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Korean Advanced EFL Learners' Attentional Allocation during Task Planning and Its Influence on Speaking*

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This study investigated what advanced-level EFL learners pay attention to while planning and performing a speaking task, and how this cognitive process affects their subsequent task performance. A total of 21 English-major college students performed an oral presentation task after provided with 10-minute planning time. Their task performances were analyzed in terms of fluency, complexity and accuracy. Furthermore, in order to investigate the participants' attentional allocation during task planning as well as task performance, retrospective interviews were conducted right after task performance. The analyses of the data showed that the learners placed most attention to conceptualization of ideas during pre-task planning and to fluency of speech while performing a task. On the other hand, little attention was paid to formulizing utterances and pursuing complexity and accuracy. It was also found that the learners' attention to fluency, complexity or accuracy during task planning did not always lead to successful performance in the aspect. While speech rate and lexical diversity were more susceptible to attentional control, accuracy and syntactic complexity were not much affected by learners' planning in advance. The findings are discussed in relation to the roles and limitations of pre-task planning in L2 performance and pedagogical implications.

[pre-task planning/attentional allocation/speaking task/TBLT]

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I. INTRODUCTION

In L2 classroom, learners typically have time to plan and prepare before performing a speaking or writing task. It is also common that L2 learners are provided with preparation time in standardized English tests such as TOEIC, TOEFL, IELTS, and OPIC. Underlying this practice is the assumption that pre-task planning will positively affect L2 learners' performance and thereby elicit L2 output of higher quality.

This assumption on the benefits of pre-task planning has been widely investigated largely in information processing theory in the past two decades or so (Yuan & Ellis, 2003). It has been postulated that when provided with some time to plan in advance, L2 learners may be able to allocate their attentional resources to various aspects of the upcoming task performance ranging from content to lexis to grammar, eventually leading to better task performance (Skehan, 1996). Results from empirical studies overall supported that L2 learners' performance become more fluent and more complex when they are provided with time to plan in advance. In terms of accuracy, however, the results are mixed. Some researchers confirmed the beneficial role of planning on accuracy but its effect was restricted by various variables such as target structures (Ortega, 1999), task type (Foster & Skehan, 1996; Wigglesworth, 1997), planning instructions (Foster & Skehan, 1996), planning time length (Mehnert, 1998), and learners' L2 proficiency (Kawauchi, 2005; Ortega, 2005; Wigglesworth, 1997). Some others observed no difference in accuracy between planned and unplanned performance (Crookes, 1989; Robinson, Ting & Urwin, 1995; Wendel, 1997).

One of the reasons for these incongruent results on the impact of task planning can be found in the product-oriented approach of the previous studies. A majority of the studies have focused on comparing L2 learners' performances in terms of fluency, complexity and accuracy under the conditions with and without planning time, respectively. What has been overlooked in the studies is the actual processes L2 learners engaged in while planning. It is highly possible that the participants used the planning time differently, some focusing on meaning, others on linguistic form, and yet others on nothing. It is evident that their choice of what to attend to while planning must have affected their subsequent L2 performance. Thus, a growing number of researchers have turned their attention to L2 learners' actual planning processes (Park, 2009). This line of studies again, however, provides only an incomplete picture of the role of task planning in L2 learning. What is needed is studies which examine both the cognitive process L2 learners engage in while planning and its effect on the subsequent performance (Kwon, 2009; Ortega, 2005). Such studies adopting a process-product approach are still sparse.

Furthermore, the impact of task planning has been mostly investigated with low- or intermediate-level L2 learners. Yet, learners' L2 proficiency has been suggested as a

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factor which determines the effect of planning on L2 performance (Kawauchi, 2005; Wigglesworth, 1997). Given that advanced-level learners may need less attentional resources to search for linguistic features and thus have more freed cognitive capacity to attend to different aspects of task performance, their cognitive processes during pre-task planning are likely to be different from those of low- or intermediate-level learners. More studies are needed on advanced learners' attentional allocation while planning.

To shed light on the gaps in the previous research, the present study, adopting a process-product approach, investigated what advanced-level Korean EFL learners do when task planning time is given, and how this process affects their English speaking performance in terms of fluency, accuracy and complexity. Specifically, this study examined the learners' conscious allocation of attention during pre-task planning and actual task performance, based on both quantitative and qualitative data. Two research questions were addressed in this study:

1) What do Korean advanced EFL learners attend to during task planning and performance?
2) How does learners' attentional allocation during task planning affect their subsequent speaking performance?

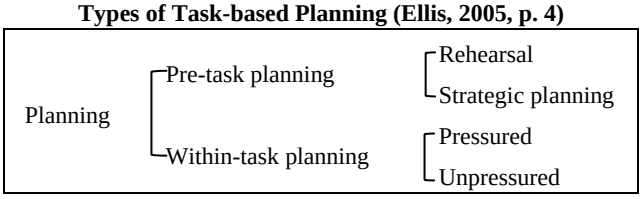
II. LITERATURE REVIEW

1. The Type and Influence of Task Planning on L2 Performance

Research on task-based language teaching (TBLT) has explored and identified many variables which affect L2 learners' performance and learning. Among them, task planning has attracted growing attention from researchers. Task planning can occur at different levels in different forms. Ellis (2005) distinguishes various types of task planning, as illustrated in Figure 1.

FIGURE

Types of Task-based Planning (Ellis, 2005, p. 4)



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Depending on when it takes place, planning can be divided into pre-task planning and within-task planning. Pre-task planning can be further divided into rehearsal, which provides learners with an opportunity to perform the same or similar task before the main task, and strategic planning, where learners prepare for the task in terms of content and linguistic features. Within-task planning, also called on-line planning, allows learners to plan while performing a task. This can be divided into pressured and unpressured planning depending on the length of task performance time available. In the present study, the participants were provided with pre-task strategic planning and pressured within-task planning. This means that they could have the opportunity to plan their performance in advance but did not have much time to plan their speech on-line.

A majority of the previous studies have investigated the impact of pre-task strategic planning, particularly in terms of fluency, complexity and accuracy of L2 performance. As far as fluency is concerned, researchers agreed on the beneficial role of pre-task planning (Foster & Skehan, 1996; Mehnert, 1998; Ortega, 1999; Wendel, 1997; Yuan & Ellis, 2003). They found that L2 learners produced faster speech with less frequent and shorter pauses, and reduced amounts of false starts, repetitions, reformulations and hesitations in planned speech. This indicates that pre-task planning facilities learners' rapid access to L2 resources. Researchers have also confirmed the positive effect of pre-task planning on complexity of L2 performance (Crookes, 1989; Foster & Skehan, 1996; Mehnert, 1998; Ortega, 1999; Wendel, 1997; Yuan & Ellis, 2003). When provided with pre-task planning time, L2 learners produced lexically, morphologically and syntactically more complex forms. According to Foster and Skehan (1996), this is because learners under the planned condition were able to utilize interlanguage structures and took the risks of producing cutting edge forms to express their pre-planned ideas.

Unlike the results on fluency and complexity, the results on the influence of pre-task planning on accuracy are mixed. For instance, Ortega (1999) obtained partially supportive results in the study with advanced-level L2 Spanish learners, where pre-task planning led to significant differences in the use of the noun-modifier agreement but not in the use of the article. Foster and Skehan (1996) investigated the effect of planning in relation to the type of planning (no planning, undetailed planning, and detailed planning) and the task type (a narrative task, a personal task, and a decision task). On the personal and decision tasks, undetailed planners were the most accurate, which was followed by detailed planners and then no-planners. On the narrative task, again undetailed planners produced most accurate speech but detailed planners were less accurate than no-planners. Finally, Crookes (1989) and Wendel (1997) failed to find any significant differences in accuracy between planned and unplanned performers.

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Put together, the previous studies have shown that pre-task planning is more likely to enhance fluency and complexity than accuracy. Ellis (2005) interpreted these results to suggest two possibilities. The first one is that when time to plan is given before task performance, L2 learners tend to pay their primary attention to organizing ideas they will carry over rather than formulating linguistic forms they need to encode the ideas. The second possibility is that even when they engaged in form-focused planning, they simply fail to implement the planned forms in the actual task performance. The latter interpretation requires research into learners' within-task processes together with pre-task planning.

The previous studies are also limited in that they are based on inference rather than direct evidence. The studies manipulated experimental conditions, namely pre-task planning conditions, and inferred mental operations learners were engaged in based on their final performance. It is necessary to investigate what learners actually did during pre-task and within-task planning and how the process affects a subsequent task performance, using introspective approaches such as think-aloud protocols or post-task stimulated recall (Skehan & Foster, 2005). In the following section, a few studies which attempted to look into the actual process will be reviewed.

2. Studies on L2 Learners' Cognitive Processes while Task Planning

Wendel (1997) investigated Japanese intermediate EFL learners' planning processes using post-task interviews. The participants' comments revealed that learners spent most of their pre-task planning time in organizing their retelling task coherently and finding vocabulary. Although there were a few participants who planned about grammar in advance, they could not make use of it in actual performance. This explains why pre-task planning often results in greater fluency and complexity but not greater accuracy.

Because of L2 learners' tendency to prioritize thinking over propositional features to planning about linguistic features when planning time is given, some researchers provided specific instructions for pre-task planning in terms of what to focus on (Crookes, 1989; Foster & Skehan, 1996; Mehnert, 1998). Sangarun (2005) raised a question on whether such focused instructions for pre-task planning actually give rise to different cognitive processes and task performances. To explore this question, Sangarun provided 40 Thai intermediate EFL learners (Grade 11) with four different pre-task planning conditions (no planning, meaning-focused, form-focused, and meaning/form-focused) and observed what they did in each condition. The participants' cognitive processes were examined via on-line protocols during 15-minute pre-planning and 10-minute retrospective interviews conducted immediately after task performance. The

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results showed that regardless of the planning conditions, the participants focused more on meaning than form. Yet, the numbers of the form planning episodes were significantly different across the groups with different planning foci. Overall, the meaning-focused group (MP) showed only superficial form planning. In contrast, the form-focused group (FP) exhibited more episodes of vocabulary planning, and the meaning/form-focused group (MFP) produced many grammatical corrections. However, it was only the MFP group who applied what they had planned about form as well as meaning to the actual task performance. Based on the results, Sangarun suggested that L2 learners can benefit most when they focused jointly on meaning and form and that such processes can be facilitated by providing learners with guidance on balanced planning of form and meaning.

A similar study was conducted in Korean EFL context by Park (2009). She investigated 43 Korean intermediate EFL college students' use and perceptions of pre-task planning under general and specific planning conditions, using think-aloud protocols and post-task questionnaires. The learners were given ten minutes to plan before they performed a retelling task. The results showed that the pre-task planning instructions exerted no significant influence on what the learners paid attention to. They all prioritized their attention to the content and organization of the story, while avoiding planning on their weak areas such as grammar. It was also frequently found that learners built a story first in Korean and then translated it into English. Most of the learners presented positive perceptions about planning, reporting that planning reduced task difficulty, lessened cognitive demands, and facilitated their noticing of interlanguage forms. Yet, some learners pointed out that their task performance was restricted by what they had planned. What is noteworthy in this study is the participants' perception about thinking aloud while planning. Forty percent of the specific planning group and 61% of the general planning group responded that thinking aloud while planning was disturbing their planning processes, raising a question on the validity of using think-aloud protocols as a data collection method. Another limitation of this study is that it did not report the learners' actual task performance as a consequence of the pre-task planning, leaving it open the link between process and product of pre-task planning.

Ortega's (2005) study is particularly relevant to the present study in that it adopted a process-product approach and examined advanced L2 learners. She analyzed post-task interviews with 14 low-intermediate and 32 advanced L2 Spanish learners, which were obtained from her previous research (Ortega, 1995, 1999). Ortega identified several themes from learners' interview scripts, but the most significant one was that learners could explicitly attend to form even if they were not instructed to do so. The participants reported conscious efforts to check, verify, and correct their speech by drawing on explicit knowledge. This result contradicts with previous finding that L2 learners mostly

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focused on meaning during planning. Park (2009) attributed this discrepancy to the advanced L2 proficiency of the participants in Ortega's study, suggesting that advanced-level learners may be able to allocate their attention to both meaning and form.

The literature review of previous studies has revealed that research on the impact of planning on L2 performance from a process-product perspective still lacks, particularly with advanced EFL learners. Motivated by this research need, the present study investigated what advanced Korean EFL learners attend to during pre-task planning and task performance, and how this affects their task performance in terms of fluency, complexity and accuracy.

III. METHODS

1. Participants

A total of 23 participants were recruited from a group of students who took English Pronunciation course in a university located in Seoul, Korea. Since the course was taught by none of the researchers, the students' participation was voluntary with no pressure. Yet, they could get one extra point for the course in compensation for their participation.

Six of the participants were male and seventeen were female. Five students had experience of living in English-speaking countries for one to six years. There were twelve sophomores, seven juniors, and four seniors. All of them either majored or minored in English Education.

They all reported TOFEL or TOEIC scores. Their TOEFL scores ranged from 92 to 115 (M = 103.33) and their TOEIC scores ranged from 760 to 985 (M = 887). According to the comparison charts provided by Educational Testing Service, all scores fell within the levels of B2 and C1 in Common European Framework of References for Languages (CEFR). Thus, all the participants in this study were considered to be upper intermediate and advanced level learners.

Of the 23 participants, two students failed to meet the task requirement of making a presentation at least for three minutes. Thus, in the end only 21 participants' speech samples and interviews were included for analysis in this study.

2. Target Task

A presentation task was chosen as a target task in this study in consideration of the participants' relatively high English proficiency. The previous studies frequently used a

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picture-based storytelling task (Ortega, 1995, 1999; Park, 2009; Yuan & Ellis, 2003). However, Foster and Skehan (1996) found that a cognitively easy task less benefited from pre-task planning than cognitively more demanding tasks. Thus, in order to maximize the potential planning effects, this study adopted a presentation task on an unfamiliar topic to the participants.

Specifically, in the presentation task, the participants were asked to give their own definition of a 'task' and one example of a task in educational setting. Although they majored or minored in English Education, they claimed to have no or little knowledge of this topic before attending this study. Thus, a short passage on TBLT, which was adapted from Brown (2007), was provided to the participants so that they could gain relevant information for the presentation. This served to reduce the cognitive load of the task to some degree (Robinson, 2001). It also made the task closed by reducing too much individual variation in content of presentation.

3. Data Collection Procedures

Data collection was made individually in the researcher's office. The participants made reservations for the experiment and came to the office. They were provided with the passage on TBLT, a task prompt, a blank paper, a pen and a stopwatch on the table.

First, the detailed procedure of the experiment was explained to the participants. They were told that they would have ten minutes planning time and then perform a presentation task on a given topic at least for three minutes. They were also instructed to pay attention to fluency, accuracy, complexity and overall organization of speech while planning, based on Sangarun's (2005) finding that planning about both form and meaning resulted in the best performance.

When their full understanding of the procedure was confirmed, the participants started the experiment. During the planning time, they read the passage on TBLT and prepared for the presentation task. They were allowed to look up a dictionary and take notes on the blank paper. When the stopwatch rang, they had to stop planning and gave a speech for three minutes at minimum without referring to the reading passage and their note. Most of the participants completed their presentation in three to four minutes. No feedback or evaluation on their performance was provided.

Immediately after the participants completed task performance, a retrospective interview was conducted by the researcher mainly in English with code-switching allowed, whenever needed. Questions were concerning what they focused on during pre-task planning and task performance. Each interview lasted for 20 to 30 minutes. All the participants' task performances and interviews were video-recorded.

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4. Data Analysis

A total of 21 task performance data and 21 retrospective interviews were transcribed. Task performance data were analyzed in terms of fluency, complexity and accuracy, as presented in Table 1.

TABLE 1

Measures for Task Performance (*N*=21)

Aspect	Measure	Calculation	Inter-rater reliability
Fluency	Unpruned speech rate per minute	Total number of syllables/Total seconds of speech * 60	.949
	Pruned speech rate per minute	Total number of syllables excluding filled pauses, reformulations, false starts and repetitions/Total seconds of speech * 60	.891
	Pauses per AS-unit	Total number of pauses/Total number of AS-units	.872
Complexity	Subordination per AS-unit	Total number of subordinate clauses/Total number of AS-units	.975
	Guiraud Index	Types of words/Square root of tokens of words	.951
Accuracy	Lexical errors per AS-unit	Total number of lexical errors/Total number of AS-units	.907
	Morphological errors per AS-unit	Total number of morphological errors/Total number of AS-units	.948

Fluency was measured by unpruned speech rate per minute, pruned speech rate per minute and mean number of pauses per AS-unit. The AS-unit is defined as "a single speaker's utterance consisting of an independent clause or sub-clausal unit, together with any subordinate clause(s) associated with it" (Foster, Tonkyn & Wigglesworth, 2000, p. 357). Complexity was analyzed in terms of syntactic complexity and lexical diversity, which were measured by the amount of subordination per AS-unit and Guiraud Index respectively. Finally, both lexical and morphological errors per AS-unit were counted to measure accuracy. Inter-rater reliability between the two researchers was calculated for each measure with regard to five participants' data (24% of the whole data). Cronbach alpha ranged from .872 to .975 for the measures, indicating considerably high reliability of the analysis.

The retrospective interviews coded in terms of whether they made any remarks on fluency, complexity and accuracy of task performance. After finalizing the list of categories, the two researchers coded 24% of the interview data (from 5 participants) independently to check the reliability of the analysis. The analysis focused on the existence rather than the frequency of the remarks of concern in each interview. They showed 86% of agreement in identifying remarks on fluency, complexity, and accuracy.

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After resolving the discrepancy, the remaining data were coded by one of the researchers.

IV. RESULTS AND DISCUSSION

1. Students' Task Performance after Pre-task Planning

Table 2 shows the participants' task performance in terms of fluency, complexity and accuracy.

TABLE 2

Fluency, Complexity and Accuracy of Task Performance (*N*=21)

	Fluency			Complexity		Accuracy	
	unpruned speech/ minute	pruned speech/ minute	pauses/ AS-unit	subordi-nation/ AS-unit	Guiraud Index	lexical errors/ AS-unit	morphological errors/ AS-unit
P1	95.4	88.2	0.91	0.64	5.51	0.00	0.45
P2	118.2	99.0	0.50	0.69	6.00	0.00	0.31
P4	124.2	111.0	0.33	1.00	6.47	0.00	0.05
P5	127.8	123.6	1.07	1.79	7.93	0.00	0.36
P6	135.6	128.4	0.86	1.07	7.74	0.00	0.21
P7	145.2	126.6	0.47	0.63	7.69	0.00	0.05
P8	70.2	66.0	0.29	0.57	6.23	0.21	0.43
P9	89.4	85.2	0.25	0.29	7.16	0.00	0.08
P10	88.2	82.8	1.27	0.73	5.77	0.27	0.60
P11	82.8	70.8	0.93	1.07	6.64	0.07	0.43
P12	116.4	111.0	0.50	0.40	7.51	0.10	0.40
P14	198.0	189.6	0.15	0.73	7.07	0.15	0.23
P15	115.2	100.2	0.93	0.40	7.08	0.13	0.20
P16	106.8	91.2	0.80	0.40	7.64	0.07	0.33
P17	96.6	86.4	1.00	0.15	6.98	0.15	0.23
P18	76.8	69.0	0.74	0.26	7.08	0.10	0.47
P19	61.8	55.2	0.45	0.73	6.33	0.36	0.36
P20	65.4	60.6	1.43	0.19	6.85	0.19	0.33
P21	90.0	81.6	1.40	0.70	6.37	0.20	0.30
P22	65.4	52.2	1.47	0.24	6.58	0.24	0.35
P23	148.2	130.8	0.50	0.55	6.64	0.25	0.25
Mean	107.4	97.8	0.76	0.60	6.80	0.11	0.32
SD	35.4	34.2	0.40	0.37	0.66	0.11	0.15

Note. P3 and P13 were excluded from analysis because of their failure to complete the task.

As far as fluency is concerned, the participants produced 107.4 syllables per minute on average. When filled pauses, reformulations, false starts and repetitions were removed, their speech rate reduced to 97.8 syllables per minute. Note that both of the rates are much higher than those of Chinese EFL learners under the pre-task planning

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condition in Yuan and Ellis (2003) (76.23 and 71.08, respectively), confirming the advanced English proficiency of the participants in this study. There occurred 0.76 pause per AS-unit. In terms of complexity, the participants produced 0.60 subordinate clause per AS-unit, while showing 6.80 GI score on average.

What is notable in Table 2 is wide individual variation. In order to see whether such variation can be attributed to different foci the participants chose to place during task planning and performance, individual participants' retrospective interviews were investigated in relation to their fluency, complexity and accuracy of task performance. It should be noted that the relationship between cognitive processes and task performance was explored only based on what was explicitly addressed in the interviews. This is simply because when participants did not report any focal attention to fluency, complexity or accuracy, it is unclear whether such attentional allocation did not occur or it occurred but only at a subconscious level.

2. The Relationship between Students' Attentional Allocation and Task Performance

1) Fluency

The participants in this study all claimed that they paid most of their attention to conceptualizing ideas while pre-task planning. They were less concerned with forms and expressions to carry over the ideas. Their efforts to prepare contents to present were rewarded, as shown in their considerably high speech rates compared to the previous studies. In tandem with their advanced English proficiency, pre-task planning focusing on contents seems to result in fluent speech, particularly in terms of speech rates.

There were four participants (P6, P8, P14 and P23) who explicitly mentioned speed of speech in the retrospective interviews. Their remarks showed their general perception about fluency and how they prioritized fluency to accuracy during task performance. Among them, P14 had the highest rank in speed measures and she attributed her fast speech rate to rich experience in English debating and six years of living in an English speaking country. She reported that her tendency to speak fast in English debates to 'win the time' resulted in overall fast speed of her speech. She also mentioned that when she got nervous, she spoke fast.

P23 was the second fastest speaker. He mentioned that his propensity to speak fast was deeply influenced by what he had learnt as an English Education major. In the course of studying on English learning and teaching, he came to learn that being fluent is much more important than being accurate. Thus he intentionally tried not to care too much about grammar or word choice to secure fluency, as illustrated in (1).

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(1) *If I care how exactly I'm speaking, or how I can use vocabulary in a fine way, I would start to hesitate. I know willingness to speak and autonomy are important for maintaining fluency, so I just didn't care about those.* (P23)

Conversely, P6 and P8 mentioned that they intentionally slowed down the speed of their speech. Yet, their purposes to do so were different. P6 reported that she adjusted her speech rate so as to meet the task requirement for the length.

(2) *I tend to speak a little fast. When I have this kind of question (the task), usually it's one or two minutes. Since this is 3 to 4 minutes, I tend to speak slowly as possible.* (P6)

Despite her intentional effort, however, her speech rate was still ranked very high. On the other hand, P8 regarded a slow speech rate as a useful strategy to maintain speech flow smooth with less pauses, as revealed in (3).

(3) *Speaking slowly can be a strategy to maintain the flow of speech. Even some native speakers make it slow, don't they?* (P8)

Her strategy worked well and her performance was one of the slowest but the least paused presentations as shown in Table 2.

Speed is not the whole picture of fluency. Pausing is another important indicator of dysfluency and also self-monitoring behavior (which might influence accuracy or complexity). The more participants paused, the more likely they were involved in monitoring their speech on-line. All the participants reported that they tried to pause less but they just could not help it. As for the reasons, five participants (P1, P4, P11, P20 and P22) mentioned that they needed to stop in the middle of speaking to think of some contents extemporaneously because they failed to remember what they had planned in advance. The excerpt in (4) illustrates P4's explanation for her pause when she tried to elaborate on an argument presented in the reading passage.

(4) *I forgot what to say for 'problem solving', so I had to stop there and think for a few seconds.* (P4)

Four participants (P4, P7, P10 and P20) reported pausing as monitoring behavior. P4 paused to think of better expressions. P7 paused to reflect on errors she had made in the previous sentences. P20 paused to recheck on pronunciation of certain words. Unlike the

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three participants who paused to monitor forms of speech, however, P10 paused to clarify her message by providing more specific information, as shown in (5).

(5) *I paused because I wanted to give listeners more specific information. If I didn't, I'm afraid they couldn't understand what I wanted to say*. (P10)

To summarize, the analysis of the interviews revealed that the participants paid their dominant attention to preparing for contents rather than forms while pre-task planning, which resulted in fluent speech. It was also found that the participants' speech rates tended to be affected by their beliefs on the value of fluency and conscious control of the speed. In contrast, pausing seems to be a more general tendency which is unavoidable even for advanced EFL learners in order to recall what they planned in advance or to monitor their on-line performance.

2) Complexity

Complexity can be further divided into syntactic complexity and lexical diversity. Syntactic complexity was measured by the number of subordination per AS-unit. As shown in Table 2, there were four participants who used more than one subordinate clause per AS-unit on average (P4, P5, P6 and P11). However, none of the top performers mentioned that they attended to syntactic complexity while pre-task planning. This indicates that their use of complex structures was mostly subconscious.

Conscious efforts over syntactic complexity were addressed by other two participants. P9 reported her attempt to use subordination involving a 'that' clause to make longer sentences, while P20 said that he on purpose used less complex sentences to be better understood by others. P20's intention to avoid complex sentences actually resulted in the second lowest use of subordination (0.19). However, P9's efforts to use more complex structures were in vein as shown in her very low score in this measure (0.29).

Guiraud Index, which measures lexical diversity, showed relatively small variation among the participants. This is possibly because the participants relied on the reference material in choosing vocabulary. Three participants mentioned their efforts towards lexical variety during speech (P6, P9 and P14) and all of them indeed scored above average in Guiraud Index. The excerpt in (6) illustrates P6's conscious attempt to avoid the repetition of a word he used earlier.

(6) *When I wanted to say 'ineffective' again, I said 'not effective'*. (P6)

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P9 also said that she knew it was better to use the synonyms of words that had been previously used. P14 reported that she re-started a lot because she wanted to use different words but it was difficult to find appropriate alternatives.

Put together, this study did not find a direct link between the participants' conscious efforts during pre-task planning and syntactic complexity in a subsequent task performance. Overall, the participants did not think much over complexity of utterances they would use. On the other hand, there were some participants who were conscious of the importance of lexical diversity. Notable is that their attention to lexical diversity occurred mostly during task performance rather than during pre-task planning. Although spontaneous, their conscious efforts to avoid repetition of the same words actually resulted in diverse use of vocabulary.

3) Accuracy

Accuracy was measured by lexical errors and morphological errors in this study. Overall, the participants made a very few lexical errors (M = 0.11, SD = 0.11) probably because of their advanced English proficiency. Seven of them (P1, P2, P4, P5, P6, P7 and P9) did not make any lexical errors at all, and yet they did not report any special efforts over preparing for vocabulary during pre-task planning. It is noteworthy, however, that two of the top performers (P4 and P5) mentioned that they value the right choice of vocabulary, as presented in (7) and (8).

> (7) *I think rich vocabulary helps deliver message, (I mean) choosing the right word.* (P4)

> (8) *The accuracy of vocabulary that you are giving is more important than how fast or how native like you can be.* (P5)

Compared to lexical errors, the participants produced more morphological errors but the amount was still small (M=0.32, SD=0.15). P4, P7 and P9 showed particularly low errors. However, they reported no attention to grammar while pre-task planning and this was the same with all the other participants. Their lack of attention to grammatical structures while pre-task planning was mainly due to the insufficient time allowed. All the participants said that they had spent all the ten minutes planning what to say rather than thinking over specific grammatical rules.

What is noticeable is that although the participants did not plan for grammar during pre-task planning, they frequently mentioned their concerns over being accurate in the retrospective interviews. They emphasized that if they had had enough time to plan, they

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would have written down the whole script and memorized it, as evident in the excerpt in (9).

(9) *I planned nothing for grammar because the topic was difficult to me so I couldn't put more emphasis on grammar. I just wanted to say something. If I had more time, I would think of grammar.* (P11)

P11 mentioned another reason for the failure to attend to grammar while pre-task planning. She said that she was not confident of her English speaking ability and thus gave up producing 'perfect' utterances. This indicates that planning for grammar could happen when participants have a certain level of competence in English.

During task performance, partial attention to forms was observed among four participants (P5, P7, P19 and P20). They particularly attended to grammatical features which they regarded as problematic, such as voice, agreement, tense, and singular forms. However, except for P7, the other three scored below the average level, indicating that their partial attention to grammar while speaking did not make them outperform others.

There were several reasons for the participants' lack of attention to grammar while speaking. The first one is related to their attitudes toward accuracy in speaking. Although they realized the need to be accurate, at the same time they believed that too much attention to accuracy is detrimental to being fluent. In the conflict between accuracy and fluency, they tended to prioritize fluency over accuracy, as shown in the excerpt in (10).

(10) *When I try to be accurate, I can't really speak very fluently. So I tried to be more fluent than accurate.* (P8)

Some participants (P5 and P10) did not attend to grammar while speaking because of their doubt about its potential effect on performance, as presented in (11) and (12).

(11) *In terms of accuracy, I think it's not something you can achieve by keeping it in mind (while speaking), you have to use the language, like, practice, speaking language many times*. (P5)

(12) *For grammar, I knew even if I work on it now, my performance wouldn't change that much.* (P10)

Their personal views on how to learn and improve English grammar made them allocate little attention to grammatical accuracy while performing a task.

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Affective factor was another reason why the participants did not pay attention to grammar. P23 reported that she intentionally tried not to care about accuracy to reduce her nervousness because every time she tried to be accurate, she got more nervous.

To summarize, the participants produced a limited number of lexical and morphological errors, reflecting their advanced English proficiency. Furthermore, they did not pay much attention to accuracy while pre-task planning, mainly because of the insufficient planning time. Although some participants were attentive to accuracy while performing a task, their attention did not result in more accurate performance than others. The participants also perceived that accuracy can be obtained at the expense of fluency and that attention to accuracy while speaking does not facilitate their performance.

V. CONCLUSION

This study, adopting a process-product approach, investigated what cognitive processes Korean advanced EFL learners are engaged in during pre-task planning and task performance and how these processes are related to actual task performance.

First of all, the analysis of retrospective interviews showed that the participants in this study mainly focused on conceptualizing ideas with little attention to language forms while pre-task planning. During task performance, their attention was still paid to maintaining a fluent speech rather than producing complex or accurate utterances. This was so even when they had been given specific instructions to focus on fluency, complexity and accuracy while planning and performing a task.

These cognitive processes are similar to those reported in Wendel's (1997) study with Japanese intermediate EFL learners and in Park's (2009) study with Korean intermediate EFL learners. The result of this study, however, is different from Ortega's (1999) finding that advanced Spanish L2 learners could attend to form as well as meaning during pre-task planning. As advanced EFL learners, the participants in this study were also expected to pay attention to various aspects of task performance, being freed from struggling with finding words and structures. However, they were still occupied with planning for propositions to carry over in task performance. One of the reasons for the discrepancy between the present study and Ortaga (1999) can be found in the type and complexity of task presented to the learners. While Ortega used a story retelling task, the present study required an academic presentation on an unfamiliar topic, which is cognitively more complex and demanding. Indeed, the participants in this study responded that the task was difficult. The complexity of the task might have eliminated room for learners' paying attention to form while planning. This indicates that as Foster

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and Skehan (1996) noted, task complexity is an important factor which affects learners' attentional allocation during pre-task planning.

This study also showed that what learners paid attention to during pre-task planning is not always reflected in their actual task performance. It was revealed that some areas of task performance were more controllable than others when they were attended to during task planning. For instance, with regard to fluency, the learners' attention to speech rate tended to be realized in their subsequent task performance. However, despite their conscious efforts to produce a smooth speech with few pauses, all the participants reported that they could not avoid pausing from time to time during task performance either to recall what they had planned in advance or to monitor their performance on-line. Similarly, the participants' attention to complexity was more rewarded in lexical diversity than in syntactic complexity. The participants who reported their awareness of the importance of lexical diversity indeed produced more diverse vocabulary, indicating a direct link between attention to lexical diversity and actual lexical choice. However, their conscious attempts to produce long sentences or avoid complex structures did not lead to the corresponding performances. Accuracy seems to be least susceptible to pre-task planning. Overall, the participants in this study rarely paid attention to accuracy. Besides, even when they did, their performance was not better than those who did not pay any attention to grammatical accuracy.

Put together, the findings of this study indicate both roles and limitations of pre-task planning on L2 speaking performance. Fluency and lexical complexity seem to benefit from pre-task planning. However, syntactic complexity and accuracy are less likely to be affected by pre-task planning. Although theoretically pre-task planning expands learners' attentional capacity so that they can manipulate various aspects of language and perform a task better, during speaking task performance learner's attention is limited and they need to prioritize and focus on one aspect of performance at the expense of others (Skehan, 1996). This means that different aspects of language (accuracy, complexity and fluency) have to compete for getting attention during task performance. In this case, the participants mostly sacrificed accuracy and complexity for the sake of fluency.

This study also indicates that learners' decision what to attend to during task planning and performance is strongly influenced by their views on the relationship between fluency and accuracy. Some participants in this study perceived fluency and accuracy to be in competition in cognitive processes and believed that fluency should be prioritized even at the expense of accuracy. Some learners also believed that attending to grammar is useless in improving task performance. As far as learners have such views on language and language learning, learners are unlikely to pay attention to grammar and accuracy while planning and performing a task. Affective factors are also identified to affect learners' attentional processes. Some participants pointed out attention to accuracy

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as the main cause of nervousness. Thus, to reduce nervousness, they chose not to care about accuracy much.

The findings of this study provide several pedagogical implications for the implementation of TBLT in L2 classroom. Given that learners' general tendency to focus on content rather than form and care more about fluency than accuracy, simply to give pre-task planning time is not sufficient to give rise to balanced attention to form and meaning and eventually high quality output on the part of the learners. In this regard, the framework suggested by Ellis (2009) is noteworthy. He argued that the impact of planning on L2 production is mediated by task design and individual differences, which was also confirmed in this study. According to this view, in order to maximize the effect of pre-task planning on L2 production, teachers need to carefully gauge task types and task difficulties to properly motivate learners. They also need to take into consideration individual differences in terms of their beliefs, attitudes and affects toward English performance. Sometimes, teachers' active intervention to change learners' perceptions on language use and learning is necessary. For instance, for advanced learners, teachers may emphasize the importance of accuracy and encourage the use of more complex structures.

The current study has several limitations. First of all, this study involved a limited number of leaners with advanced-level English proficiency. Thus, the findings of this study need to be interpreted in the given context until more studies are conducted with a larger population and various levels of learners. Also it is possible that the use of retrospective interviews may have missed some unreported but significant cognitive processes during task planning and performance. Finally, the influence of the factors which were suggested to affect learners' cognitive processes during planning time in this study (such as task type, task complexity, and affective factors) needs to be explored in a more rigorous research design.

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