Korean Journal of English Language and Linguistics
Vol. 18, No. 3, Fall 2018, 306-327
10.15738/kjell.18.3.201809.306

The Effects of Individual vs. Collaborative Pre-task Planning on Korean Middle School Learners' English Oral Task Performance under Different Task Complexity*

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Kang, Sooyeon. 2018. The effects of individual vs. collaborative pre-task planning on Korean middle school learners' English oral task performance under different task complexity. *Korean Journal of English Language and Linguistics* 18-3, 306-327. This study investigated the effects of three different types of planning conditions on oral task performance under different task complexity. A total of 65 Korean middle school learners performed two individual narrative tasks with different complexity (i.e., simple vs. complex) under different planning conditions (i.e., individual, collaborative, and no planning). Their task performance was analyzed with respect to task completion, fluency, complexity, and accuracy. The major findings are as follows. First, planning itself resulted in greater fluency and accuracy than no planning. Second, collaborative planning was the most beneficial for task completion and accuracy. Third, individual planning led to smaller number of pauses denoting its beneficial effect for fluency than collaborative planning. Fourth, there was no interaction effect between the planning conditions and the complexity of tasks but task complexity itself had an impact on syntactic complexity; an increase in task complexity resulted in a decrease in syntactic complexity.

Keywords: task-based language teaching, pre-task planning, collaborative planning, oral task performance, task complexity

1. Introduction

Task-based language teaching (TBLT) has caught great attention from second language acquisition (SLA) researchers and language teachers since 1980s (Branden, Bygate and Norris 2009) with a claim that it stimulates second language (L2) development. It has been promoted as a powerful language pedagogy in many countries as it has the benefits of involving learners in meaningful communication, and Korea is no exception. Since the introduction of the 7th National Curriculum by the Korean

* This paper is based on the author's master's thesis data.

Ministry of Education (2000), which put great emphasis on promoting learners' communicative ability through actual language use (Hahn 2008), it has been introduced in many English textbooks and teaching practices. However, previous studies with Korean English as a foreign language (EFL) learners revealed that when TBLT is actually implemented, the learners found it demanding to perform tasks due to the lack of English proficiency (Kim 2013). This implies that tasks should be carefully arranged and learners should be provided with additional support to make TBLT more effective.

As one way of supporting learners' task performance, pre-task planning time has been offered in task-based learning, and a good number of studies have shown that it encourages learners to produce higher linguistic quality of L2 (Foster and Skehan 1996, Ortega 1999, Wigglesworth 1997, Yuan and Ellis 2003). In particular, it turned out to have positive effects on L2 fluency whereas its impact on complexity and accuracy is limited (Mehnert 1998, Mochizuki and Ortega 2008, Tajima 2003). This is not surprising considering that an individual's effort made during planning alone cannot enhance one's ability to produce more complex and accurate language as these are more directly related with interlanguage development. It seems that learners need extra support during the planning stage.

Reviewing the positive effect of collaboration on learners' language production (Swain 1997) and the limitation of previous research where planning was mostly conducted individually by participants, collaboration at the planning stage appears to be a possible candidate to bring balanced improvements in learner language. There have been studies which have investigated how collaboration affects task performance but these have only focused on 'during' task performance (Gilabert, Baron and Llanes 2009, Kim 2009). Yet, collaboration can be placed at any stages of learning activities with no exception of pre-task planning stage.

Thus, one of the aims of the current study is to examine the effect of pre-task planning on task performance by manipulating 'the participatory structure'(Ellis 2003) into collaborative planning, individual planning, and no planning. Previous studies (Foster and Skehan 1999, Geng and Ferguson 2013) have explored how different planning conditions affect task performance but mixed findings from them call for further studies to explore why there were discrepancies. Moreover, this study also investigates how the effect of planning conditions on task performance interacts with task complexity (i.e., simple vs. complex). In the field of TBLT, a growing number of studies have examined how task complexity varies learners' task performance but its

interactive effect on task performance with different planning conditions has not yet explored. Individual planning alone can be sufficient for learners to prepare for simple tasks, but for complex tasks, collaborative planning may be helpful for learners to compensate for their individual limitation. The present study aimed to address the following research questions:

1. Does the planning condition (i.e., individual vs. collaborative vs. no planning) affect Korean EFL middle school learners' individual oral task performance?
2. To what extent does the effect of planning condition differ depending on task complexity?

2. Literature Review

2.1 Pre-task Planning and Task Performance

Previous studies have examined the role of pre-task planning on learners' task performance particularly with respect to the three dimensions of learner language: fluency, complexity, and accuracy (Ortega 1999, Tajima 2003, Wendel 1997). According to Skehan (1996), fluency is concerned with how much a learner is able to mobilize or automatize one's interlanguage system to deliver meaning in real time while complexity concerns how much a learner can elaborate his/her interlanguage system. On the other hand, accuracy refers to a learner's ability to deal with his/her current interlanguage complexity.

The results from most studies revealed the benefits of pre-task planning on fluency. In an early study which was conducted by Wendel (1997), for example, Japanese learners of English who conducted film retelling tasks under either planning or no planning produced more syllables per minute and shorter pauses under the planning condition. In another study, Ortega (1999) revealed that advanced learners of Spanish produced faster pruned speech in the planned narratives. In a more recent study, Tajima (2003) found that planning led to fewer pauses and faster speech rate than no planning. These studies thus all show the advantages of planning for increasing fluency.

However, for complexity and accuracy, more mixed results are found. In Wendel's (1997) study, for instance, there was no positive effect of planning for both lexical

complexity and accuracy. In line with this, Ortega (1999) found that planning made no difference in lexical complexity although it turned out to have a positive impact on syntactic complexity and a partially positive effect on accuracy. Meanwhile, Tajima (2003) found no effect of planning for syntactic complexity but still there existed a positive impact of it on lexical complexity and accuracy. These incongruent results have implied that planning alone is not sufficient to elaborate one's interlanguage system and to handle his/her current interlanguage complexity, and thus there has been an inquiry to find a specific planning condition that can provide balanced benefits to learners' task performance.

One of the earliest efforts to resolve the inquiry was conducted by Forster and Skehan (1999) by diversifying the pre-task planning condition into what Ellis (2003) later referred to as 'the participatory structure'. According to Ellis (2003), the participatory structure of the planning condition can be manipulated into individual, teacher-led, or group/pair work planning. The main interest of Forster and Skehan's (1999) study was to investigate the effect of different planning conditions (i.e., individual, teacher-fronted, and group-based) on performing an individual oral decision-making task. They proved that the teacher-fronted planning led to the greatest accuracy while individual planning resulted in greater fluency and complexity. Meanwhile the group-based planning group and the no-planning control group did not make any significant differences, signalling no salient effect of group-based planning on learners' task performance. Recently, Geng and Ferguson (2013), as a partial replication of Forster and Skehan (1999), examined the effect of three planning conditions (i.e., individual, pair-work and teacher-led) on performing two task types: information-gap and decision-making tasks. Unlike the unimpressive effect of group-based planning on task performance in Foster and Skehan's (1999) research, pair-work planning was significantly more beneficial for fluency than teacher-led planning but it was not effective for accuracy or complexity.

The review of previous studies regarding the pre-task planning effect on learners' task performance thus suggests that there is not yet a planning condition that can lead to the balanced enhancement of all aspects of learner languages. Concerning the participatory structure at planning stage, there are also mixed results regarding which participatory structure brings the most benefits on learner language. These together, in turn, call for more research in this field.

2.2 Task Complexity and Task Performance

Another rigorously investigated issue in the field of TBLT is how task complexity affects learners' task performance. According to Robinson, task complexity is "the result of the attentional, memory, reasoning, and other information-processing demands imposed by the structure of the task on the language learner" (Robinson 2001, p. 28). It has caught attention from many researchers as it can give suggestions on how to design and sequence tasks.

Table 1. A Triadic Componential Framework (Adapted from Robinson 2001)

Task complexity (Cognitive factors)	Task condition (Interactive factors)	Task difficulty (Learner factors)
a. resource-directing	a. participation variables	a. ability variables
± here and now	± open solution	h/l working memory
± few elements	± one way flow	h/l aptitude
± reasoning	± convergent solution	h/l field independence
b. resource-dispersing	b. participant variables	b. affective variables
± planning time	± same proficiency	h/l anxiety
± prior knowledge	± same gender	h/l self-efficacy
± single task	± familiar	h/l openness

As indicated in Table 1, task complexity can be manipulated by resource-directing and resource-dispersing. Resource-directing variables are concerned with cognitive and conceptual demands of tasks whereas resource-dispersing variables are related with procedural demands of tasks. For example, a task with [+few elements] contains just few elements that need to be handled conceptually while a task with [-few elements] has several elements to complete the task, thus making the task more cognitively demanding. On the other hand, a task with [+planning time] calls for less procedural burden for learners than a task with [-planning time].

Regarding how cognitive demands of tasks affect task performance, two dominantly competing stances exist. Skehan (1998), based on his empirical studies in 1996 and 1997, suggests that an increase in cognitive demands of a task pressures learners' attentional system, and thus a trade-off effect between form and meaning occurs. Also, the limited attentional capacity results in a trade-off between complexity and accuracy. Thus, a cognitively demanding task leads learners to produce more complex but less accurate language. According to Skehan, this can occur in the opposite way. On the contrary, Robinson (2003) claims that a cognitively demanding task leads to an increase in both complexity and accuracy as it encourages learners to reach greater

functional and conceptual demands. His stance was supported by the results of his study conducted in 1995 where it was proved that participants under complex tasks produced lexically more complex and accurate speech than under simple tasks.

Apart from the earlier studies by Skehan (1996, 1997, 1998) and Robinson (1995, 2001) of which interests were in investigating the task complexity effect on learner language, there have been numerous studies on this issue. Some studies support Skehan's trade-off effect stance (Ortega 1999, Yuan and Ellis 2003) while others support Robinson's Cognition Hypothesis (Kuiken, Michel and Vedder 2007). Meanwhile, more recent studies on task complexity issues have been elaborated by examining its effect in interaction with other variables such as task types and modes (Baron, Gilabert and Levkina 2011, Michel 2011). Yet, there is no research so far that focuses on how the task complexity effect interacts with the participatory structure at the planning stage. It is worth examining the issue as the planning condition effect can differ depending on the task complexity.

3. Research Method

3.1 Participants

Sixty-five third grade students at a public middle school in Seoul, Korea participated in this study. All of them had received achievement level As throughout two consecutive semesters, which indicates that their final English scores remained consistently over 90 out of 100 points. The scores reflected the results of three types of school English tests, mid-term (30%), final (30%), and performance assessment (40%). In addition to participants' overall achievement level in the English subject, their most recent speaking scores from the performance assessment were included as a measure of their English proficiency because tasks implemented in the present study were oral tasks. Out of 40 points, all participants attained over 36 points, which demonstrated, according to the achievement level description, that they could handle speaking tasks using appropriate vocabulary and language forms. This study intentionally recruited relatively high proficient students because performing a narrative task required a certain level of English ability.

For the experiment, participants were randomly allocated into three groups (Group A, B, and C). Table 2 illustrates each group's mean score of the final English scores

and also the mean score of their most recent speaking scores.

Table 2. English Test Scores of Participants

		Group A	Group B	Group C
Number		23	24	18
Final English score	M	96.83	96.83	96.96
	SD	2.38	2.42	2.53
Speaking score	M	39.65	39.67	39.76
	SD	1.15	1.63	0.97

The results of analysis of variance (ANOVA) showed no significant differences between the groups in both final English scores (F=0.018, p=.982) and speaking scores (F=0.046, p=.987), which guarantees the three groups' equivalence in their English proficiency.

3.2 Target Tasks and Pre-task Planning Conditions

For the study, each participant performed two oral narrative tasks with differing task complexity. They had to tell a story referring to a series of six pictures adopted from one of the workbooks which were published to prepare learners for the National English Ability Test (NEAT). The differing task complexity was decided referring to the [± few elements] factor in Robinson's (2011) Triadic Componential Framework. In the simple task (i.e., [+few elements]), a series of six pictures contained only one main character with only a few elements needed to make a storyline whereas in the complex task (i.e., [−few elements]), a series of six pictures had five characters (e.g., two main characters and three minor characters) to describe and more elements to include in making a full story (See Appendix A and B).

The three groups who were given the identical two task types were placed in individual, collaborative, and no planning conditions, respectively. In the individual planning condition, participants planned solitarily whereas participants under collaborative planning condition were seated in pairs and were encouraged to have as many discussions as possible on the tasks. Prior to the experiments, the participants were paired as they wished to control the acquaintanceship effect. Meanwhile participants under no planning condition had no chance to plan and thus began to perform the tasks right after reading the instructions for the tasks. The length of planning time and speaking time were decided through a pilot study conducted with

two participants whose test scores approximated the mean scores of main study groups. Table 3 summarizes how participants performed the tasks.

Table 3. Design of Groups, Pre-task Planning Conditions, Task Complexity, Planning Time and Individual Speaking Time

Groups (n=65)	Pre-task planning conditions	Task complexity [± few elements]	Planning time	Individual speaking time
Group A (n=23)	Individual planning	Simple → Complex (n=11)	5 mins	2 mins
		Complex → Simple (n=12)		
Group B (n=24)	Collaborative planning	Simple → Complex (n=12)	5 mins	2 mins
		Complex → Simple (n=12)		
Group C (n=18)	No planning	Simple → Complex (n=9)	NA	2 mins
		Complex → Simple (n=9)		

3.3 Procedures and Analysis

The experiment for the study was conducted in a quiet room to which participants in Group A and Group C came alone while those in Group B came in pairs. After listening to a brief introduction about the nature of the target tasks (i.e., making a story based on pictures), each participant received task materials comprised of written instructions and six series of pictures. Participants in Group A were given five minutes to plan individually, then produced a monologue speech for two minutes. On the other hand, participants in Group B were given five minutes to plan collaboratively, then each person of the pair went to separate places and had a monologue speech for two minutes. Prior to the experiment, participants in both Group A and B were informed that they are allowed to take notes of their ideas during the planning time, but that the notes would be collected by the researcher before they begin to speak and only the pictures would be shown while they speak. Lastly, those in Group C began their speech right away without any planning time. All participants' speech was fully recorded by using the recorder in their own cell phones, and the file was submitted as soon as they finished their speaking.

In total, 130 speech samples were transcribed and then analyzed with respect to task completion, fluency, complexity, and accuracy by the researcher. *Task completion* was measured by the percentage of participants who completed the task. Under the condition that the participant included all six pictures in making a story and the story

telling was completed within the given two minutes, his or her performance was marked as 'complete.'

To measure *fluency*, the study analyzed four factors: number of pauses, pause length, unpruned speech rates per minute, and pruned speech rates per minute. The number of pauses was measured by counting each participant's total number of both filled and unfilled pauses, and the pause length was measured by counting the total length of pauses beyond 1.5 seconds. For measuring participants' speech rate, the dysfluencies (i.e., filled pauses, reformulations, false starts, repetitions, and use of mother tongue) in participants' speech were analyzed in advance. Also, syllables for each transcribed speech were counted. Then unpruned speech rate was gained through dividing the total number of syllables by the total minutes of speech whereas pruned speech rate was calculated through dividing the total number of syllables excluding dysfluencies by the total minutes of speech.

The measurement of *complexity* consisted of analyses of two measures: lexical complexity and syntactic complexity. To measure lexical complexity, the Guiraud Index (GI) was used where lexical diversity is calculated by dividing the total number of word types by square root of total number of tokens. For measuring syntactic complexity, the transcribed speeches were first divided into Analysis of Speech (AS) units. AS unit denotes an utterance that includes an independent clause or sub-clausal unit as well as any subordinate clauses related with it (Foster, Tonkyn and Wigglesworth 2000). Then the total number of subordinate clauses was divided by the number of AS units to get syntactic complexity for each participant.

As for *accuracy* measures, the percentage of error-free clauses was counted as a generalized measure of accuracy by dividing the total number of error-free clauses by the total number of AS units. The study also counted tense-error-free clauses per AS unit as task-specific accuracy measurement considering that narrative tasks require learners to think upon the tense they should choose to use. A tense-error-free clause was a clause which included correct use of tense though there would be some other grammatically awkward or wrong elements within the same clause.

In order to gain an adequate level of inter-rater reliability, a second rater who is professional in dealing with this type of data analyzed total ten percentage of transcribed speech samples. The two raters agreed on 90% of their analyses of task completion, fluency, complexity, and accuracy. After discussion, some parts of the participants' data were reanalyzed and they reached 100% agreement.

Regarding the between-group variable (i.e., three types of planning condition) and

the within-group variable (i.e., task complexity), this study employed two way repeated measures ANOVA to examine how language production is affected by planning conditions or task complexity, and the interaction between the two.

4. Results

4.1 Planning Condition and Task Complexity Effect on Task Completion

Table 4 illustrates the percentages and the raw numbers of participants who completed the tasks successfully for the three groups.

Table 4. Task Completion of Groups A, B, and C

			Group A	Group B	Group C	Mean
Task completion	Simple task	Mean	91.3%(21/23)	100%(24/24)	94.44%(17/18)	95.25%
	Complex task	Mean	91.3%(21/23)	100%(24/24)	77.8%(14/18)	89.7%

Regardless of the complexity of tasks, participants in Group B who were under collaborative pre-task planning condition showed 100% of task completion. On the other hand, as for Group A who had individual pre-task planning time, two failed to complete both simple and complex tasks, not being able to complete their monologue speech in the given time. In case of the participants in Group C who had no time to plan in advance, task incompletion was more remarkable particularly in dealing with complex task.

Overall the results show that pre-task planning time before performing a task increases the rate of task completion, especially when learners are doing complex tasks. Also, collaboration at the pre-task planning stage seems to help learners perform the tasks successfully although the quality of their performance is a different matter.

4.2 Planning Condition and Task Complexity Effect on L2 Fluency

In measuring participants' L2 fluency, this study employed four criteria: the number of pauses, pause length, unpruned speech rates per minute, and pruned speech rates

per minute. Table 5 delineates the results from the three groups on the four measures of fluency under different task complexity.

Table 5. Three Groups' Fluency under Different Task Complexity

			Group A	Group B	Group C	M
# of pauses	Simple task	M	3.87	7.25	9.78	6.75
		SD	2.65	3.64	3.64	4.04
	Complex task	M	5.26	6.25	8.89	6.63
		SD	3.66	3.07	3.48	3.66
Pause length	Simple task	M	17.18	22.88	38.78	25.26
		SD	21.44	14.64	21.31	20.80
	Complex task	M	20.39	18.71	44.00	26.31
		SD	18.58	9.87	26.77	21.60
Unpruned SR	Simple task	M	72.55	69.32	51.79	65.61
		SD	24.17	22.34	17.71	23.66
	Complex task	M	72.34	70.71	50.77	65.76
		SD	33.72	21.71	22.97	28.08
Pruned SR	Simple task	M	61.27	58.04	38.94	53.89
		SD	24.73	20.61	17.50	23.09
	Complex task	M	59.71	59.28	39.62	53.99
		SD	35.32	19.41	19.78	27.36

Across all measures, Group C showed the poorest performance among the three groups regardless of the degree of task complexity. This may be because they needed more on-line processing at 'during' task stage with no preparation time in advance. Meanwhile Group B tended to perform better in fluency as the task complexity increased in all four measures. It seems that collaborative planning is more effective to enhance learners' fluency when they are under complex tasks.

In comparison with Group A, on the other hand, Group B paused more frequently (7.25 seconds for simple task and 6.25 seconds for complex task) in both simple and complex tasks. In line with this, with respect to both unpruned speech rate and pruned speech rate per minute, Group A showed faster speed than Group B in the two tasks with different complexity. With respect to pause length, there was a similar result for the groups, but only when the two groups performed simple tasks. Overall the results suggest that individual planning may be more beneficial to bring out more fluent speaking in a subsequent individual task performance.

The results of ANOVA on fluency measures in Table 6 show that all four variables of fluency are statistically different ($p<.05$) among the types of planning groups.

Table 6. Effect of PT and TC on Fluency

		Type Ⅲ Sum of Squares	df	Mean Square	F	Sig.
# of pauses	PT	459.388	2	229.694	14.677	.000**
	TC	.880	1	.880	.127	.723
	PT * TC	40.880	2	20.440	2.943	.060
Pause length	PT	12217.671	2	6108.835	10.682	.000**
	TC	64.883	1	64.883	.431	.514
	PT * TC	537.252	2	268.626	1.786	.176
Unpruned SR	PT	10474.209	2	5237.105	4.831	.011*
	TC	.084	1	.084	.001	.980
	PT * TC	32.071	2	16.035	.116	.890
Pruned SR	PT	10780.041	2	5390.020	5.326	.007**
	TC	.475	1	.475	.003	.953
	PT * TC	50.243	2	25.121	.184	.832

Note. *: $p<.05$; **: $p<.01$; PT: Planning Type; TC: Task complexity; PT*TC: The interaction effect between planning type and task complexity

Once examined in detail as in Table 7, however, it was found that the differences came mostly from the differences between Groups A-C and Groups B-C not Groups A-B. For example, in three measures (i.e., pause length, unpruned speech rate, and pruned speech rate per minute), this pattern was evident. The only measure that revealed the differences across all the groups was the number of pauses ($p<.010$), Group A showing the least pauses in their speech, indicating the greatest fluency of all.

Thus, regarding the first research question, there were two major findings. First, planning time can be beneficial to bring more fluent speech from students. Second, to bring out fluent speaking with less number of pauses in during-task performance, individual preparation time than collaborative one might be a better option.

On the other hand, with regard to the second research question, it was revealed as in Table 6 that the planning condition effect on fluency was not affected by task complexity although the interactive effect of planning condition and task complexity on groups' performance approached the significant level ($p=.06$) only in the number of pause.

Table 7. Multiple Comparisons on Three Groups' Fluency Measures

						95% Confidence Interval	
			Mean Diff.	Std. Error	Sig.	Lower Bound	Upper Bound
# of P	GA	GB	−2.1848*	.81625	.010**	−3.8164	−.5531
		GC	−4.7681*	.88031	.000**	−6.5278	−3.0084
	GB	GA	2.1848*	.81625	.010	.5531	3.8164
		GC	−2.5833*	.87222	.004**	−4.3269	−.8398
PL	GA	GB	−2.0091	4.51379	.960	−13.3222	9.3041
		GC	−22.6063*	6.22745	.003**	−38.2231	−6.9895
	GB	GA	2.0091	4.51379	.960	−9.3041	13.3222
		GC	−20.5972*	5.34406	.002**	−34.2978	−6.8967
UnPSR	GA	GB	2.4311	7.16844	.982	−15.4111	20.2733
		GC	21.1674*	7.42535	.021*	2.6396	39.6952
	GB	GA	−2.4311	7.16844	.982	−20.2733	15.4111
		GC	18.7363*	6.35814	.016*	2.8511	34.6215
PSR	GA	GB	1.8301	7.13538	.992	−15.9986	19.6587
		GC	21.2102*	7.22796	.017*	3.1257	39.2948
	GB	GA	−1.8301	7.13538	.992	−19.6587	15.9986
		GC	19.3801*	5.55816	.004**	5.5070	33.2533

Note. *: $p<.05$; **: $p<.01$

4.3 Planning Condition and Task Complexity Effect on L2 Complexity

The descriptive statistics on complexity measures in Table 8 present that it was the Group B that produced the most lexically and syntactically complex language among the groups, Group C producing the least complex language.

Table 8. Three Groups' Complexity under Different Task Complexity

			Group A	Group B	Group C	M
Guiraud Index	Simple task	M	24.65	24.80	22.87	24.21
		SD	7.20	6.46	4.32	6.20
	Complex task	M	24.35	27.08	20.79	24.37
		SD	8.05	9.27	7.26	8.57
# of subordination per AS unit	Simple task	M	0.19	0.23	0.14	0.19
		SD	0.21	0.15	0.11	0.17
	Complex task	M	0.16	0.18	0.08	0.14
		SD	0.16	0.14	0.07	0.14

Yet, the results of ANOVA on complexity measure (i.e., Table 9) indicate that the differences among the groups were not statistically significant in terms of lexical

complexity (p=.121). Similarly, the differences with respect to syntactic complexity among the groups only approached the statistically significant level (p=.06).

Table 9. Effect of PT and TC on Complexity

		Type Ⅲ Sum of Squares	df	Mean Square	F	Sig.
GI	PT	351.239	2	175.620	2.183	.121
	TC	.045	1	.045	.002	.968
	TC * PT	101.420	2	50.710	1.820	.171
SubC/AS	PT	.188	2	.094	2.937	.060
	TC	.081	1	.081	5.613	.021*
	TC * PT	.005	2	.003	.178	.838

Note. *: p<.05

Meanwhile, both Table 8 and 9 support the effect of task complexity itself on learners' syntactic complexity. Learners in all groups produced syntactically less complex language as the task complexity increases and this tendency was statistically significant with p=.021. As for lexical complexity, no such finding was detected.

4.4 Planning Condition and Task Complexity Effect on L2 Accuracy

Table 10 delineates the language accuracy of three groups with respect to error-free clauses per AS unit and tense-error-free clauses per AS unit.

Table 10. Three Groups' Accuracy under Different Task Complexity

			Group A	Group B	Group C	M
Error-free clauses per AS unit	Simple task	M	3.35	5.71	1.72	3.77
		SD	3.41	4.01	1.60	3.62
	Complex task	M	3.74	5.38	1.39	3.69
		SD	3.68	3.32	1.24	3.40
Tense-error-free clauses per AS unit	Simple task	M	4.39	7.30	2.50	4.94
		SD	4.08	4.10	2.31	4.13
	Complex task	M	5.65	7.08	2.67	5.35
		SD	4.22	3.60	1.81	3.85

In both measures, regardless of task complexity, Group B produced more accurate speech compared to Groups A and C with Group C demonstrating the least accurate performance. The differences among the groups were statistically significant as in Table 11 (p<.000 for error-free clauses per AS unit and tense-error-free clauses

per AS unit).

Table 11. Effect of PT and TC on Accuracy

		Type Ⅲ Sum of Squares	df	Mean Square	F	Sig.
EFC/AS	PT	329.358	2	164.679	9.877	.000**
	TC	.269	1	.269	.079	.780
	TC * PT	3.902	2	1.951	.569	.569
TEFC/AS	PT	437.182	2	218.591	10.318	.000**
	TC	5.282	1	5.282	1.193	.279
	TC * PT	13.446	2	6.723	1.519	.227

Note. *: $p<.05$; **: $p<.01$

Table 12 illustrates that Groups A-C, Groups B-C, and Groups A-B were all statistically different across two variables.

Table 12. Multiple Comparisons on Three Groups' Accuracy Measures

						95% Confidence Interval	
			Mean Diff.	Std. Error	Sig.	Lower Bound	Upper Bound
EFC/AS	GA	GB	-1.9982*	.84250	.021*	-3.6823	-.3141
		GC	1.9879*	.90862	.032*	.1716	3.8042
	GB	GA	1.9982*	.84250	.021*	.3141	3.6823
		GC	3.9861*	.90027	.000**	2.1865	5.7857
TEFC/AS	GA	GB	-2.1658*	.94971	.026*	-4.0642	-.2673
		GC	2.4384*	1.02424	.020*	.3910	4.4858
	GB	GA	2.1658*	.94971	.026*	.2673	4.0642
		GC	4.6042*	1.01483	.000**	2.5755	6.6328

Note. *: $p<.05$; **: $p<.01$

Among the groups, Group B showed the greatest accuracy and Group C the least, and Group A in the mid. This illustrates that collaborative planning is more beneficial for learners' accurate speech production than other planning conditions. Yet, no significant effect of task complexity on learners' task performance was found (See Table 11). Also, there was no interaction effect between planning condition and task complexity.

5. Discussion and Conclusion

Overall the present study found the beneficial effect of planning on learners' task

completion, fluency, and accuracy. However, no such effect was detected for complexity. With respect to the effects of different types of planning condition on individual task performance, there were two major findings. First, individual planning turned out to be more effective on diminishing the number of pauses in learners' speech, denoting its positive effect on fluency. Second, collaborative planning was more conducive to bring out more accurate speech on the part of the individual learners.

The results of the advantage of individual planning over fluency with respect to its effect on reducing the number of pauses, in particular, partially support Foster and Skehan (1999) in which the solitary planning led to the production of a smaller number of pauses than the group-based one. The reason for the partial support is because despite its collaborative nature, Foster and Skehan's (1999) group-based planning and pair-based planning of the present study differ considerably. That is, pair work can be more efficient in making use of the planning time than group work (Geng and Ferguson 2013), which may result in quite different discussions and outcomes. Meanwhile, Geng and Ferguson (2013) found no significantly different effect of the pair-based and individual planning on fluency measure. It seems the results differ from this study where individual planning led to more fluent speech (i.e., number of pauses). Yet, if the specific measure for fluency is considered, the results from the two studies are rather similar. That is, neither study found a significant difference between the pair-based and individual planning on the measure of pruned speech rate. The reason for the advantage of individual planning to smaller number of pauses is not straightforward but the casual retrospective interview with learners in the condition yielded a possible clue. They reported that once they finished thinking of contents and lexis, they spent their extra time in rehearsing and memorizing their ideas, which was reported as closely related with fluency (Bygate 2001).

On the other hand, the greater advantage of collaborative planning over accuracy is noteworthy because no significant effect of it was found in both Foster and Skehan (1999) and Geng and Ferguson (2013). In the studies, it was the teacher-led planning condition that was commonly found to be effective for accurate language production than the collaborative planning condition. Some of the task-based studies targeting foreign language learners (Buckwalter 2001, Iwashita 2001) which found that learners' attention is not only directed to lexis or meaning but also to morphosyntax of the target language may partially explain the result. Also, the fact that a good deal of English instruction in Korea is on the explicit learning of morphosyntax may have made them naturally concern about the correct language use. What the result of the

study implies more importantly, however, is that even without the effort of directing learners' attention to certain language forms or guiding learners with instruction as in Mochizuki and Ortega (2008) and Sangarun (2005), providing learners with an opportunity to collaborate at the planning stage alone can lead to meaningful discussion that positively affects accurate use of language in the following individual task performance.

As for the second research question, there found to be no significant interaction effect between the planning conditions and task complexity. Rather, the respective effect of them on learners' task performance was greater. In terms of task complexity effect, for example, the more the task was complex, the less the learners' syntactic complexity was, which in turn supports Skehan's (1996) limited capacity model.

Pedagogically the results of the current study suggest that individual planning is a better option to facilitate learners' fluency, particularly to reduce the number of pauses in learners' during-task speaking performance; whereas collaborative planning contributes to learners' accuracy. Regarding the incongruent findings from the previous studies about planning effect on accuracy, this study also demonstrates that collaborative planning is the possible candidate that can promote learners' accurate language use. The result is noteworthy in that collaboration was proven to be beneficial even for a task that should be done individually. It can be said that collaboration at the planning stage smoothed the path to more accurate use of language in individual task performance, and thus L2 teachers should observe the discussions at the planning stage carefully, value them, and get information about what linguistic helps are needed for their students.

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Examples in: English
Applicable Languages: English
Applicable Level: Secondary

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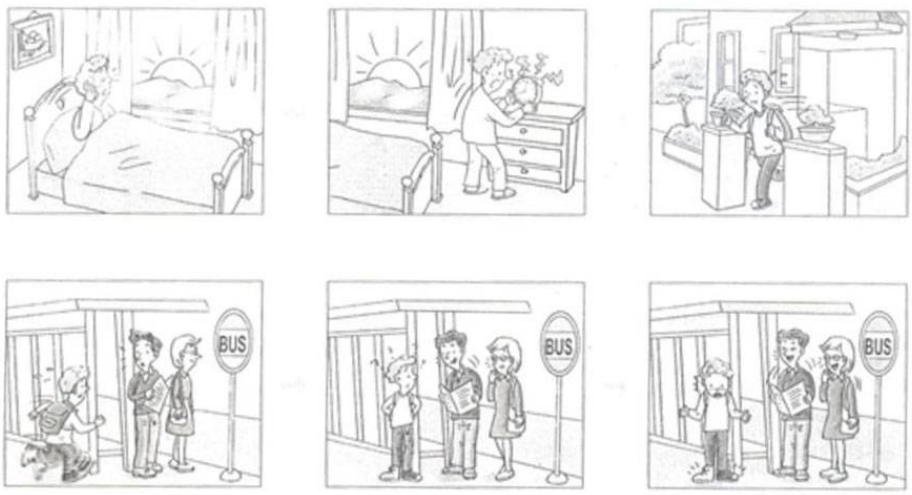
Received: July 31, 2018
Revised: September 05, 2018
Accepted: September 18, 2018

Appendix A
(Simple Task)



☆ 다음 6개의 그림을 보고 한 편의 '이야기'를 만들어 보세요.
☆ 노트 필기가 필요하면 아래 빈칸에 해보세요. 여백 아무데나 해도 좋습니다.

Appendix B
(Complex Task)

☆ 다음 6개의 그림을 보고 한 편의 '이야기'를 만들어 말 해 보세요. ☆

☆ 노트 필기가 필요하면 아래 빈 칸에 해 보세요. 여백 아무데나 해도 좋습니다! ☆