

L2 Proficiency Similarities Versus Differences in Pair Work and Their Effects on Peer Interaction

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The importance of learner-learner interaction in second language (L2) acquisition has been increasingly recognized in applied linguistics. In particular, several recent studies indicate that learner-learner interaction may be an important aspect of learning (e.g. Gass & Torres, 2005; Youjin Kim, 2008; Mackey, 2009; McDonough, 2005). However, little research has documented how differing levels of L2 proficiency in a pair might affect learner-learner interaction. To contribute to this paucity, the present study explored the effects of grouping learners in terms of L2 proficiency levels in EFL writing classes. As a first step, the study examined which linguistic problems Korean EFL learners focused on when interacting with interlocutors from similar or different proficiency levels; and how the linguistic issues were resolved. Eight Korean EFL learners were paired with either homogenous or heterogeneous interlocutors in terms of L2 proficiency levels. Their pair talk in carrying out joint composition tasks was analyzed in terms of: (a) the frequency and resolution of language-related episodes (LREs); and (b) the patterns of interaction with their interlocutors. Results showed that the grouping of learners according to relative L2 proficiency levels did not affect the frequency or resolution of LREs. However, this study suggested that proficiency similarity or difference between two learners in a pair had some impact on the patterns of learner interaction: pairs in homogeneous grouping seemed to be more collaborative than the counterparts.

[pair work/grouping learners/learner interaction/language-related episodes/모둠 활동/학습자들 집단화/학습자들간의 상호작용/언어관련 에피소드]

I. INTRODUCTION

Pair work¹ is commonly used in second language (L2) classrooms, and the use of pair work has received great support in the L2 literature. Along with the influence of Communicative Language Teaching (CLT), a benefit of using pair work in language classrooms is that pair work provides L2 learners with communicative opportunities. Apart from this benefit, pair work has another important value, which is related to the notion of *learner-learner interaction*. The notion of *learner-learner interaction* can be understood from two major language learning theories: the cognitive theory of interaction and the sociocultural theory of the mind.

According to the cognitive theory of interaction, interaction between learners or between learners and native speaker interlocutors raises learners' awareness of problematic utterances and negative feedback; the learners may modify their output as responses to such feedback (Gass, 1997, 2003; Long, 1996; Long & Robinson, 1998). From the cognitive perspective, these interactional processes involving feedback and modifications referred to as *negotiation* (or *negotiation of meaning*) facilitate second language learning. Here, pair work that requires learners to work together promotes attention to form via interaction; therefore providing effective opportunities for producing output and L2 learning (Mackey, 2009).

Whereas cognitive theory focuses on interaction eliciting learners' cognitive process, sociocultural theory emphasises the importance of interaction at a social level. According to this theory, based largely on the work of Vygotsky (1978), knowledge is constructed by the interactions of individuals within society; and learning including language learning is the internalisation of social interaction and has given rise to the Zone of Proximal Development (ZPD)². The term ZPD refers to the difference between a novice's actual level of development and the potential level reached with the assistance of an expert. Thus, this particular interaction occurring between a novice and an expert, with the expert's assistance to suit the novice's ZPD is crucial for all learning according to sociocultural theory; and the interaction process is termed as *scaffolding*. However, several L2 studies (e.g. de Guerrero & Villamil, 2000; Donato, 1994; Storch, 2007; Swain & Lapkin, 2002)

¹ Pair work is part of small-group work. However, in this paper, the term pair work is used instead of small-group work as the activity employed in this study was pair work as small-group work.

² In Vygotsky's (1978) definition, the ZPD is "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance in collaboration with more capable peers" (p. 86).

have suggested that scaffolding can occur not only in expert-novice interaction but in peer interaction. These studies have also claimed that the use of pair work is beneficial for L2 learning as learners may get opportunities to pool their linguistic resources and consolidate the existing knowledge.

However, despite the strong pedagogical and theoretical arguments for the role of learner-learner interaction in L2 development, there has been relatively little empirical research exploring the relationship between learners' characteristics and interaction. It is apparent that one important issue related to the role of interaction during pair work is the impact of learner characteristics, such as proficiency, gender, and cultural background, on learner-learner interaction. Among those learner variables, proficiency is of particular interest for EFL teachers who need to deal with learners of varying abilities, especially when organizing learners into pairs. Although learner interaction involving learners of different proficiency levels is commonly observed in an L2 classroom, surprisingly, little research has documented how differing levels of L2 proficiency in a pair might affect learner-learner interaction and this article will explore the few studies in this area on grouping of learners. The key term in this study, *collaboration*, will be discussed further in the Literature Review.

II. LITERATURE REVIEW

1. *Collaboration* as Key Concept to the Study

The belief that interaction is important to L2 development has become widely accepted in L2 literature, in particular in research on pair work. As discussed above, negotiation and scaffolding, that is the particular kind of interaction effective for L2 learning, emphasise a joint and reciprocal task that demand a collaborative effort. In the field of SLA, studies on either negotiation or scaffolding have shown that it is only when learners work collaboratively that they create opportunities for language learning. This implies that merely assigning students to work in pairs will not create conditions conducive to L2 learning; and different configurations of joint work result in different outcomes. Ironically, however, relatively few L2 studies take into account the collaborative aspects of learners' interaction (Donato, 2004; Storch, 2002, 2007). In this vein, capturing what qualifies interaction as collaborative interaction is of significance.

Donato (2004) provided common characteristics that typify collaborative interaction, taking several perspectives on collaboration from different fields (Fullan, 1999; Petrovsky, 1985). According to the researcher, collaboration has three categorical features. The first characteristic is "the social relations that develop as a result of jointly constructed goals for

the common endeavour” (Donato, 2004, p. 287). The second feature is that collaboration entails “recognition of individuals as parts of a cooperative activity and the acceptance of the contributions of individuals in the service of a larger goal” (Donato, 2004, p. 287). The third is that collaboration makes learners “build coherence within and among social relations and knowledge located in its members” (Donato, 2004, p. 287). Therefore, to collaborate successfully, both learners, regardless of their proficiency levels, must maintain an inter-subjectivity³ by means of which they establish common goals within a shared communicative context.

2. Previous Studies on Interaction and Grouping Learners

A study by Kowal and Swain (1994) examined interaction occurring in pair work during a dictogloss task, which required learners first to listen and take notes as their teacher read a short text containing specific grammatical features; and then to work in pairs to reconstruct the text from their joint notes. The study found that in a highly heterogeneous grouping (e.g. upper-middle and low), the students at the higher proficiency level tended to carry out most of the work, because the less proficient students were too intimidated to say anything, were willing to let the stronger student do the task, or were not allowed to do any of the tasks, regardless of their opinion. This study also reported that heterogeneous dyads of learners worked less effectively together, possibly because “neither of the students’ needs were within the zone of proximal development of the other” (Kowal & Swain, 1994, p. 86).

Similarly, another study was conducted by Leeser (2004), focused on the impact of learners’ L2 proficiency on language-related episodes (LREs)⁴ produced by three different groupings: high-high (H-H), high-low (H-L) and low-low (L-L). The findings of the study indicated that, as for the frequency of LREs, H-H grouping produced more LREs than H-L and L-L pairs; this pairing resolved problems correctly more often than the others; and L-L dyads were most likely to leave LREs unresolved. Based upon these findings, Leeser concluded that proficiency level itself seemed more important than grouping in determining the overall proficiency and the outcomes of LREs. However, as the researcher acknowledged, this study merely dealt with the quantity of LREs without examining the

³ According to de Guerro and Villamil (2000), inter-subjectivity means a shared understanding among individuals who establish reciprocal and equal perspective to accomplish a joint activity through interaction.

⁴ A language-related episode (LRE) has been defined as any part of a dialogue in which students talk about the language they are producing, question their language use, or other-or self-correct their language production (Swain & Lapkin, 1995).

relationship between proficiency differences in a pair and their interactional patterns, an issue which cannot be answered from the quantitative analysis of LREs.

Another study on the effects of proficiency difference in a pair was carried out by Watanabe and Swain (2007), addressing an issue unexamined in the two earlier studies, that is, the quality of interaction by different groupings. First, in order to address the matter of how individual learners benefited from interaction with interlocutors, the study involved two different types of participants: core and non-core. Each core participant interacted with two non-core participants whose English proficiency was either higher or lower than their own. The findings, in terms of the frequency of LREs, seemed to be consistent with the previous studies (Kowal & Swain, 1994; Leeser, 2004), in that as the overall proficiency of the dyad increased, learners produced a greater frequency of metatalk. A noteworthy point is that the pattern of interaction of the pair with the highest frequency of LREs was found to be collaborative, while the interaction pattern of the pair with the lowest frequency of LREs was non-collaborative. In other words, the quality of the LREs had an effect on the quantity of the LREs. Based on these findings, Watanabe and Swain (2007) suggest that proficiency difference in a pair does not necessarily affect the occurrence of LREs, and a more likely factor might be the pattern of interaction.

Given the small body of existing research on the effects of proficiency differences on learner-learner interaction, there is clearly a need for further research in the field. There has been little research to document how learners paired with similar or different language proficiency levels interact with each other, and whether the interaction of homogenous pairs is different from heterogeneous ones. Although the study by Watanabe and Swain suggests that proficiency differences in a pair do not necessarily affect the nature of peer assistance, studies in this area are still very limited, and hence to contribute to this domain, the present study explores the effects of proficiency in grouping on learner-learner interaction.

III. METHOD

1. Research Questions

The present study, part of a larger study examining the role of EFL learners' dialogic interaction in L2 learning, extends on the effect of two types of groupings, homogeneous and heterogeneous groupings on learners' interaction in joint writing tasks. The homogeneous grouping involved pairs in which the two participants had similar L2 proficiency levels; the heterogeneous grouping consisted of pairs with two participants who were different in terms of L2 proficiency level. Expanding the work of Leeser (2004),

this study investigated how these different groupings relate to the quality as well as the quantity of learners' interaction. The following are the four research questions that guided the study.

1. How do the occurrences of LREs (i.e. the overall frequency and language focus) differ when homogeneous pairs are compared with heterogeneous pairs?
2. How do the resolutions of LREs (i.e. resolution results and resolution types) differ between homogeneous pairs and heterogeneous pairs?
3. Is there any relationship between the number of these LREs, their language foci, their resolution results, and the resolution types which the two different groupings of learners generated?
4. How do the pair interactions differ between homogeneous pairs and heterogeneous pairs?

2. Participants

The participants were eight EFL learners⁵ selected from two undergraduate EFL classes offered for a credit course at a Korean university. In order to select and group learners according to their proficiency levels, an abbreviated version of the TOEIC test⁶ was administered in the second week of the course. The participants were placed in one of three proficiency bands using the TOEIC scores: low (below 60), intermediate (61-79), high (80 and above). It was intended to establish two homogenous dyads (one dyad of high-high learner and one dyad of low-low learners) and two heterogeneous dyads (two dyads of high-low learners). However, this grouping allocation was re-arranged as there were not enough advanced learners. Two intermediate learners with the next highest scores were assigned as heterogeneous dyad members, in each case paired with a low-level learner. The criterion to form the heterogeneous pairs was to have about a 15-point difference between each intermediate and low participant on the TOEIC score. Participants were not informed about their own or their partners' proficiency levels, in order to avoid preconceived ideas about proficiency. Table 1 presents each participant's name (pseudonym) and test score.

⁵ The learners were four females and four males. I initially intended to form pairs of the same gender and similar degree of familiarity apart from L2 proficiency levels, considering that those variables might affect their interaction. However, it was impossible to group each learner as all the variables.

⁶ The revised TOEIC test included only structure and reading comprehension questions to ascertain learners' knowledge of grammar. Since the test had been shortened, the test scores showed the percentages of the correct answers that students gained instead being compared to paper-based TOEIC scores.

Table 1
Participants

Grouping type	Homogeneous group				Heterogeneous group			
	High-High		Low-Low		Inter-Low 1		Inter-Low 2	
Name	Miyeon	Jung	Nami	Hoon	Jihye	Sunae	Daeho	Sangki
TOEIC scores(%)	83	77	50	48	70	55	68	50
Gender	Female	Male	Female	Male	Female	Female	Male	Male

3. Collaborative Writing Tasks

The task used in the study was a type of joint writing task⁷. Learners were given a short reading text and discussion session about a topic which they would work on in their joint writing task. Each of the topics included a dilemma based on which the students were asked to either choose a solution or give advice. The key feature of the joint writing task for this study was that learners were required to talk explicitly about any linguistic matters of either form or meaning while they were jointly composing a topic; and solving the linguistic problems. As in Watanabe and Swain's study (2007), the participants in this study had no access to any aids (e.g. a dictionary or the researcher). The dyads took approximately between 15 and 25 minutes to complete their writing tasks. The learners were provided with one practice session. During the practice session, the researcher demonstrated how to carry out a collaborative writing task; their dialogic interaction was recorded in order to familiarize them with the recording equipment. The entire study was conducted over a six-week period.

4. Data Analysis Framework

The first step for data analysis was transcribing the pair talk of the eight learners. For quantitative analysis, the transcribed pair talk was coded for LREs. Then, the LREs were counted in terms of overall frequency and language focus, either *lexical* or *grammatical*⁸. Lexical LREs referred to episodes where learners talk about lexical features such as word

⁷ Examples of writing products by a homogeneous pair and a heterogeneous pair are attached in Appendix.

⁸ For the language foci, two principal categories of LREs were adopted: *lexical* LREs and *grammatical* LREs, which have been generally accepted in the L2 literature.

choice, collocation, choice of preposition⁹ and phonological and orthographic form. Grammatical LREs were defined as LREs in which learners discussed grammatical features of English; these LREs included verbal tense, subject-verb agreement, passive, infinitive, modals (conditional and others), morphology, articles/determiners/quantifiers, clauses, and negation. Next, the LREs were coded as their resolved results, either *correctly resolved* or *incorrectly resolved*, following Leaser (2004) and Swain (1998). Another category of the resolution of the LREs concerned how learners came to a conclusion in linguistic problem solving, that is ways of resolving LREs. Adapting Qi and Lapkin's study (2001), LRE data in this study were categorised: (1) providing specific reasoning (*with-reason*); (2) guessing or using intuition (*alternatives*); (3) noticing only without showing any reasoning (*noticing-only*). The researcher coded all the transcripts first; and the second coder coded 25% of the transcripts. Inter-coder reliability was 93%.

For qualitative analysis, the same transcribed data was examined through micro-genetic analysis to observe moment-by-moment collaborative or non-collaborative interactional features. It is important to note that the analysis of the current study counted the novice/expert interaction as collaborative interaction. Some researchers (e.g. Storch, 2002) separated the novice/expert interaction from collaborative interaction, claiming that such an interactional pattern involved a certain degree of asymmetry between the learners in the aspect of the role adopted by the participants. However, despite being asymmetric by learner's role, the novice/expert interaction should be still viewed as that interaction designates a situation where both participants were fully engaged in their interaction, regardless of the role taken by each participant. This is exactly identical to the process of scaffolding; and the metaphor of scaffolding, as Donato (2004) rightly views, is "an epiphenomenon of collaboration" (p. 289). Another typical instance of collaborative interaction included mutual scaffolding, the situation where both participants contribute equally to the construction of knowledge; and where peers provide each other with assistance. In contrast, the cases where both learners were not fully engaged in their interaction or one of the learners was too dominant or passive, were considered as non-collaborative interaction. 25% of the data were coded independently by the second coder; 90% of the coding was agreed.

IV. FINDINGS

⁹ *Choice of preposition* has been classified as a lexical LRE because there is a strong tradition of investigation of the semantic properties of prepositions (e.g. Bennett, 1975; Bowerman, 1996; Dewell, 2007).

1. The Occurrences of LREs and Proficiency Differences in Pairs

1) The Frequency of LREs

The first research question asked whether the occurrences of LREs differed between the homogeneous grouping and the heterogeneous grouping of learners. First, to deal with that issue, the total number of LREs generated by each of the groupings was counted. A glance at the sub-total percentages in Table 2 shows that the heterogeneous grouping produced more LREs (twenty-five LREs) than the homogeneous grouping. Second, in terms of the language focus of LREs, the homogeneous grouping produced more grammatical LREs out of their total LREs (62%, thirteen grammatical LREs) while their counterparts produced more lexical LREs (60%, fifteen lexical LREs) than grammatical ones. Since group totals can obscure individual pair differences, the occurrences of LREs for each dyad were also examined. In contrast to the results of the sub-total by the two different groupings, Table 2 presents that there was not much difference in the number of LREs between each pair of the groupings. For instance, one of the homogeneous pairs, the Low-Low pair produced the same number of LREs as a heterogeneous pair, Inter-Low 2 (four LREs). In addition, the other homogeneous pair, the High-High pair produced more or less the same LREs as Inter-Low 1 did (seventeen LREs by the High-High pair; twenty-one LREs by the Inter-Low 1 pair). In terms of the language focus of LREs, cross comparison results by each pair also show that the grouping does not appear to have an impact on the linguistic issues the different groupings focused on. As illustrated in the table below, the ratios of language-based LREs by the two dyads in the same set of heterogeneous grouping were quite diverse. The two dominated pairs (High-High; Inter-Low 1) influenced the linguistic issues focused by the whole groupings.

Table 2
Occurrences of LREs by Each Pair

Pairs as to proficiency levels	Homogeneous grouping						Heterogeneous grouping						
	High-High		Low-Low		Sub-total		Inter-Low 1		Inter-Low 2		Sub-total		
	No	%	No	%	No	%	No	%	No	%	No	%	
No. of LREs	17	37	4	9	21	46	21	46	4	9	25	54	
Language foci	Lexis	7	41	1	25	8	38	13	62	1	25	15	60
	Grammar	10	59	3	75	13	62	8	38	3	75	10	40

2) Resolution of LREs

Another aspect of the occurrences of LREs to be examined is whether the resolution of LREs differed between the homogeneous grouping and the heterogeneous grouping. This includes two issues: the results of the decisions learners made for resolving their linguistic problems and the ways they resolved those problems. The first finding regarding the resolution of LREs is that proficiency similarity or difference between two learners in a pair did not seem to have an impact on the results of LREs. As shown in Table 3, the two pairs in the homogeneous grouping (High-High and Low-Low) produced proportionally different resolution results. While High-High resolved 59% of their total LREs correctly, the other pair in the same set of grouping (i.e. Low-Low) correctly resolved LREs with the lowest ratio (25% of their total LREs) amongst all the dyads. This variance was also found in the heterogeneous pairs. Inter-Low 1 correctly resolved their LREs far more frequently than the other heterogeneous pair, Inter-Low 2: the ratios of LREs correctly resolved by Inter-Low 1 and Inter-Low 2 were 62% and 50% respectively.

The next finding about LRE resolutions is related to the LRE resolution types. Just as in the results of the resolution, a large variance in resolution types was also found in the same set of groupings. As seen in Table 3, the proportions of with-reason out of the total LREs in the two homogeneous pairs, High-High and Low-Low pairs were 59% and 25% respectively; those in the heterogeneous pairs, Inter-Low 1 and Inter-Low 2 were 38% and 75% in that order. In addition, the proportions of Inter-Low 2 and High-High were the two highest among the six dyads. This seems to suggest that proficiency similarity or difference between two learners in a pair did not have an impact on how they resolved their linguistic issues.

Table 3
Resolutions by Each Pair

		Homogeneous grouping				Heterogeneous grouping			
		High-High	Low-Low	Sub-total		Inter-Low 1	Inter-Low 2	Sub-total	
Resolution results	Correct	10 (59%)	1 (25%)	11	52%	13 (62%)	2 (50%)	15	60%
	Incorrect	7 (41%)	3 (75%)	10	48%	8 (38%)	2 (50%)	10	40%
Resolution types	With reason	10 (59%)	1 (25%)	11	52%	8 (38%)	3 (75%)	11	44%

Alternative	5 (29%)	1 (25%)	6	29%	8 (38%)	1 (25%)	9	36%
Noticing only	2 (12%)	2 (50%)	4	19%	5 (24%)	0 (0%)	5	20%

3) Interrelationship: Language Foci of the LREs, Results of LRE Resolution and Ways of Resolving LREs

Prior to discussing LREs in relation to interaction patterns, a point worth investigating was how the three classifications of LREs (i.e. the language foci, the resolution results, and the resolution types of LREs) were interrelated in each of the different groupings. This concerns the third research question. The question is twofold: were LREs resolved correctly when learners talked about lexical or grammatical items? What were the results of the resolution when learners explicitly provided a reason for their resolution?

As illustrated in Table 4, learners, regardless of their grouping type, tended to reach a correct conclusion in resolving grammatical LREs. Grammatical issues were correctly resolved more often by learners in both of the groupings: nearly 80% of the grammatical LREs (77%) were correctly resolved by the homogeneous pairs. This tendency was also found in the heterogeneous pairs: 73% of their grammatical LREs were correctly resolved. In contrast, the proportions of correctly resolved lexical LREs were much lower in both of the groupings. In the homogeneous grouping, only 37% of the lexical LREs were correctly resolved; in the heterogeneous grouping, 21% of the lexical LREs were resolved correctly. These findings suggest that when learners talked about grammatical issues, those LREs were more likely to be resolved correctly than when they talked about lexical issues. This occurs on both groupings.

Table 4

Interrelationship of the Language Foci, Resolution Results, and Resolution Types by Each Pair

		Homogeneous grouping			Heterogeneous grouping		
		High-High	Low-Low	Sub-Total	Inter-Low 1	Inter-Low 2	Sub-Total
Language foci & their resolution results	Lexical LREs	7	1	8	13	1	14
	Correct	3	0	3 (37)	3	0	3 (21)
	Incorrect	4	1	5 (63)	10	1	11(79)
	Grammatical LREs	10	3	13	8	3	11
	Correct	7	3	10 (77)	7	1	8 (73)
	Incorrect	3	0	3 (23)	1	2	3 (27)

	With reason	10	1	11	8	3	11
	Correct	4	1	5 (45)	6	1	7 (64)
	Incorrect	6	0	6 (55)	2	2	4 (36)
Resolution types & their results	With alternatives	5	1	6	8	1	9
	Correct	4	0	4 (67)	5	1	6 (67)
	Incorrect	1	1	2 (33)	3	0	3 (33)
	Noticing only	2	2	4	5	0	5
	Correct	2	0	2 (50)	2	0	2 (40)
	Incorrect	0	2	2 (50)	3	0	3 (60)
Total LREs		17	4	21	21	4	25

The next issue is the relationship between results of LREs and resolution types. Table 4 displays that there was not as great a difference between the resolution outcomes and their types. First, when learners in the homogeneous grouping provided a reason for LREs, those LREs were incorrectly resolved quite frequently: more than a half of their LREs (55% of the total LREs) were inaccurately solved. On the other hand, when the learners did not provide any reason or used intuition, they still managed to resolve those LREs correctly. As seen in the table, 80% of the LREs were resolved *with alternatives* by the homogeneous grouping were correct. As for the heterogeneous grouping, when the learners explained a specific reason for their resolution, 64% of those LREs were correctly resolved. Interestingly, even when the learners in the heterogeneous grouping resolved LREs with their intuition, those LREs were correctly resolved quite often: the total instances of *alternatives* comprised 67% of correctly resolved LREs. Therefore, it can be said that ways of resolving LREs on correct results of the relevant language points fares no better than chance in both grouping settings.

2. Interactional Patterns and Groupings as to L2 Proficiency

Patterns that typify collaborative and non-collaborative interaction in the current study emerged from comparing and contrasting instances of interaction by the different groupings of pairs. This comparing and contrasting process revealed distinct patterns of dyadic interaction, particularly in how the learners in a pair approached their joint tasks and made decisions concerning linguistic issues in composing the text. What became evident from reading the transcribed pair talk was that Miyeon and Jung, the homogeneous pair consisting of two advanced learners spent considerably longer time on the task than the other pairs. This dyad spent almost 25 minutes on each of the tasks. They composed the text and re-read it, checking for grammatical accuracy. In contrast, Daeho and Sangki, whose interaction seemed non-collaborative, spent just over 15 minutes on each task

session¹⁰.

Apart from the length of the interaction, the process of decision making about language problems varied from one another. First, as Excerpt 1 shows, High-High homogeneous dyad (Miyeon and Jung) began the task by establishing a joint understanding of what they would write for the joint text (e.g. lines 1-6). Once the joint understanding was established, Miyeon and Jung started to compose a text. Throughout their text composition, the pair talk these participants produced was cohesive. Cohesion was created as the participants incorporated or repeated each other's utterances (e.g. lines 92-93) and extended on them (e.g. lines 93-94, 114), or simply completed each other's utterances (e.g. line 95). In addition, the participants sometimes engaged with each other's suggestions (e.g. lines 5, 107). There are requests (e.g. lines 3, 106) and provision of information (e.g. lines 99, 112). This interaction can be characterised as highly contingent (van Lier, 1996). It also resembles Storch's (2002) frame of collaborative interaction, where the role of the earners in the pair work is "high on equality and mutuality".

Excerpt¹¹ 1. High-High homogeneous pair

- | | | |
|-------|--------|--|
| 1 | Miyeon | which one shall we choose? Shall we choose for going {joining to the English team}? |
| 2 | Jung | let's go for an easy one {to write about} |
| 3 | Miyeon | what shall we decide? |
| 4 | Jung | how about staying ? |
| 5 | Miyeon | staying ? |
| 6 | Jung | yes. |
| ----- | | |
| 90 | Miyeon | if he went |
| 91 | Jung | I suppose we should use the conditional |
| 92 | Miyeon | shall we use <i>if he leave</i> again? <i>If he choose</i> ? |

¹⁰ The other two dyads (i.e. Nami and Hoon; Jihye and Sunae) spent between 17 and 22 minutes.

¹¹ Line numbers shown correspond to line numbers in the original transcripts. The following system was used in transcribing the translated English data of the pair talk: (I) Korean utterances in original transcripts but translated in English are written in Roman letters: (i) Roman letters in bold type indicate the words for and from text product; (ii) Roman letters without bold are the words not for and from text product. (II) English utterances in original transcripts are in italics: (i) Italicized words in bold show the words for/from text product; (ii) Italicized words without bold type are the words not for/from text product. Words underlined are words with emphasis. < > brackets illustrate non-verbal behaviour. + indicates a pause. Additional comments are enclosed in { } brackets.

- 93 Jung *if he choose? If he decide?*
 94 Miyeon *if he decide?*
 95 Jung *decides*
-
- 106 Jung then, how do you say {in English} **if he became a member of the team, if he entered the team?** Can we use the word *include*?
 107 Miyeon *involve* means to involve and *include* also means the same?
 108 Jung yes
 109 Miyeon let's just say *he becomes* using *become*
 110 Jung oh, then delete *decide*. *If he becomes*
 111 Miyeon *if he* <writing the text> *become*?
 112 Jung *if he becomes*
 113 Miyeon *if he becomes a member of*
 114 Jung *a member of English team*

A different approach to the joint composition task and to dealing with decisions concerning language issues was evident in the pair talk of the other homogeneous dyad of two beginners. The depth of the engagement of the Low-Low pair on joint tasks seemed quite limited unlike the High-High pair. For example, although both participants in the pair involved in composing a text, their approach to solving linguistic problems was not contingent. First, as presented in Excerpt 2, there was an attempt to establish an agreed text of what they wrote about (lines 1-6). Nami initiates an LRE in trying to compose a text meaning that “they are too young to marry” (line 7). In that LRE, she looks for a phrase “too adjective to verb” and seeks the partner’s assistance (line 10). However, the partner Hoon composes a distinct chunk of the text without providing Nami with the necessary and contingent help. Instead, he constructs a text in L1 on his own. Also, he seems to impose what he intends to write on the partner Nami (line 11). At the end, Nami is not able to find the phrase she was looking for and has resolved the linguistic matter incorrectly (line 14). In contrast to Excerpt 1, which showed cohesive discourse of the High-High pair, Excerpt 2 shows very little evidence of repetition and incorporation of each other’s suggestions in the Low-Low pair.

Excerpt 2. Low-Low homogeneous pair

- 1 Nami I think number one is right.
 2 Hoon me too.
 3 Nami then, why do you think so?
 4 Hoon **they are still too young and students**
 5 Nami you think in a very similar way as I do. Then, how shall we write?

- they are too young**
- 6 Hoon *they are, they are too young.*
- 7 Nami **they are too young to marry.**
- 8 Hoon that's right.
- 9 Nami there is an English expression meaning {a subject} is too {adjective} to {verb}, right? How do we say **they are too young?**
- 10 Hoon **they are too young. Therefore, they have to wait until they are able to solve problems.** I want to write something like that.
- 11 Nami **because they are young.**
- 12 Hoon let's translate this in English.
- 13 Nami *they are so much young.*

Interestingly, despite little indication of sufficient assistance or mutually accepted resolutions in this Low-Low pair, both of the learners still seemed to be willing to take part in pair work. The overall turn-takings of the pair in composing a joint text were lengthy; each learner's participation was evenly distributed; the learners, particularly Nami frequently used phatic utterances (e.g. "that's right" in line 8), which are shown as "the process of satisfaction of individuals' needs for social cohesion and mutual acknowledgement" (Cruz, 2001, p.203). A possible reason for the lack of scaffolding in spite of their intention of active participation in the task may be that the learners' L2 proficiency was not enough to notice linguistic problems, talk about and resolve them. Probably, a minimal level of linguistic competence is necessary if both students are to benefit from a joint linguistic problem-solving task.

The following excerpts (Excerpt 3 and Excerpt 4) illustrate how two heterogeneous pairs approached the joint composition tasks and made linguistic decisions. First, for the Inter-Low 1 pair, notably, several instances of scaffolding were found in their interaction. Excerpt 3 shows a typical example of scaffolding between expert and novice. As presented in the excerpt, Jihye plays the role of novice by asking the partner a question (line 20). Sunae plays the role of expert by providing the less capable learner (Jihye) with an explanation as a response (e.g. lines 22, 25). Sunae provides further clarification for Jihye's uncertain linguistic problem (e.g. line 25), without necessarily being authoritarian¹². Sunae does not impose her view but rather tries to provide explanations (e.g. line 27) which Jihye accepts and repeats (e.g. lines 26, 30). As explained, these novice/expert scaffolding processes show that the problematic linguistic item for the novice was resolved with the expert's sufficient scaffolded assistance; and the item was understood by the novice. However, interestingly, Jihye, who plays the role of novice in the interaction, has a higher

¹² van Lier (1996) distinguishes the concept of authoritarian from authoritative.

proficiency level than Sunae; Sunae, who plays the role of expert, is actually the less capable learner in the pair. These findings provide evidence that the roles of learners in scaffolding may be *fluid* as found in other L2 studies (Brooks, Donato, & McGlone, 1997; Donato, 1994; Ohta, 1995, 2000; Junghee Hwang, 2010): the less capable learner can function as an expert; and the more capable learner takes the role of the novice.

Expert 3. Intermediate-Low 1 heterogeneous pair

- 20 Jihye *that's the most* /+/ *most* /+/ Can we write *biggest* after that?
 21 Sunae *biggest*
 22 Jihye but *most* is a superlatives. So *biggest* cannot come to the next.
 23 Sunae just *the biggest*
 24 Jihye oh, then what about *most*?
 25 Sunae *most* is used in words with three syllables and above, I mean, for example, *the most expensive*, *the most difficult*, something like that.
 26 Jihye ah, I see. {I understand} the syllable, *difficult* is a four syllable word, so we put *most* to the word, do I understand right?
 27 Sunae yes, more than three syllables.
 28 Jihye oh, I see. *I didn't know*.
 29 Sunae for a word like *cheap*, *cheapest*, for *big*, *biggest*, *tallest*
 30 Jihye so, *the biggest problem*

The final excerpt, Excerpt 4, comes from the data of the other heterogeneous pair (Inter-Low 2). The transcript demonstrates the heterogeneous pair's different approach to the joint task from the same set of grouping Inter-Low 1. Here, one learner, Sangki's (the lower-level learner in this pair) role seems extremely limited and passive. Through the entire dialogues, Sangki did not initiate any LREs; did not respond to the partner's initiation; or answered in an indifferent manner. As shown in Expert 4, for example, Daeho seeks his partner's assistance by asking him about an English word for "leaving for England" (line 13). The partner Sangki bluntly answers "I don't know" (line 14). There is little assistance offered in their dyadic interaction. Daeho decides to use an alternative word, "go England" (line 15), which is incorrect instead of resolving the linguistic problem. No further interaction occurred. These processes can be seen as non-collaborative and they were often observed in Inter-Low 2.

Excerpt 4. Inter-Low 2 heterogeneous pair

- 13 Daeho *leave* means **going away**? So, **leaving for England** is *leaving England*?
 14 Sangki I don't know.

15 Daeho *go England, go England team*

VI. DISCUSSION AND CONCLUSION

This study set out to examine whether learners in an EFL course would spontaneously notice their own linguistic problems (i.e. produce LREs) during joint writing tasks and whether the different groupings of the dyad members in terms of target language proficiency would influence the number, result, and type of their LREs. The study, despite the small number of participants and sessions, revealed that there was a large variance in the occurrences of LREs produced by different dyads, but that overall, the different groupings of learners in terms of L2 proficiency did not greatly affect those LREs. As discussed earlier, two dyads in the same set of grouping, both of the homogeneous grouping or the heterogeneous grouping produced the different number of LREs to a great extent; in addition, there was not much difference in the correctly resolved LREs or the way of resolved LREs. The findings of the study do not correspond with those of previous studies such as Leaser's (2004), which presented that homogeneous pairs with two advanced learners produced more LREs than the other pairs, high-low or low-low pairs; and suggested that L2 proficiency level may be a more important factor than how to group learners in terms of proficiency.

One explanation for the variance of findings between the current and the previous studies could be related to the relative difference in task demands. In other words, the type of task implemented in the preceding study was dictogloss, where learners had to comprehend a passage before producing L2. The task demands of comprehending the passage might be high for beginner learners whereas it might be much lower for the more advanced learners. This was probably why the lower proficiency learners generated a smaller number of LREs than the higher proficiency learners in the previous studies. In fact, Leaser (2004) himself pointed out that, in performing a dictogloss task, low proficiency learners might "struggle to extract meaning from the passage more than the more proficient learners, who might be able to direct more of their attention to linguistic items" (p. 72). On the contrary, for the collaborative writing task employed in the current study, understanding a passage was not a prerequisite for completing the pair composition tasks. In addition, learners in this study were allowed to use their L1¹³ (Korean) to achieve the

¹³ In research based upon sociocultural theory, using L1 is often accepted since learners are considered to make meaning of a text, maintaining their task goal or dialogue via the L1. See Anton and Dicomila (1999) for further discussion of functions of using L1. Apart from this theoretical rationale, it was expected that low proficiency learners in the current study would have

task; thus, communicating with interlocutors should not have been a problem, even for lower proficiency learners. However, a caveat worthy of note is that the proficiency difference in the heterogeneous pairs was smaller than planned as a result of an insufficient number of advanced learners in the study. Larger differences might have yielded significant effects.

The qualitative analysis of the data has suggested several important implications, which were not uncovered by the quantitative analysis. A first implication of this study is that as Tudge (1990) rightly says, learner-learner interaction is complex and the quality of interaction indeed varies. Previous studies within the sociocultural framework (e.g. Donato, 1994; Ohta, 2000; Swain, 2000) often described learners as active participants or efficient suppliers of afforded assistance in their interaction. In other words, these studies take little account of the opposite cases, that is, the cases where learners work fairly non-collaboratively. However, the absence of collaboration was sometimes observed in the current study. Therefore, following from this, future research is needed to explicate more fully the diverse nature of interaction beyond successful dialogic interaction, particularly in terms of the effects of the different natures of interaction on L2 learning. This may be an important step in enriching the understanding of how second language learning occurs.

Second, this study also implies that assistance in the homogeneous dyads seemed to be more mutual and the interaction tended to be more collaborative than their counterparts. This is in line with what some researchers have already found regarding the benefits of homogeneous pair interaction (e.g. Kowal & Swain 1994; Ohta, 2000). For interaction to be collaborative, it is important that group members respect one another's perspectives and trust each other's opinions (Stone, 1993). This may be difficult to achieve when proficiency differences are too large. However, traditionally, heterogeneous groupings had been recommended for peer work. This is because, in terms of Vygotskian learning theory, the 'expert' provides guidance to the 'novice' to enable the latter to appropriate new knowledge within the novice's ZPD. In this regard, studies within the framework of sociocultural theory have tended to focus on heterogeneous pairs, in which partners differ in their level of ability. As discussed, yet, the examples in this study show a very different picture: the interaction in the homogeneous grouping can be effective as well, especially if the learners in a pair have a certain level of competence in a target language. These findings of the present study may add to the growing body of research which has claimed the relative value of homogeneous groupings.

Third, the qualitative analysis has suggested that L2 proficiency may not be a pre-determined level, but a role which learners take on when doing a task. As seen in

faced difficulty in discussing their linguistic problems in L2; thus, by allowing learners to use the L1, the learners would maintain their interest in the task.

Excerpt 3, in the dyad of Inter-Low 1, the higher level of learner played the role of the ‘novice’ while the other learner with lower proficiency level played the role of a more capable learner assisting the ‘novice’. This *fluid* concept of proficiency may also explain why proficiency was not found to have an impact on the quantity of LREs in this study. Similarly, a study by Yule and Macdonald (1990) suggests that an important factor affecting the amount of negotiation may not be L2 proficiency, rather the specific role each learner in a pair assumes in their interaction. In addition, a more recent study by Watanabe and Swain (2007), as reviewed earlier, has demonstrated that the L2 proficiency level is not related to the quantity of negotiation; it suggests the nature of interaction between two learners in a dyad may be a more important contributing factor to it.

Fourth, this study also implies that simply putting learners into a pair or group does not guarantee effective interaction. As demonstrated in the excerpts, sometimes learners were not fully engaged with each other in the joint tasks; at other times, learners did not assist each other sufficiently particularly when their proficiency was low. In these circumstances, the participants may not have “opportunities for learning” (Lantolf, 2000) or “affordances” (van Lier, 2000). Therefore, teachers should be careful not to assume that grouping students always leads to constructive pair work. In order to facilitate pair work in L2 classrooms, it may be necessary for teachers to prepare learners more carefully for pair work. This is especially the case for both learners in a pair whose proficiency levels are low; teachers may need to act as a resource provider for such learners. Furthermore, prior to assigning learners to work in pairs, it may be useful if teachers provide them with model collaborative pair work, particularly for those who seem passive during the class. In addition, it seems of importance for teachers to be advised that assessments of task performance cannot be based on a single administration of a pair work. Finally, as Jyi-yeon Yi (2010) suggests, it may also be useful to provide learners with some training sessions or guidelines of how to offer effective peer feedback so that learners themselves will be able to learn from learner interaction.

Despite the valuable findings and implications of this study, it must be noted that, given the small-scale nature of the study, the small number of participants and the relatively short time frame used to assess whether collaborative/non-collaborative interaction took place, these conclusions are suggestive. Particularly, if it is admitted that “collaboration takes time for learners to develop socially and cognitively as supportive learning contexts for each other” (Donato, 2004, p.287), a longitudinal study should be more appropriate for research on learner-learner interaction. The importance of time has only started to receive attention in the area of L2 research on collaboration (e.g. Brooks et al., 1997) and further investigations with a longer time frame are required to examine learners’ dynamic interaction. Finally, the present study did not relate the results to L2 learning. Thus, the issue of whether pairs who were more collaborative than others can benefit from working

with peers is still an open question.

REFERENCES

- Anton, M., & DiCamilla, F. (1999). Socio-cognitive functions of L1 collaborative interaction in the L2 Classroom. *Canadian Modern Language Review*, 54, 314-342.
- Bennet, D. (1975). *Spatial and temporal uses of English prepositions: An essay in stratificational semantics*. London: Longman.
- Bowerman, M. (1996). The origin of children's spatial semantic categories: cognitive versus linguistic determinants. In J. Gumperz & S. Levinson (Eds.), *Rethinking linguistic relativity* (pp.145-176). Cambridge: Cambridge University Press.
- Brooks, F., Donato, R., & McGlone, J. (1997). When are they going to say "it" right? Understanding learner talk during pair-work activity. *Foreign Language Annals*, 30(4), 524-541.
- Cruz, M. (2001). The relevance of what seems irrelevant: Remarks on the relationship between phatic utterances and sociopragmatic failure. *ELIA*, 2, 199-221.
- Dewell, R. (2007). Moving around: The role of the conceptualizer in semantic interpretation. *Cognitive Linguistics*, 18(3), 388-415.
- de Guerrero, M., & Villamil, O. (2000). Activating the ZPD: Mutual scaffolding in L2 peer revision. *Modern Language Journal*, 84(1), 51-68.
- Donato, R. (1994). Collective scaffolding in second language learning. In J. Lantolf & G. Appel (Eds.), *Vygotskian approaches to second language research* (pp. 33-56). Norwood, NJ: Ablex.
- Donato, R. (2004). Aspects of collaboration in pedagogic discourse. *Annual Review of Applied Linguistics*, 24, 284-302.
- Fullan, M. (1999). *Change forces: The sequel*. London: Falmer .
- Gass, S. (1997). *Input, interaction and the second language learner*. Mahwah, NJ: Lawrence Erlbaum.
- Gass, S. (2003). *Input and interaction*. In C. Doughty & M. Long (Eds.), *The handbook of second language acquisition* (pp. 224-255). Malden, MA: Blackwell.
- Gass, S., & Torres, M. (2005). Attention when?: An investigation of the ordering effect of input and interaction. *Studies in Second Language Acquisition*, 27, 1-31.
- Hwang, Junghee. (2010). Negotiation about form across L2 proficiency levels and its Role in second language learning. *English Teaching*, 65(2), 47-73.
- Kim, Youjin. (2008). The contribution of collaborative and individual tasks to the acquisition of L2 Vocabulary. *The Modern Language Journal*, 92(1), 114-130.
- Kowal, M., & Swain, M. (1994). Using collaborative language production tasks to promote

- students' language awareness. *Language Awareness*, 3(2), 73-93.
- Lantolf, J. (2000). Second language learning as a mediated process. *Language Teaching*, 33, 79-96.
- Leeser, M. (2004). Learner proficiency and focus on form during collaborative dialogue. *Language Teaching Research*, 8(1), 55-81.
- Long, M. (1996). The role of the linguistic environment in second language acquisition. In W. Ritchie & T. Bhatia (Eds.), *The handbook of second language acquisition* (pp. 413-468). San Diego, CA: Academic Press.
- Long, M., & Robinson, P. (1998). Focus on form: Theory, research and practice. In C. Doughty & J. Williams (Eds.), *Focus on form in classroom second language acquisition* (pp. 15-41). Cambridge: Cambridge University Press.
- Mackey, A. (2009). *Input, interaction and corrective feedback in L2 learning*. Oxford: Oxford University Press.
- McDonough, K. (2005). Identifying the impact of negative feedback and learners' responses on ESL question development. *Studies in Second Language Acquisition*, 27, 79-103.
- Ohta, A. (1995). Applying sociocultural theory to an analysis of learner discourse: Learner-learner collaborative interaction in the Zone of Proximal Development. *Issues in Applied Linguistics*, 6(2), 93-121.
- Ohta, A. (2000). Rethinking interaction in SLA: Developmentally appropriate assistance in the zone of proximal development. In J. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 52-78). Oxford: Oxford University Press.
- Petrovsky, A. (1985). *The collective and the individual*. Moscow: Progress.
- Qi, D., & Lapkin, S. (2001). Exploring the role of noticing in a three-stage second language writing. *Journal of Second Language Writing*, 10(4), 277-303.
- Storch, N. (2002). Patterns of interaction in ESL pair work. *Language Learning*, 52, 119-58.
- Storch, N. (2007). Investigating the merits of pair work on a text editing task in ESL classes. *Language Teaching Research*, 11(2), 143-159.
- Stone, C. (1993). What is missing in the metaphor of scaffolding. In E. Forman, N. Minik., & C. Stone (Eds.), *Contexts for learning: Sociocultural dynamics in children's development* (pp. 169-183). Oxford: Oxford University Press.
- Swain, M. (1998). Focus on form through conscious reflection. In C. Doughty & J. Williams (Eds.), *Focus on form in second language acquisition* (pp. 64-81). Cambridge: Cambridge University Press.
- Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In J. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 97-114). Oxford: Oxford University Press.

- Swain, M., & Lapkin, S. (1995). Problems in output and the cognitive processes they generate: A step towards second language learning. *Applied Linguistics*, 16, 371-391.
- Swain, M., & Lapkin, S. (2002). Talking it through: Two French immersion learners' response to reformulation. *International Journal of Educational Research*, 37, 285-304.
- Tudge, J. (1990). Vygotsky, the zone of proximal development and peer collaboration: Implications for classroom practice. In L. Moll (Ed.), *Vygotsky and education* (pp. 155-172). New York: Cambridge University Press.
- van Lier, L. (1996). *Interaction in the language curriculum: Awareness, autonomy, and authenticity*. London: Longman.
- van Lier, L. (2000). From input to affordance: Social interactive learning from an ecological perspective. In J. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 245-259). Oxford: Oxford University Press.
- Vygotsky, L. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Watanabe, Y., & Swain, M. (2007). Effects of proficiency differences and patterns of pair interaction on second language learning: Collaborative dialogue between adult ESL learners. *Language Teaching Research*, 11(2), 121-142.
- Yi, Jyi-yeon. (2010). The characteristics of Korean EFL college students' peer feedback to English writing and their perception of the peer feedback. *Modern English Education*, 11(3), 134-161.
- Yule, G., & Macdonald, D. (1990). Resolving referential conflicts in L2 interaction: The effect of proficiency and interactive role. *Language Learning*, 40, 539-565.

APPENDIX

Example of Writing Products

By Low-Low homogeneous pair:

They shouldn't make a decision about marriage right now. They are so much young and they have so many problems. When they can solve these problems, they should make a decision about marriage.

By Inter-Low heterogeneous pair:

Sachiko shouldn't make a decision about marriage right now. They have many problems. It's language problem, culture problem, children problem and so. They would not fit in to society each other. They would end in divorce, if they marry. Therefore, they must break up.

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