-NNS	NNS-NNS
Motivation	high	5 dyads	5 dyads
	low	5 dyads	5 dyads
Anxiety	high	5 dyads	5 dyads
	low	5 dyads	5 dyads
WTC	high	5 dyads	5 dyads
	low	5 dyads	5 dyads
Perceived competence	high	5 dyads	5 dyads
	low	5 dyads	5 dyads
Total		40 dyads	40 dyads

2) Coding Procedure

The transcription was coded, based on Mackey et al. (2003), in terms of coding categories such as nontargetlike utterances, recasts provided, opportunities for modified output, and modified output as follows. First, initial learner utterances were classified as targetlike or nontargetlike indicating whether utterances were lexically/grammatically targetlike or not; second, interlocutor responses to nontargetlike learner utterances were classified as opportunity for modified output or no opportunity according to whether recasts were provided or not and, if recasts were provided, whether the opportunities for learners to produce modified output were provided or not; third, learner responses to recasts were coded as modified output or no modified output according to whether learners incorporated feedback into their following utterances, that is, if they utilized recasts or not. To illustrate, see the following episodes coded according to the above coding categories:

(2) Learner : ... and sexy T (nontargetlike utterance)

NS : Sexy T-shirt? (recast with opportunity for modified output)

Learner : ... and short pants. (no modified output)

(3) Learner : High blue shirt. (nontargetlike utterance)

NS : Light blue shirt? (recast with no opportunity for modified output)

What is his hair style?

(4) Learner : Her hair curly blond hair. (nontargetlike utterance)

NNS : She has curly blond hair? (recast with opportunity for modified output)

Learner : Yes, she has curly blond hair. (modified output)

4. Data Analysis

To examine the research questions of the study, data analysis was carried out by using

chi-square test after all the episodes were coded and the frequency of each category was calculated. The results are presented in the following section.

IV. RESULTS AND DISCUSSION

This study was designed and performed to investigate the effect of learner variables on the provision and uptake of recasts as negative feedback in NS-NNS and NNS-NNS dyads. Below are the results of the interactional communication reported and discussed according to the research questions.

1. The Amount of Recasts Provided

Do learner variables affect the amount of recasts provided in NS-NNS and NNS-NNS dyads? To answer the question, a chi-square analysis was run to confirm any differences between the frequencies of interlocutors' responses to nontargetlike utterances produced by the subjects in NS-NNS and NNS-NNS dyads according to each variable. In Tables 2, 3, 4, and 5, the frequencies of NS and NNS interlocutor responses are enumerated corresponding to each variable. In the amount of feedback, there were significant differences by motivation, willingness to communicate, and perceived competence in NS-NNS dyads whereas there was a significant difference by anxiety in NNS-NNS dyads, as shown in tables 2 through 5.

TABLE 2
Interlocutor Responses to Nontargetlike Production by Motivation

	NS-NNS		NNS-NNS	
	High Motivation	Low Motivation	High Motivation	Low Motivation
Recasts	69*(55.65%)	97*(69.78%)	46(43.39%)	38(37.25%)
No recasts	55*(44.35%)	42*(30.22%)	60(56.60%)	64(62.75%)
	$\chi^2 (1, N=263) = 5.63, p<.01$		$\chi^2 (1, N=208) = 0.81, ns$	

TABLE 3
Interlocutor Responses to Nontargetlike Production by Anxiety

	NS-NNS		NNS-NNS	
	High Anxiety	Low Anxiety	High Anxiety	Low Anxiety
Recasts	97(59.88%)	72(61.02%)	47*(29.75%)	40*(54.05%)
No recasts	65(40.12%)	46(39.98%)	111*(70.25%)	34*(45.95%)
	$\chi^2 (1, N=280) = 0.04, ns$		$\chi^2 (1, N=232) = 12.7, p<.000$	

TABLE 4
Interlocutor Responses to Nontargetlike Production by WTC

	NS-NNS		NNS-NNS	
	High WTC	Low WTC	High WTC	Low WTC
Recasts	66*(56.41%)	103*(73.57%)	37(45.12%)	53(45.30%)
No recasts	51*(43.59%)	51*(43.59%)	45(54.88%)	64(54.70%)

$\chi^2 (1, N=257) = 8.34, p < .01$ $\chi^2 (1, N=199) = 0.00, ns$

TABLE 5
Interlocutor Responses to Nontargetlike Production by Perceived Competence (PC)

	NS-NNS		NNS-NNS	
	High PC	Low PC	High PC	Low PC
Recasts	69*(79.31%)	102*(62.58%)	34(50.74%)	62(40.00%)
No recasts	18*(20.69%)	61*(37.42%)	33(49.25%)	93(60.00%)

$\chi^2 (1, N=250) = 7.35, p < .001$ $\chi^2 (1, N=222) = 2.20, ns$

As seen in Tables 2 through 5, the chi-squares for frequencies of interlocutor responses to the nontargetlike utterances in NS-NNS dyads were 5.63, $p < .01$ in motivation, 8.34, $p < .01$ in WTC, and 7.35, $p < .001$ in perceived competence, indicating that there were statistically significant relationships between each of the three variables and the amount of recasts provided in NS-NNS dyads respectively. In other words, the subjects were given recasts differently depending on the level of motivation, WTC, and perceived competence when they interacted with the NS interlocutor. On the contrary, the chi-square for frequencies of interlocutor responses in NNS-NNS dyads was 12.7, $p < .000$ in anxiety, meaning that there was a statistically significant relationship between this variable and the amount of recasts provided in NNS-NNS interaction. In other words, the subjects were given recasts differently depending on the level of anxiety when they interacted with the NNS interlocutor.

The findings show that the NS interlocutor provided significantly more recasts to the subjects who had low motivation as in (5) than to the ones who had high motivation and to the ones who were less willing to communicate as in (6) than to the ones who were more willing. What is interesting here is that the NS interlocutor provided significantly more negative feedback to the learners who had a high level of perceived competence as in (7) than to the ones who had a low level of the variable, which is the opposite result to the former two variables, motivation and WTC. The level of anxiety in the learners did not significantly influence the NS interlocutor's behavior in terms of the provision of recasts.

(5) Learner (Low Motivation) : He is so surprise.

NS : He is so surprised?

(6) Learner (Low WTC) : He is average tall.

NS : He is average height!

(7) Learner (High Perceived Competence) : He has balding.

NS : He is balding.

The NS interlocutor's opposite pattern of providing recasts according to the variables may be explained as follows: the highly motivated subjects as in (8) and the ready-to-speak subjects as in (9) were more likely to continue to speak instead of taking turns in interaction and giving the NS interlocutor the opportunities to respond to their utterances than the less motivated students and the unwilling-to-speak students. On the contrary, the students who evaluated themselves high in terms of communication skills were more likely to take turns in interaction with their NS interlocutor than the ones who assessed their communicative competence as low, which may explain why the subjects with high perceived competence were provided more recasts as in (10) than the learners with low perceived competence.

(8) Learner (High Motivation): She is blue striped and long shirt over white T-shirt and blue jeans. Boy is wearing...ah, he is wearing blue long shirt and beige jeans.

(9) Learner (High WTC): Mother is short hair, color is brown. Father is short hair, white. Two brothers, one brother, black hair, short black hair. Two brother, brown, short black hair. Sister is light brown, light yellow long hair.

(10) Learner (High Perceived Competence) : She is wearing long red one piece.

NS : A long red dress?

Learner : A long red dress!

NS : And is she tall? Or short?

Learner : She is short.

The NNS interlocutor provided significantly more recasts to the learners with low anxiety than to the ones with high anxiety while she didn't behave differently in providing negative feedback according to motivation, WTC, and perceived competence. She gave more negative feedback to the students with low anxiety as in (11) than the ones with high anxiety, and it can be inferred that a high level of anxiety in the learners may have prevented her from giving negative feedback.

(11) Learner (Low Anxiety): He is very high.

NNS : He is very tall!

In sum, motivation, WTC, and perceived competence affected the amount of recasts in NS-NNS interactional dyads, but not in NNS-NNS dyads, while anxiety affected the

amount of negative feedback in NNS-NNS interaction, but not in NS-NNS interactions. Anxiety affected the amount of recasts in a different way from the other three variables in NS-NNS and NNS-NNS interactions. And in NS-NNS dyads, motivation and WTC affected the amount of recasts differently from perceived competence.

2. The Nature of Recasts Provided: The Opportunities for Modified Output

Do learner variables affect the nature of the recasts provided in NS-NNS and NNS-NNS dyads in terms of opportunities given for modified output? To answer this question, a chi-square analysis was also run to confirm any differences between the frequencies of opportunities provided in NS-NNS and NNS-NNS dyads. In Tables 6 through 9, the frequencies of opportunities are enumerated corresponding to each variable. There were no significant differences according to the variables in NS-NNS and NNS-NNS interaction in terms of whether the opportunities for the subjects to modify their original utterances were given or not after the recasts were provided in the dyads, with the exception of a significant difference according to WTC in NS-NNS interaction. WTC was the only variable that affected the opportunities for the learner to utilize the recasts in NS-NNS dyads.

TABLE 6
Nature of Recasts Provided to Learners by Motivation

	NS-NNS		NNS-NNS	
	High Motivation	Low Motivation	High Motivation	Low Motivation
Opportunities	64(92.75%)	86(90.53%)	44(91.67%)	38(100%)
No opportunities	5(7.25%)	9(9.47%)	4(8.33%)	0(0%)

$\chi^2 (1, N=164) = 0.25, ns$ $\chi^2 (1, N=86) = 3.32, ns$

TABLE 7
Nature of Recasts Provided to Learners by Anxiety

	NS-NNS		NNS-NNS	
	High Anxiety	Low Anxiety	High Anxiety	Low Anxiety
Opportunities	90(92.78%)	61(87.14%)	46(97.87%)	39(97.5%)
No opportunities	7(7.22%)	9(12.86%)	1(2.13%)	1(2.5%)

$\chi^2 (1, N=167) = 1.49, ns$ $\chi^2 (1, N=87) = 0.01, ns$

TABLE 8
Nature of Recasts Provided to Learners by WTC

	NS-NNS		NNS-NNS	
	High WTC	Low WTC	High WTC	Low WTC
Opportunities	55*(83.33%)	97*(94.17%)	36(97.30%)	52(98.11%)
No opportunities	11*(16.67%)	6*(5.83%)	1(2.70%)	1(1.89%)

$\chi^2 (1, N=169) = 5.23, p<.01$ $\chi^2 (1, N=90) = 0.07, ns$

TABLE 9
Nature of Recasts Provided to Learners by Perceived Competence (PC)

	NS-NNS		NNS-NNS	
	High PC	Low PC	High PC	Low PC
Opportunities	57(82.61%)	87(85.29%)	33(97.06%)	61(98.39%)
No opportunities	12(17.39%)	15(14.71%)	1(2.94%)	1(1.61%)
	$\chi^2 (1, N=171) = 0.22, ns$		$\chi^2 (1, N=98) = 0.19, ns$	

As seen in Table 8, the chi-square for frequencies of opportunities for modified output in NS-NNS dyads was 5.23, $p < .01$ in WTC, indicating that there was a statistically significant relationship between WTC and the nature of recasts provided to the learners in NS-NNS dyads. In other words, the learners were given opportunities to modify their original nontargetlike utterances differently depending on the level of WTC in NS-NNS dyads, but not in NNS-NNS dyads. The other chi-squares were not significant, which means that the nature of recasts learners were provided with was not different according to the level of the other three variables, namely, motivation, anxiety, and perceived competence in either NS-NNS or NNS-NNS communication.

In the interaction with the NS interlocutor, the subjects who were less willing to communicate as in (12) were offered significantly more opportunities for modified output than the subjects who were more willing. It can be inferred that the low level of WTC in the learners may influence the turn taking with the NS interlocutor. Hence, when the learners stop or hesitate out of the lack of the willingness to communicate, the NS may take his turn and give the learners recasts. This may result in the possibility of the learners ending up with the opportunities to repeat their original utterances in a modified form if the NS also stops after he offers the feedback. Neither NS nor NNS interlocutors behaved differently in providing the opportunities according to the level of the other three variables. Both of them consistently gave many opportunities to the learners regardless of the level of motivation, anxiety, and perceived competence.

(12) Learner (Low WTC): He is play bicycle.

NS : He is riding a bicycle.

Learner : Riding a bicycle.

In sum, in NS-NNS interaction WTC was the only variable that affected the opportunities for modified output. In NNS-NNS interaction none of the variables affected the opportunities. The inference may be drawn that the learner variables related to communication except WTC do not much affect the nature of recasts regardless of the interlocutor type.

3. The Uptake of Recasts: The Production of Modified Output

Do learner variables affect the production of modified output in response to recasts in NS-NNS and NNS-NNS dyads? To examine this research question, a chi-square analysis was performed to determine if there was a difference between the frequencies of learner responses in NS-NNS and NNS-NNS communication types according to the level of each variable. In Tables 10 through 13, the frequencies of modified output produced in NS-NNS and NNS-NNS interactions are enumerated corresponding to motivation, WTC, anxiety, and perceived competence.

As illustrated in Tables 10 through 13, the chi-squares for frequencies of the modified output produced in the dyads with the NS interlocutor were 20.92, $p < .000$ in motivation, 3.91, $p < .05$ in anxiety, 2.55, $p < .01$ in WTC, and 3.57, $p < .05$ in perceived competence respectively, revealing that there were statistically significant relationships between each of the four variables and the production of modified output in NS-NNS interaction. That is, students utilized the recasts provided differently depending on the level of each variable. The chi-square for frequencies of the modified output produced in the dyads with the NNS interlocutor was 4.37, $p < .05$ in perceived competence, indicating that there was a significant difference between perceived competence and the production of modified output in NNS-NNS communication.

TABLE 10
Learner Responses to Interlocutors' Recasts by Motivation

	NS-NNS		NNS-NNS		
	High Motivation	Low Motivation	High Motivation	Low Motivation	
Uptake	55*(85.94%)	43*(50.00%)	40(90.91%)	33(96.84%)	
No uptake	9*(14.06%)	43*(50.00%)	4(9.09%)	5(13.16%)	
		$\chi^2 (1, N=150) = 20.92, p < .000$		$\chi^2 (1, N=82) = 0.35, ns$	

TABLE 11
Learner Responses to Interlocutors' Recasts by Anxiety

	NS-NNS		NNS-NNS		
	High Anxiety	Low Anxiety	High Anxiety	Low Anxiety	
Uptake	70*(77.78%)	55*(90.16%)	45(97.83%)	36(92.31%)	
No uptake	20*(22.22%)	6*(9.84%)	1(2.17%)	1(7.69%)	
		$\chi^2 (1, N=151) = 3.91, p < .05$		$\chi^2 (1, N=85) = 1.43, ns$	

TABLE 12
Learner Responses to Interlocutors' Recasts by WTC

	NS-NNS		NNS-NNS		
	High WTC	Low WTC	High WTC	Low WTC	
Uptake	46*(83.64%)	70*(72.16%)	33(91.67%)	48(92.31%)	
No uptake	9*(16.36%)	27*(27.84%)	3(8.33%)	4(7.69%)	
		$\chi^2 (1, N=152) = 2.55, p < .01$		$\chi^2 (1, N=88) = 0.01, ns$	

TABLE 13
Learner Responses to Interlocutors' Recasts by Perceived Competence (PC)

	NS-NNS		NNS-NNS	
	High PC	Low PC	High PC	Low PC
Uptake	52*(91.23%)	61*(79.22%)	28*(84.45%)	59*(96.72%)
No uptake	5*(8.77%)	16*(20.78%)	5*(15.15%)	2*(3.28%)
	$\chi^2 (1, N=134) = 3.57, p < .05$		$\chi^2 (1, N=94) = 4.37, p < .05$	

Overall, the subjects consistently modified their original nontargetlike utterances by utilizing the recasts provided when they were given the opportunities to do so in all dyads. However, the pattern of production of modified output was different according to whether the levels of four variables were high or low in NS-NNS interaction and according to the level of perceived competence in NNS-NNS interaction. In the interaction with the NS interlocutor, as in (13), (14), (15), and (16), those with high motivation, WTC and perceived competence and those with low anxiety produced significantly more modified output by taking up the recasts than those with low motivation, WTC, and perceived competence and those with high anxiety. On the contrary, in the dyads with the NNS interlocutor, the learners with low perceived competence produced more modified output as in (17) than the ones with high perceived competence. Unlike the perceived competence variable, the other three variables did not affect the amount of modified output produced in NNS-NNS interaction dyads, even though the learners consistently produced modified output by utilizing the recasts in the other dyad types.

(13) Learner (High Motivation): He is long face.

NS : He has a long face.

Learner : He has a long face.

(14) Learner (High WTC): There is girl and boy talk, talking, talking about.

NS : They are talking?

Learner : They are talking.

(15) Learner (High Perceived Competence): He has balding.

NS : He is balding.

Learner : He is balding and he has a moustache.

(16) Learner (Low Anxiety): He is car next walk, standing.

NS : Standing next to the car?

Learner : Yes, he is standing next to the car.

(17) Learner (Low Perceived Competence): He is hold on casesuit and walking.

NNS : He is carrying a suitcase!

Learner : He is carrying a suitcase.

Among the findings pertaining to the third research question, it is very interesting that the learners who evaluated their competence high modified their utterances more than the ones who assessed their competence as low when they communicated with the NS interlocutor, and vice versa when they conversed with the NNS interlocutor. This opposite pattern of production of modified output or uptake of recasts in NS-NNS and NNS-NNS dyads may be explained as follows: those with a high level of perceived competence may have been more likely to modify their utterances in interaction with the NS interlocutor as in (15) since they perceived him as a reliable source of target language form; on the contrary, in the NNS-NNS interaction, they may have been less likely to modify their utterances as in (18) since they did not count on the interlocutor to be as a reliable source as the NS interlocutor.

(18) Learner (High Perceived Competence): She is listening to the music.

NNS : She is listening to music?

Learner : ... "She is listening to the music" is right!

V. CONCLUSION

The present study researched the effect of learner variables on the provision and uptake of recasts in NS-NNS and NNS-NNS dyads. The results indicate that, in interaction dyads, learner variables influenced the interlocutor responses to the nontargetlike learner utterances and the learner responses to the interlocutor recasts, as can be inferred from findings of the previous studies on the relationship between the affective variables and self-reported frequency of L2 communication. In NS-NNS dyads, the NS interlocutor provided more recasts to the learners with low motivation and WTC and to the learners with high perceived competence, offering more opportunities for the uptake of recasts to the learners with low WTC. And the learners with high motivation, WTC, and perceived competence, and low anxiety produced more modified output by utilizing the recasts than the ones with low motivation, WTC, and perceived competence, and high anxiety. In NNS-NNS dyads, the NNS interlocutor gave more recasts to the learners with low anxiety, and the learners with low perceived competence produced more modified output through the uptake of recasts than the ones with high perceived competence. In short, learners' affective variables influenced the provision and uptake of recasts in the interaction with both interlocutor types, but the effects of the variables were greater in the interaction with the NS than with the NNS. In the interaction with the NS, perceived competence affected the provision of recasts differently from either motivation or WTC, and anxiety influenced the uptake of recasts differently from the other variables. Also, the effect of perceived

competence on the uptake was different according to the interlocutor type.

Based on the findings, the following can be inferred. In the interaction with the NS interlocutor, the high level of motivation and WTC in the learners may lead to reduce the learners' possibility to receive negative feedback by driving them to continue the delivery of their messages. However, high motivation and WTC are likely to result in the uptake of the NS interlocutor feedback, once the feedback is given and available, by driving the learners to modify their nontargetlike utterances as the NS's target form. The level of anxiety may increase in the interaction with the NS interlocutor, and the higher anxiety may discourage the learners from participating in L2 communication and inhibit them from producing modified utterances. The learners with high perceived competence may give a turn to the NS interlocutor, considering themselves as a competent L2 speaker and expecting a natural two-way communication. Their interaction pattern may lead to the possibility of more recasts being elicited from the interlocutor. Also they may perceive the NS interlocutor as a reliable L2 source and incorporate his feedback into their speech. However, it seems that the learners' confidence in their L2 competency works differently in the interaction between the NNS learners. The learners with high perceived competence are less likely to utilize the NNS interlocutor's negative feedback from the strong confidence in their L2 ability than the learners with low perceived competence are likely to do from the lack of L2 confidence. Overall, the differences in the provision and incorporation of recasts according to the level of each affective variable may be more significant in NS-NNS dyads than in NNS-NNS dyads.

The results of the present study also show the higher frequencies of the interlocutor responses to the nontargetlike learner utterances, the opportunities for modified output, and the production of modified output both in NS-NNS and NNS-NNS dyads than the results of the previous studies (e.g. Mackey et al., 2003). It means that, in the present study, a very active interaction was performed both on the part of the interlocutor and on the part of the learners. The NS interlocutor responded to most of the learners' original wrong utterances by providing recasts and also gave opportunities for modified output in most cases after he offered the feedback. The NNS interlocutor also consistently responded to most of the nontargetlike utterances by offering recasts even though the frequencies of her recasts were lower than those of the NS's. And the learners consistently modified their utterances in the interaction with both types of the interlocutors with very high frequency. Since the uptake of recasts means the possibility of the learners' modifying their interlanguage system to approximate it to the target language, the findings that recasts were consistently given to and used by the L2 learners and they were given and used both in NS-NNS and NNS-NNS dyads imply that recasts provided in the interaction may promote L2 acquisition (e.g. Long, Inagaki, & Ortega, 1998; Mackey & Philp, 1998) and that the interaction with the NNS interlocutor as well as the interaction with the NS may be necessary for L2 development.

Among the findings, it is worthy to note that recasts were consistently offered and were incorporated even to a greater extent in NNS-NNS dyads than in NS-NNS dyads although there were not any significant differences in incorporation of recasts depending on the level of the variables in NNS-NNS dyads. One possible explanation for this interaction pattern is that the NNSs may have offered recasts to each other for clarification request or confirmation check since they “did not have access to the target forms themselves” (Mackey et al., 2003, p. 37).

Despite the worthy and interesting findings, we need to be cautious in generalizing them and drawing any solid conclusions since the study has some limitations. One of the limitations is that a small number of the learners were categorized into each type of dyad with ten students assigned to each variable dyad. With a larger number of sampling, the research would have shown the results that could be generalized to Korean L2 learners. Another limitation is related to the interlocutors. In order to measure the effect of the learners’ variables, only one NS and one NNS interlocutor participated in the study and neither interlocutor represents all NSs and NNSs respectively. Besides, the NS was a male lecturer who was a little older than the learners while the NNS was a female student who was almost the same age. It means that it is possible that age and sex of the interlocutors may affect the interaction. The future study should include a larger number of NS and NNS interlocutors with the other factors controlled. Still another limitation is that the interaction tasks were performed in a laboratory like situation where a third party, the researcher, was present. Therefore, the learners might not have participated in a natural way of communication.

The results of the study on the comparison of the NS instructor and the NNS learner as interlocutors have pedagogical implications important to Korean EFL learners since, in most communication settings they are exposed to, their NS interlocutors are their language teachers and their NNS interlocutors are their classmates. As shown in the findings, affective variables more influenced the provision and uptake of recasts in the interaction with the NS interlocutor than in the interaction with the NNS. It implies that considering learners’ affective variables should be more emphasized in interaction with the NS instructor. For example, the NS interlocutor may be asked to interpret and react to the learners’ responsive behaviors to his or her feedback in the aspect of their affect as well, not just in the aspect of their L2 proficiency. Also, the instructor may be able to create a non-threatening atmosphere in a L2 classroom, motivate the learners to participate in L2 tasks, and encourage them to assess their L2 performance in a more positive and optimistic light. On the other hand, learners may be trained to use affective strategies to participate confidently in communication with the NS interlocutor.

The finding that recasts were consistently provided and utilized to a great degree in the interaction with both interlocutors also has a pedagogical implication that group or pair

activities where language learners interact with each other giving and receiving recasts, may promote their L2 development. Therefore, the classroom activities should be designed to include various types of learner-learner interaction for L2 learners' language development.

Despite the shortcomings, the study can contribute to the understanding of second language acquisition in that it tried to examine the effects of the affective variables on the real L2 communication frequency, not on the self-reported one, and to investigate the relationship between the variables and the patterns of interaction where recasts are provided and utilized, which hasn't been researched much yet in second language acquisition field. The important findings of the study involved differences in the provision and uptake of recasts in communication according to the level of each affective variable, and one of the most significant results is that such differences exist in real communication. To confirm the findings and to explore in detail how these affective variables play a role in second language communication, more research has to be conducted with a larger number of students with different levels of L2 proficiency, and in diverse communication settings.

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