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Effects of Different Sources of Pre-task Planning on Second Language Oral Performance: A Study of Korean EFL Learners

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Abstract

Previous research has documented positive effects of pre-task planning on task-based performance, commonly analyzed in terms of complexity, accuracy, and fluency, in an L2. However, the sources of planning have rarely been examined in the research of task-based language teaching. The present study explored EFL learners' oral performance across the three sources of pre-task planning—teacher-led, group-based, and solitary—and their perceptions toward pre-task planning. Forty-eight L1 Korean college students were divided into four different source-of-planning conditions and took a decision-making task in English. Results show that there was a general planning effect on the learners' fluency and complexity. The solitary planning condition was effective in producing more fluent speech, and the group-based planning condition produced the highest syntactic complexity scores. The teacher-led planning condition helped learners produce L2 speech that is more accurate and richer in vocabulary, but the effects on accuracy were not statistically significant. Most of the planners perceived the opportunity for planning to be beneficial, but some behavioral differences were found among the planning groups, providing some implications for the implementation of pre-task planning.

Planning is one of the extensively examined topics in the recent task-based language teaching (TBLT) literature. Planning is a manipulable condition of task-based performance (Crookes, 1989) that is expected to help learners assess the demands of a task and organize their cognitive and linguistic resources to complete the task. A large body of research has shown facilitative effects of planning in learners' task performance in complexity, accuracy, and fluency (CAF) and trade-offs within CAF (e.g., Dawadi, 2019; Foster & Skehan, 1996, 1999; Li, Chen, & Sun, 2015; Yuan & Ellis, 2003). Research also reports that planning lessens communicative stress and lowers the perceived difficulty of tasks (e.g., Ortega, 2005). However, as many second language (L2) researchers and practitioners admit, planning is unavoidably variable in multiple aspects, such as source, duration, and procedure (e.g., Ahmadian & Tavakoli, 2011; Geng &

Ferguson, 2013). It is therefore necessary to closely examine the impacts of different procedural options of planning in order to expand the current understanding of, and further on, maximize the effectiveness of, planning in L2 classrooms. The present study focused on the *sources* of planning on L2 oral performance. The study aimed to compare the effects of three different sources of planning—solitary, group-based, and teacher-led—on the variables of CAF of L2 English learners' oral performance.

Background

The notion of planning has been important particularly in speech production studies. According to Levelt's Speech Production Model (1989), speech production involves three stages: conceptualization, formulation, and articulation. As a speaker produces speech, he or she self-monitors the production before it is articulated and reformulates the speech when necessary (Kormos, 2006). These processes often require conscious attention of the speaker and may yield a cognitive burden, especially in the case of L2 speech production. Planning plays a role to help learners identify appropriate message content and formulate their speech prior to articulation (Levelt, 1989).

Researchers in L2 acquisition have thus studied planning with reference to information processing theory, the notion of attention, and cognitive models of task-based performance. Skehan (1998), for instance, follows a limited-capacity, single-resource model of attention and assumes that learners are not able to pay full attention to all dimensions of task performance, as most known as CAF, due to their limited processing capacity (see VanPatten, 1990). Thus, trade-offs within CAF are likely to occur, but if learners are asked to (or allowed to) plan before completing a task, their limited cognitive resources can be freed up during the actual performance, allowing more space to be available for attending to other dimensions of production. Robinson (2001), on the other hand, argues that form and content need not always be in competition for attentional sources. Manipulation of planning time leads to depletion of attentional and memory resources. In his model, planning is seen as a resource-depleting factor that determines the overall complexity of the task and the extent to which learners attend to form. Pre-task planning has thus been highlighted as a useful pedagogic choice for providing L2 learners with facilitation in performing tasks in their L2 (e.g., Foster & Skehan, 1996; Yuan & Ellis, 2003).

As systematically reviewed by Ellis (2009), previous studies on L2 speech production have reported a relatively consistent, positive influence of planning on fluency and structural complexity (e.g., Crookes, 1989; Foster & Skehan, 1996), and somewhat mixed results with accuracy in that no significant effect of planning was found in some studies (e.g., Yuan & Ellis, 2003). The mixed findings are in part due to other factors included in respective studies, such as task type (e.g., Dawadi, 2019; Song & Lee, 2015) and learners' content familiarity (e.g., Bui & Huang, 2018).

The fact that planning itself is quite variable makes the previous findings even more complicated. For instance, planning is distinguished in terms of when it takes place—either before the task is performed (pre-task) or during its performance (within-task). Ellis (2005) further divides pre-task planning into rehearsal and strategic planning. Another key condition is whether planning is guided or unguided (or "detailed/undetailed;" e.g., Foster & Skehan, 1996). In the guided condition, learners receive specific guidance about what to plan (e.g., meaning, specific forms, or both) as well as how to plan it. The length of planning time has

varied as well, ranging from 30 seconds to 10 minutes, and the differential effects of lengths of planning time on task performance have been investigated in some studies (e.g., Mehnert, 1998; Li et al., 2015). Careful planning allows learners to have ample time to carefully plan and attend to their performance, while pressured planning has learners plan under time pressure (Ahmadian & Tavakoli, 2011). Planning may also vary in terms of source, or *locus*, which is the main focus of the present study. The principal sources of planning are solitary (i.e., individual), group-based, and teacher-led (Ellis, 2005).

However, much about the sources of planning remains underexplored. As pointed out by Foster and Skehan (1999), most of the planning studies have focused only on solitary planning, in which subjects carry out planning in isolation. However, it is important to note that solitary planning cannot be the only planning method in actual classrooms, especially in which communicative language teaching and interaction are central. Group-based planning is rather more likely to occur in natural circumstances, especially in a TBLT context (Willis, 1996). Foster and Skehan also addressed the need for exploring the effects of teacher-led planning, which is expected to yield a greater level of efficiency for learners who are likely to do different things when they engage in individual activities. Overall, there seem to be instructional benefits in each of the source-of-planning conditions, and extensive research on this topic is expected to help teachers make more effective pedagogic decisions when implementing tasks in L2 classrooms.

This paper reviews two major studies that probed the different sources of planning and their effects on task-based oral performance in terms of CAF: Foster and Skehan (1999) and Geng and Ferguson (2013). In the former study, Foster and Skehan investigated the locus of planning (teacher-fronted and group-based) and the focus of planning (i.e., language versus content) in ESL learners' performance on a decision-making task. The authors also included a solitary planning condition and a control (i.e., no planning) condition. The study found that the teacher-fronted planning condition had a significantly greater influence on accuracy. Teacher-fronted planners' fluency and complexity were at satisfactory levels as well, yielding the most balanced performance. The solitary planners were significantly better in complexity and fluency, while the group-based planners did not perform significantly better than the control group. The other independent variable of that study, focus of planning, had little effect on task performance. The authors argued that the teacher preparation, whether its focus was the content or the language, became the basis for complexity and accuracy in their subjects.

Geng and Ferguson (2013) divided their ESL learner participants into four groups of what they referred to as *participatory structure*: teacher-led, pair work, individual, and no-planning. Their study included another variable, task type (decision-making and information-exchange), and examined the interaction of the participatory structure (i.e., source of planning) and task type. In their study, the teacher-led planners outperformed in accuracy. The individual planners produced the language of greater grammatical complexity, but the effects did not reach significance. The pair work planning condition generated significantly greater fluency compared to the teacher-led and no-planning conditions. Finally, the decision-making task led to higher complexity than did the information-exchange task.

The two studies reviewed above have some common findings. The learners' accuracy in oral task performance is greatly and positively affected by pre-task planning led by a teacher, and the learners are likely to achieve the greatest complexity when they are allocated some time for individual planning. Planning seems to facilitate fluency to some extent, but the most effective

source of planning remains unclear: The pair-work planners in Geng and Ferguson (2013) produced quite fluent speech (as measured by speech rate), whereas the group-based planners in Foster and Skehan (1999) had poorer fluency—to be specific, breakdown (pause-related) fluency and repair fluency (reformulation, false starts, repetitions, and replacements). A careful analysis of learner performance in different planning conditions thus seems to be necessary to retest the previous findings, and furthermore, enhance the robustness of the findings on the sources of planning and CAF.

The present study aimed to take part in illuminating the importance of sources of planning in L2 task-based oral performance. The study adapted a part of the research design and methodology of Geng and Ferguson (2013). This study, however, investigated the sources of pre-task planning in an EFL context in Korea, one of the East Asian nations in which TBLT often faces difficulties in practical implementation due to obstacles such as limited classroom management and learners' avoidance of English (Jeon, 2009; Littlewood, 2007). Any empirical evidence for the differential effects of planning sources is expected to constitute useful information that helps foreign language teachers' understanding of the instructional choices in implementing TBLT in their own classrooms.

In addition, the study delved into the learners' perceptions about their opportunities for pre-task planning and the sources of planning provided to them. This was to address the problem that was continuously raised in previous studies due to the unobservable nature of planning (Ellis, 2005; 2009): It is difficult to know what learners actually do during planning or to what extent they are engaged in planning (e.g., Crookes, 1989; Foster & Skehan, 1996; Ortega, 1999, 2005; Sangarun, 2005). Hence, the study examined the perceived benefits of pre-task planning and their sources which can allow us to have additional insights about how planning impacts task performance.

The present study addressed the following research questions:

> **Research Question 1**. Do different sources of pre-task planning (i.e., teacher-led, group-based, and solitary) have effects on the CAF of EFL learners' oral performance? If yes, how?
>
> **Research Question 2.** How do the EFL learners perceive the effects of pre-task planning of different sources?

Method

Participants and Research Design

The participants were 48 Koreans learning English as their foreign language. They were all female students, first year in college in South Korea (mean age: 19.7 years). They were enrolled in the program of hospitality management, in which they receive systematic training in skills that are required for hospitality service management. At the time of data collection, the participants had learned English as a foreign language for 8.5 years on average through public and private education, while they had little opportunity to use English for communication purposes in non-classroom settings. They scored from 5.5 to 6.5 on IELTS speaking test (average: 6.02, SD = 0.31) and thus were considered intermediate-level learners of English, corresponding to B1-B2 based on the CEFR scale. The participants were randomly assigned to four groups (n = 12 each) comprising three experimental planning groups—teacher-led, group-

based, solitary—and one control group, who had no opportunity for pre-task planning. All of the participants signed an informed consent form prior to participation in the study.

Speaking Task

The participants performed a decision-making task that resembled the one used ; in Geng and Ferguson (2013). The participants had to select items to take with them to survive on a desert island. The task was designed to demand some extent of cognitive effort as the participants had to mobilize sets of values, prioritize items, and justify their selections (Foster & Skehan, 1999).

Operationalization of CAF

This study operationalized CAF following the methods used in previous research (e.g., Ellis, 2009; Foster & Skehan, 1996; Geng & Ferguson, 2013; Ortega, 1999; Yuan & Ellis, 2003). The present study made a distinction between syntactic (i.e., grammatical) complexity and lexical complexity (i.e., diversity or richness of lexis; e.g., Ellis, 2009). Syntactic complexity was measured through an index of subordination, by dividing the total number of clauses in the speech transcription by the number of c-units (independent utterances providing referential or pragmatic meaning). For lexical complexity, type-token ratio was computed by dividing the number of different words (types) by the total number of words (tokens). The accuracy measure was the percentage of error-free clauses (counting all errors related to morphosyntax and lexical choice) in the overall performance. To capture general fluency of speech performance, the present study used pruned speech rate, the most widely used fluency measure: number of syllables per minute computed from the speech pruned by excluding filled pauses, repairs, and incomplete expressions.

Procedure

The participants took the speaking task as an extra-class activity in their English listening comprehension class. Before the task, the participants received a brief introduction. They could ask questions, if necessary. After task instructions, the control group (i.e., no-planning) proceeded to the task immediately. The other groups received written planning guidelines that listed suggestions for planning. Thus, the planning conditions were guided rather than unguided. The suggestions directed the participants to consider content, lexis, and grammar of the speech they were about to create (adapted from Geng and Ferguson (2013)).

In accordance with Geng and Ferguson (2013) and other previous studies (e.g., Foster & Skehan, 1996; Ortega, 1999; Yuan & Ellis, 2003), the planning groups had 10 minutes for pre-task planning and were told to use the planning time in full. The planners could take notes, but using the notes was not allowed during task performance. The participants in the teacher-led condition were guided by an English-Korean bilingual teacher who communicated with the students in English at all times. The teacher read aloud the planning guideline with the students and verbally explained the task to them. Then she provided assistance when they asked for it. The teacher's assistance was based on the lexis and grammar suggestions shown in the planning guideline. When it was necessary, the teacher also provided oral suggestions for discourse organization (e.g., use of transition signals such as *first* and *next*). Meanwhile, there was no intervention in the solitary and group-based (two students per group) planning conditions. Table 1 displays the overall procedure.

Table 1. Procedure Outline

Condition	Teacher-led (n = 12)	Group-based (n = 12)	Solitary (n = 12)	No planning (n = 12)
Procedure	Introduction of the task			
	Planning (2 students + 1 teacher) 10 minutes	Planning (2 students) 10 minutes	Planning (individually) 10 minutes	None
	Individual task performance (up to 5 minutes)			
	Questionnaire & interview			None

After planning, the participants audio-recorded their oral response individually using a voice recorder handed out by the researcher. In the teacher-led and group-based conditions, the two students were seated apart, farthest from each other in the same classroom so that their voice would not be included in their partner's voice recording. This was also to administer the speaking task to the planners simultaneously without allowing any additional planning time.

The speaking task sought to collect monologic speech performance data in order to avoid any influence of interactional variables (e.g., Yuan & Ellis, 2003). The audio-recorded task performance was transcribed, coded, and analyzed based on the measures of CAF used in this study.

Upon completing the speaking task, the participants in the planning conditions responded to a questionnaire in which they provided their accounts about planning and task performance. In addition, eight of these participants volunteered to have an interview to give more retrospective accounts and self-assessments. The interviews were overall semi-structured with an interview protocol. The resulting interviews were 7.5 minutes long on average. The post-task questionnaires and interviews were in the participants' L1 (i.e., Korean) to elicit as much detailed reflection as possible from the participants.

Data Analysis

To explore the pre-task planning effects under the four conditions, statistical analyses were performed using SPSS 27. Prior to the statistical analyses, a Shapiro-Wilk normality test confirmed the normality of all data sets (*p*-values greater than 0.05).

The participants' questionnaire data had both yes-no questions and open-ended questions. The open-ended responses were coded as follows: The researcher first open-coded the responses and inductively extracted emergent thematic codes (see Table 6). A second coder, a graduate student in applied linguistics, coded the same data, and the agreement between the two coders was 95.45%.

Results

This section presents the results of the data analysis and revisits the research questions of the study.

Research Question 1.

Table 2 displays descriptive statistics on the measures of CAF. As seen in the table, the control group (i.e., no-planning condition) generated the lowest average values for all measures except

for lexical complexity, suggesting that there was, in general, a planning effect in the participants' performance. For syntactic complexity, the group-based planners performed slightly better than those in the other planning conditions. The highest mean scores in lexical complexity and accuracy were seen in the performance of the teacher-led planners. On the other hand, fluency, operationalized as pruned speech rate, was best facilitated by solitary planning.

Table 2. Descriptive Statistics

Variable	Planning condition	Mean	SD
Syntactic complexity	Teacher-led	1.68	0.26
	Group-based	1.82	0.20
	Solitary	1.78	0.18
	No planning	1.59	0.22
Lexical complexity	Teacher-led	0.50	0.06
	Group-based	0.46	0.07
	Solitary	0.42	0.07
	No planning	0.43	0.04
Accuracy	Teacher-led	0.55	0.10
	Group-based	0.54	0.12
	Solitary	0.53	0.10
	No planning	0.50	0.09
Fluency	Teacher-led	111.83	10.80
	Group-based	120.42	7.69
	Solitary	122.58	9.64
	No planning	111.60	10.19

The performance data were then submitted to a multivariate analysis of variance (MANOVA) to ascertain the effect of no planning versus pre-task planning on the oral performance. The analysis revealed a statistically significant main effect for the planning condition, $F(12, 108.767) = 2.934$, $p < 0.01$, Wilk's $\Lambda = 0.476$, $\eta^2 = 0.219$. Pairwise comparison of the no-planning (control) condition and the three pre-task planning conditions, as presented in Table 3, revealed that the no-planning condition is significantly different from the planning conditions in syntactic complexity (group-based and solitary), lexical complexity (teacher-led), and fluency (group-based and solitary), but not in accuracy.

Table 3. Pairwise Comparisons

Variable		Mean difference	Std. error	Sig.
Syntactic complexity	No planning vs. teacher-led	-0.092	0.089	0.308
	No planning vs. group-based	-0.225	0.089	0.015*
	No planning vs. solitary	-0.183	0.089	0.045*
Lexical complexity	No planning vs. teacher-led	-0.065	0.025	0.012*
	No planning vs. group-based	-0.031	0.025	0.222
	No planning vs. solitary	0.007	0.025	0.765
Accuracy	No planning vs. teacher-led	-0.049	0.043	0.259
	No planning vs. group-based	-0.042	0.043	0.338
	No planning vs. solitary	-0.022	0.043	0.604
Fluency	No planning vs. teacher-led	-0.250	3.743	0.947
	No planning vs. group-based	-8.833	3.743	0.023*
	No planning vs. solitary	-11.000	3.743	0.005*

Note: * = significant at $p < 0.05$

In an attempt to identify the differences in the three planning conditions, a separate MANOVA, based on the data excluding those from the no-planning condition, followed. The MANOVA revealed a statistically significant difference in oral performance based on the source of planning condition, $F(8, 60) = 3.443$, $p = 0.003$, Wilk's $\Lambda = 0.470$, $\eta^2 = 0.315$. Next, a series of one-way ANOVA examined the differences in means across the three planning conditions. Table 4 presents the ANOVA results for the variables in this study.

Table 4. One-way Analyses of Variance (ANOVAs) for CAF Scores

Variable	Sum of squares	*df*	Mean square	*F*	Sig.	η^2
Syntactic complexity	0.112	2	0.056	1.200	0.314	0.068
Lexical complexity	0.032	2	0.016	3.721	0.035*	0.184
Accuracy	0.005	2	0.002	0.185	0.832	0.011
Fluency	775.722	2	387.861	4.328	0.021*	0.208

Note: * = significant at $p < 0.05$

The ANOVA results indicate that the scores for fluency and lexical complexity reflect differences between the three sources of planning examined in this study: for fluency, $F(2, 33) = 4.328$, $p = 0.021$, $\eta^2 = 0.208$; for lexical complexity, $F(2, 33) = 3.721$, $p = 0.035$, $\eta^2 = 0.184$. On the other hand, the between-group differences in the other mean scores were not statistically significant: for syntactic complexity, $F(2, 33) = 1.200$, $p = 0.314$, $\eta^2 = 0.068$; for accuracy, $F(2, 33) = 0.185$, $p = 0.832$, $\eta^2 = 0.011$. Post-hoc tests using the Bonferroni correction revealed that the teacher-led planners' lexical complexity (0.50 ± 0.06) was significantly higher than that of the solitary planners (0.42 ± 0.07) ($p = 0.030$). The difference was not significant between the teacher-led and group-based conditions or between the group-based and solitary conditions. For fluency, only the difference between the teacher-led condition (111.83 ± 10.80) and the solitary condition (122.58 ± 9.64) was significant ($p = 0.027$), while the difference between the other pairs did not reach significance. Table 5 summarizes the post-hoc test results.

Table 5. Multiple Comparisons (Bonferroni Correction)

Variable		Mean difference	Std. error	Sig.
Lexical complexity	Teacher-led vs. group-based	0.034	0.266	0.623
	Teacher-led vs. solitary	0.073	0.266	0.030*
	Group-based vs. solitary	0.038	0.266	0.476
Fluency	Teacher-led vs. group-based	-8.583	3.865	0.100
	Teacher-led vs. solitary	-10.750	3.865	0.027*
	Group-based vs. solitary	-2.167	3.865	1.000

Note: * = significant at $p < 0.05$

These results indicate that different sources of pre-task planning influence L2 oral performance. The participants in the no-planning condition did not perform as successfully as those who could plan for the oral task. The differences in accuracy, however, did not reach significance.

Solitary planning had the greatest effect on fluency, and its effect was significantly higher than that of teacher-led planning. The effect of teacher-led planning on lexical complexity was significantly higher than that of solitary planning. Group-based planning led to seemingly higher syntactic complexity; however, the effect was not significant. In short, it appears that the sources of planning had differential effects on the performance measures examined in this study.

Research Question 2.

Analyses of the post-task questionnaires and interviews revealed how the participants in the planning conditions perceived and used the opportunity for pre-task planning. Table 6 summarizes the results obtained from the questionnaire data. In each planning condition, the majority of the participants (80.56%) responded that they found the planning opportunities helpful in preparing for their speaking task. The rate of the positive responses was particularly high in the solitary planning condition. However, not all participants appreciated the opportunity for planning. These planners felt that their performance would not have been much different even without the opportunity for planning.

Table 6. Summary of the Questionnaire Data

Question & Answer	Teacher-led planning (n = 12)	Group-based planning (n = 12)	Solitary planning (n = 12)	Total
1. Did you find the planning opportunity helpful?				
Yes	10 (83.33%)	8 (66.67%)	11 (91.67%)	29 (80.56%)
No	2 (16.67%)	4 (33.33%)	1 (8.33%)	7 (19.44%)
2. What was your focus while you were planning for your performance?				
Content	11 (91.67%)	12 (100%)	12 (100%)	35 (97.22%)
Vocabulary	12 (100%)	12 (100%)	10 (83.33%)	34 (94.44%)
Note-taking	5 (41.67%)	6 (50.00%)	9 (75.00%)	20 (55.56%)
Rehearsal	2 (16.67%)	4 (33.33%)	7 (58.33%)	13 (36.11%)
Others (e.g., translation)	2 (16.67%)	5 (41.67%)	2 (16.67%)	9 (25.00%)
3. What were you concerned about while planning?				
Content	5 (41.67%)	5 (41.67%)	6 (50.00%)	16 (44.44%)
Vocabulary	4 (33.33%)	6 (50.00%)	7 (58.33%)	17 (47.22%)
Grammar	2 (16.67%)	5 (41.67%)	4 (33.33%)	11 (30.56%)
Pronunciation	1 (8.33%)	2 (16.67%)	4 (33.33%)	7 (19.44%)
Time pressure	5 (41.67%)	6 (50.00%)	3 (25.00%)	14 (38.89%)
4. Did you find the written planning guideline useful?				
Yes	5 (41.67%)	7 (58.33%)	8 (66.67%)	20 (55.56%)
No	7 (58.33%)	5 (41.67%)	4 (33.33%)	16 (44.44%)
5. If you had a partner or teacher, did you find him/her helpful while planning?				
Yes	9 (75.00%)	7 (58.33%)	Not Applicable	16 (66.67%)
No	3 (25.00%)	5 (41.67%)	Not Applicable	8 (33.33%)
6. Would you prefer to have time to plan when you take a task in the future?				
Yes	10 (83.33%)	10 (83.33%)	11 (91.67%)	31 (86.11%)
No	2 (16.67%)	2 (16.67%)	1 (8.33%)	5 (13.89%)

The planners in general used their planning time for identifying task problems and organizing their utterance content. More than 90% of the planners attended to the vocabulary in the task material because they had to know each of the words in the lists and justify their choice about each item to fulfill the task requirement. Some of the planners recalled that they took some notes (see Excerpts 1 and 2). They reported that they jotted down some words as they were brainstorming or attempted to write a script for the response even though they knew that they were not allowed to use their notes when actually taking the task. (Note: The following interview excerpts were translated from the participants' L1.)

> **(Excerpt 1)** Solitary planner 02: *I usually feel comfortable when I have a script. I just wanted to write down some sentences and remember them although I didn't have much time for that.*
>
> **(Excerpt 2)** Teacher-led planner 05: *I had some ideas and didn't want to forget them. I wrote down some words in a hurry and then came back to them to plan what to include in my response.*

Another strategy attempted by a few of the planners was a rehearsal of the performance. The number of those who attempted rehearsal was greater in the solitary planning condition (58.33%) than in the other two planning conditions. A smaller number of planners attempted other things such as translation of the planned ideas from Korean to English and memorization of the planned ideas.

Meanwhile, the planners faced some challenges as well. Some of them (44.44%) recalled that their foremost concern was planning for the content of the speech, such as examples and reasons for their opinion, and the organization of the utterance (see Excerpts 3 and 4). The planners also had difficulty in retrieving lexical knowledge (47.22%) that they needed to achieve better lexical choice. A few others were concerned about the grammatical accuracy (30.56%) and phonological accuracy (19.44%). Some planners also recalled that they felt pressured by the time limit (38.89%).

> **(Excerpt 3)** Solitary planner 12: *I had to think about what to say first, next, and so on because there were so many items to cover.*
>
> **(Excerpt 4)** Group-based planner 07: *We found it difficult to come up with a good reason for not choosing certain items.*

The perceived benefit of the written planning guideline was not high in that slightly more than half (55.56%) of the planners gave a positive response. Many of the planners in the teacher-led and group-based conditions were satisfied with having a teacher or partner during planning. Seventy-five percent of the teacher-led planners thought that the presence of the teacher was beneficial in that they could receive help in using L2 vocabulary or producing target-like L2 pronunciation (see Excerpt 5). On the other hand, the other teacher-led planners commented that the benefit of having a teacher was minimal (see Excerpt 6), suggesting that students may feel skeptical about the presence of a teacher even though they appreciate the opportunity for pre-task planning.

> (**Excerpt 5)** Teacher-led planner 11: *The teacher was helpful because I could learn how a word is used and how to pronounce that word. For example, the word "purification" was new to me, so I needed to know its meaning and how it sounds.*

(Excerpt 6) Teacher-led planner 05: *I didn't know what I should be doing with the teacher. I didn't really need her.*

A similar tendency was observed among the group-based planners. Some of the group-based planners appreciated having a partner during planning, but the others (5 out of 12) had a different opinion. Two of the latter planners commented, respectively, in the post-task interview that the collaboration with a partner was somewhat limited (see Excerpt 7) and that they often felt unclear about what they should be doing while preparing for the task (see Excerpt 8). The negative experience seems to be partly due to the participants' limited abilities in L2.

(Excerpt 7) Group-based planner 07: *Working with someone whose English proficiency level is similar to mine, I had emotional support but not the kind of [linguistic] support that I needed to do the task successfully.*

(Excerpt 8) Group-based planner 08: *I wasn't sure if my partner and I were preparing the task in the right way.*

Nevertheless, most of the planners (86.11%) expressed positive attitudes toward pre-task planning and responded that they would prefer to have time to plan before they take an L2 task. During the interview, some recalled that they were less anxious because of the opportunity for planning (see Excerpt 9).

(Excerpt 9) Solitary planner 12: *I would have been very nervous if I had not had any time for planning.*

Discussion and Conclusion

The present study investigated the impacts of different sources of planning—teacher-led, group-based, and solitary—on the CAF of L2 oral performance to obtain empirical information that may help implementation of TBLT in foreign language classrooms. In addition, the study examined how learners perceived and used the opportunity for planning when taking an L2 task. It focused on one task type, decision-making, to zero in on the source-of-planning conditions.

The results of the study revealed a general effect of pre-task planning on CAF in that the three planning groups outperformed the control group (i.e., the no-planning condition). The group-based and solitary planners significantly outperformed the control group in syntactic complexity and fluency. The teacher-led group was significantly advantageous in using diverse lexical items. As Levelt's Speech Production Model (1989) explains, the planners in the study, who had opportunities to think about the message content (conceptualization) and how to convey it (formulation), were able to utilize their attentional resources in a way more effective than the control group. In other words, some traces of the meaning and the forms of the speech were already available to the planners when taking the speaking task. However, the effect of planning on accuracy was not at a significant level, although the planners in the present study had higher mean scores than did the control group. This adds another piece of evidence for the mixed findings in the literature of the planning effects on accuracy (e.g., Ortega, 1999; Yuan & Ellis, 2003).

Further analyses revealed that the planning effects on the CAF measures were different across the planning conditions. First, the group-based planning condition was found to have promoted balanced performance in all CAF measures, conforming to Geng and Ferguson (2013), but

contrary to Foster and Skehan (1999). The group-based planners in the present study had the highest scores in syntactic complexity (as measured through an index of subordination) and second-highest scores in fluency, accuracy, and lexical complexity, although the planning effects did not reach significance. As shown in the questionnaire data, all of the group-based planners in the study seem to have maximally attended to the content and vocabulary of their speech during planning. The interactions they had during planning may have allowed them to have the chance for modifying their output and enhancing input (cf. Swain & Lapkin, 1995) while helping each other utilize their own linguistic and metacognitive resources to prepare for their task performance. Although their linguistic resources may have been limited as compared to those of the teacher-led planners (as previously reported in Excerpts 7 and 8), the group-based planners were somehow able to maximize their resources and abilities to produce more fluent and syntactically complex speech. Another possible explanation for this successful performance is that the group-based planners' negotiation and interaction simulated a form of task rehearsal or repetition, which could have eased cognitive processing at the conceptualization stage of Levelt's (1989) model and promoted more fluent task performance (cf. Ahmadian & Tavakoli, 2011).

The solitary condition generated the greatest fluency (as measured through speech rate). The fluency effect was significant between the solitary and teacher-led conditions, but not between the solitary and group-based conditions. The solitary planners had slightly (and non-significantly) lower scores in syntactic complexity and accuracy than did the group-based planners, suggesting that solitary planning may be as beneficial as planning with peer(s). According to the post-task questionnaire and interview, both the group-based planners and solitary planners, in general, appreciated having some time to plan for their task performance, corroborating the previous findings on learners' positive attitudes toward planning (cf. Dawadi, 2019). These planners also expressed the ownership of the process of planning to some extent. In the case of solitary planners, they were still able to prepare for their task performance even without any interaction with others. Rather, as revealed in the questionnaire data, they had more freedom to maximally, and efficiently, use their planning time to independently work on the strategies they needed, such as rehearsal and note-taking.

A different pattern of results was obtained from the teacher-led planners. In the present study, the teacher-led planners did outperform the other planners in accuracy (as measured through the percentage of error-free clauses), consistent with Geng and Ferguson (2013), but only to a non-significant extent. On the other hand, these planners performed with the greatest lexical complexity: The teacher-led condition might have supported the planners to use more diverse and richer vocabulary, and the facilitative role was significant when compared to the solitary condition. Meanwhile, the teacher-led condition produced relatively low syntactic complexity (mean scores of 1.68 clauses per c-unit) and strikingly, low fluency (111.83 syllables per minute), which was difficult to distinguish even from the fluency of the control group. This indicates that the teacher-led condition led to slightly greater accuracy and lexical complexity at the expense of fluency and syntactic complexity.

The present results from the teacher-led and group-based conditions are inconsistent with Foster and Skehan (1999), in which the teacher-fronted planning condition was seen to have produced the most balanced gains in CAF, whereas the group-based planning was a relatively unsuccessful condition. This inconsistency may be due to several methodological differences between Foster and Skehan (1999) and the present study, including the tasks that the learners

performed, the size of the groups, and some measures of fluency. However, the post-task questionnaire and interview included in the present study revealed how the planners felt about the planning process they experienced and offered some explanation for the planners' performance. For instance, the teacher-led planners—although many of them exhibited positive attitudes toward the presence of their teacher during planning—seem to have been overly dependent on the teacher and thus did not actively (or spontaneously) carry out planning. These planners were clearly advantageous in that they had teacher's assistance in L2 vocabulary and language form; however, their preparation was limited to what the teacher had offered to them and was insufficient to formulate the message for their production. Their role as a planner was quite passive, as compared to the planners under the group-based and solitary conditions. Such a phenomenon may have to do with the task-taking strategies of this particular sample of EFL learners or their language expertise (intermediate level; cf. Ortega, 2005). It is also possible that there was a cultural (here, Korean) influence from the teacher-centered classroom systems (Jeon & Hahn, 2006), in which students are likely to become passive listeners when the teacher is present and speaking. These possibilities require further research.

The findings have some implications for foreign language classrooms. Each of the three source-of-planning conditions appears to have advantages and disadvantages, and all of the three planning sources can be used in a balanced manner to promote learners' CAF. The findings highlight the important role of teachers in judiciously implementing TBLT and in selecting and organizing L2 tasks and planning conditions to support learners' development. For instance, group-based or solitary planning should be preceded by teachers' careful evaluation of the availability of (linguistic) resources, composition of the groups, learners' individual differences, and others. Teachers may provide guidance and additional input that help learners prepare for accurate and lexically rich performance, but they must also consider learners' readiness and willingness to conceptualize and formulate their production as well as the quality of the interaction during planning. Additionally, a closer examination of how learners perceive and use the planning opportunities may help teachers assess the efficacy of planning.

Lastly, several limitations of the present study need to be acknowledged. First, the study examined only some immediate effects of one-time planning on L2 task performance. It will be interesting (and useful) to research training for planning and whether the effects can bring about the long-term development of the L2 (Foster & Skehan, 1999). Secondly, the questionnaire in this study mainly used a dichotomous scale and collected binary answers (i.e., yes/no). Thus, it was not able to capture the perceived degree of effectiveness of planning. In addition, a larger sample size and more teachers (in teacher-led planning) would have allowed the findings to become more generalizable. Finally, the present study focused on only one type of task—decision-making—which is seen to be more cognitively demanding than other task types such as narratives (Ellis, 2009). Further research examining different types of tasks will be useful in understanding the effects of the different planning sources on task performance.

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Appendix A: Decision-making Task: How to Survive on a Desert Island (Adapted from Geng & Ferguson, 2013)

Situation
You will have to live on a small isolated island surrounded by the sea for two weeks. You can take a few little things to help you survive on that island. Look at the following lists of items you have been given. You can take only four items from each group. You must make a decision on which things to take and give reasons.

Group 1: Food: fresh water, water purification tablets, tea, coffee, beer, alcohol, milk, canned baked beans, dry tomato soup, meat, fresh vegetables, fruit, oil, salt, sugar
Group 2: Other essentials: knife, dishes, lighter, watch, bow and arrows, first aid kid, ropes, fishing pole, batteries, pillow, sleeping bag, sheet, extra clothes, favorite book, radio, paper and pen

Appendix B: Written Planning Guidelines (Adapted from Geng & Ferguson, 2013)

a) Content
1. Think about what problems you may have and how to solve these problems.
2. Think of four items that could help you survive on the island.
3. List the reasons why you choose these items.

b) Language (lexis and grammar)
1. Think about what vocabulary you need to talk about this topic.
For example, think of adjective words or phrases when you describe something or express your opinions, such as *(un)necessary, (un)essential, luxurious, redundant, practical, valuable, handy, convenient, useful, available, …*
2. Think about what grammar you might need
For example, think about how to organize your speech by using transition words or phrases, such as *first, second, finally, however, in addition, besides, though, what's more, …* so that it is for listeners to follow what you are saying.
Consider tenses and the appropriate forms of verbs.
Consider the opening and closing of the talk.

Appendix C: Post-task questionnaire

1. Did you find the planning opportunity helpful?
Yes/No
2. What was your focus while you were planning for your performance?
Open-ended responses
3. What were you concerned about while planning?
Open-ended responses
4. Did you find the written planning guideline helpful?
Yes/No
5. If you had a partner or teacher, did you find him/her helpful while planning?
Yes/No
6. Would you prefer to have time to plan when you take a task in the future?
Yes/No

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