The Effect of Length of Pre-task Planning Time on Discourse-analytic Measures and Analytic Ratings in L2 Written Narratives

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ABSTRACT: The favorable gains gleaned from the provision of pre-task planning time (PTP) have struck a chord with SLA researchers as they try to manipulate task features to promote language production and development. In a similar vein, the present study is a two-fold attempt to first compare the effect of the length of pre-task planning time on discourse-analytic measures in narrative written production of the Iranian intermediate EFL learners under (a) no planning, (b) three-minute PTP, and (c) ten-minute PTP conditions and, second, to explore the impact of manipulation of time on scores assigned to learners' output. Subsequently, discourse-analytic measures of accuracy, syntactic complexity, lexical complexity, and fluency were estimated. In addition, the subjects' output was scored. The results showed that both groups of planners outperformed no-planners with regard to accuracy and fluency, but not complexity. However, the difference between the three-minute planners and ten-minute planners was not statistically significant with regard to the two production areas. Additionally, scores of the subjects in the three groups did not differ significantly. The fact that three-minute planners and their ten-minute planner counterparts did equally well in terms of all measures can indicate that in future studies, three-minute PTP can be allocated in lieu of the orthodox ten-minute PTP.

Keywords: analytic rating, discourse-analytic measures, pre-task planning time, written narratives

Historically, planning as a task index has been progressively incorporated into task-based language teaching and task design (Skehan, 1996), since research (e.g., Ellis & Yuan, 2004; Foster & Skehan, 1996; Gilabert, 2007; Mehnert, 1998; Tavakoli & Skehan, 2005; Yuan & Ellis, 2003) has largely converged on the conclusion that the provision of strategic planning time fosters fluency and complexity of production (Crookes, 1989; Ellis & Yuan, 2004; Foster & Skehan, 1996; Mehnert, 1998; Ortega, 1999; Skehan

& Foster, 1997; Tavakoli & Skehan, 2005; Yuan & Ellis, 2003) albeit with blurred results for accuracy of production. De Larios, Marin, and Murphy (2001) champion the pronounced importance attached to the investigation of the allocation of time in L2 writing and of the task conditions, which put that into effect by asserting, "Writers will differ in the way they adapt their time allocation to formulation processes as a result of task conditions " (p. 503). Nevertheless, how planning time aids language learners in improving their performance is a matter of controversy (Sangarun, 2005).

Undergirding such investigations are dissenting psycholinguistically-oriented theories of attention thus far advanced, of which Skehan's (1998) limited *attentional resource model* and Robinson' (2001) *multiple-resource model* are significant. Embracing Van Patten's (1992, 2002) and Huitt's (2003) viewpoints, Skehan (1998) proposed that in light of limited attentional resources which are at learners' disposal, spoken discourse generated by L2 learners would favor one area of performance (meaning) to the detriment of another (form). Further, Skehan and Foster (1997, 2001) argue that these tradeoffs transpire in such a way that either higher accuracy or complexity is espoused with higher fluency, but not both accuracy and complexity.

Anderson (1983) advanced the ACT theory in which it was posited that, in skill acquisition, one's explicit knowledge of a skill (declarative knowledge) fits into implicit knowledge (procedural knowledge). This theory was further given a boost by Elder and Iwashita (2005) who suggested that opportunities for planning time may facilitate access to the declarative knowledge via retrieval and rehearsal strategies implemented by the facility of retrieval of grammatical forms and vocabulary items during task execution.

Furthermore, to support a limited attentional capacity perspective, Skehan (1998) advanced a scheme of task difficulty. In essence, it is posited that more cognitively demanding tasks invoke higher attention, which is, given the limited attentional pool of learners, allocated to only one aspect of performance rather than the others. In their empirically substantiated Limited Attentional Capacity Model, Skehan (1996) and Skehan and Foster (1999, 2001) maintain that tradeoffs transpire between accuracy and complexity with fluency undeteriorated. Based on this proposal, it has been suggested that teachers should resort to tweaking task design features so that they can selectively direct the learners' attention to certain areas of production in which they are falling behind to create balance between the three areas of production, i.e., accuracy, complexity, and fluency.

Planning Time Studies

In task-based instruction's literature, planning time has been figured as a processing condition whose contributions to language production cannot be overlooked, especially with regard to complexity and fluency of production. Favorable gains brought about by the provision of planning time have been mostly sustained through different task types (e.g., narratives, decision-making, personal, and instructional tasks) as well as in different languages, i.e., English in the majority of studies, Mandarin (Robinson, Ting & Urwin, 1996), Spanish (Ortega, 1999, 2005), and German (Mehnert, 1998). Different lengths of planning time have been studied, i.e., 15 minutes (Sangarun, 2005); 10 minutes (Crookes, 1989; Ellis & Yuan, 2004; Foster & Skehan, 1996, 1999; Gilabert, 2007; Kawauchi, 2005; Mehnert, 1998; Ortega, 1999; Rouhi & Marefat, 2006; Skehan & Foster, 1997, 2005; Yuan & Ellis, 2003), 5 minutes (Mehnert, 1998; Tavakoli & Skehan, 2005), 3 minutes (Robinson, Ting & Urwin, 1996; Williams, 1992), and 1 minute (Mehnert, 1998).

An insightful enquiry into pre-task planning time is that of Foster and Skehan (1996) who explored the effects of task design and processing conditions on oral performance for personal information exchange, narrative, and decision making tasks. Findings showed that the unplanned group's performance was characterized by more pauses and greater length in comparison to that of the detailed and undetailed planning group, with the guided planners generating the most fluent speech. In addition, the personal information task engendered the highest fluency. Regarding structural complexity, the effects of which were more readily obvious in narrative and decision-making tasks, planning time advantaged the guided planners significantly in comparison to the other groups. In addition, unguided planning triggered greater complexity than the no-planning condition. Moreover, mixed results were obtained as far as accuracy is concerned. Accuracy scores consistently increased in conjunction with greater planning time, except for one condition (narrative, guided planning), and less guidance.

In a subsequent study, Skehan and Foster (1997), using the same task types as those of their former study (Foster & Skehan, 1996), added a post-task condition to their study with two conditions (no planning vs. undetailed 10-minute planning) although different tasks were used. In the post-task period, learners were told that, following the completion of the task, they would go public. It was hoped that the awareness of a follow-up activity would channel attention to the aspects of production, particularly accuracy. The results regarding planning corresponded to those of their previous investigation; planning time triggered greater accuracy coded in terms of error-free T-units on the narrative and personal information exchange task, but not on the decision-making task. However, accuracy

could not be heightened through the awareness and provision of the post-task.

Using an oral decision-making task, Foster and Skehan (1996) probed the effects of planning, along with an element of surprise in order to ascertain if attention to form can be heightened through the injection of an element of surprise into the task. The task was one in which pairs of learners had to pass on rulings about imaginary crimes. The element of surprise was operationalized as some information, which could change the course of events regarding the verdict being issued. No improvements were observed for no-planners, unguided planners, and guided planners with respect to accuracy, complexity, and fluency in the wake of the element of surprise. In addition, it seemed that prolonged engagement with the task disadvantaged the performance.

In a laboratorial testing context, Wigglesworth (1997) investigated planning across high and low proficiency levels on a set of oral tasks. Planning was operationally defined at two levels of 'no planning time' and '1-minute planning time'. Both discourse-analytic measures and external ratings were implemented. It was found that planning time advantaged the complexity of higher-proficiency testees' speech in more difficult tasks. 1-minute planning time triggered speech that was more fluent across proficiency groups. However, findings for self-repairs were mixed for low-proficiency testees. On the other hand, the analysis of data related to the high-proficiency group indicated that planning time promoted fluency in the most difficult task, the summary of conversation task. It can be hypothesized that the easier the task, the less likely it is that planning time advantages performance. Moreover, the analysis of accuracy demonstrated that performance was significantly improved by the planning time for the high-proficiency group in the summary of conversation and picture tasks. Regarding the low-proficiency group, performance was enhanced in terms of accuracy on all tasks except for picture tasks by planning time. Regarding the external ratings, Wigglesworth found that the trained raters did not find any differences across the proficiency groups whilst the production measures did.

In another investigation on German, Mehnert (1998) operationalized pre-task planning into four levels: no planning, 1-minute planning, 5-minute planning, and 10-minute planning time. The tasks chosen were an instructional task (+ familiar information & + present) making this task a noncomplex one, and an exposition task (– familiar information & – present) making it a complex task. The result was that planning time triggered speech that is more fluent. 10-minute planning time generated significantly longer oral discourse with fewer pauses than no planning time in the structured task but not in the unstructured task. Concerning complexity, 10-minute planners generated more complex speech in the

noncomplex task than the other groups. In addition, planners produced significantly more accurate speech than no-planners. In terms of lexical density, the 10-minute planning time group generated more lexically dense language than the no-planning condition group and the progressive lengths of planning time did generate progressively more lexically dense language. By and large, 10-minute planners produced significantly more accurate, fluent, and lexically dense language although with non-significantly greater structural complexity in comparison to no-planners. Although increments in planning time improved the aspects of production, the nature of these differences was different; 10-minute planning time enhanced structural complexity, while 1-minute planning time improved accuracy.

Skehan and Foster (1999) crossed planning time with inherent task structure on two video-elicited story retelling tasks (structured vs. unstructured) in four conditions (Condition 1, watch and tell simultaneously; Condition 2, outline given, then watch and tell simultaneously; Condition 3, watch first, then watch and tell simultaneously; Condition 4, watch first, then tell in own time). Of the production measures utilized regarding planning, only complexity showed higher scores for condition 4 compared to the other conditions. The researchers proposed that the non-simultaneous condition gave rise to higher levels of complexity, as the learners were not burdened with the need to keep abreast of the movie which could have imposed greater processing demands compared to the three simultaneous conditions in which learners had to juggle the processing demands of the task itself and those obtruded by watching of the video. With respect to accuracy, the results were confounding in the sense that no significant main effect was registered for accuracy; however, an interaction was found between task structure and processing condition. In brief, their hypothesis regarding the progressive ease of tasks from Condition 1 to Condition 4 was not confirmed.

Questioning the disparity of the results gained from discourse-analytic measures and of those obtained through external ratings in her previous study (Wigglesworth, 1997), Wigglesworth (2001) used five dialogic task types in which she manipulated two task characteristics (structure and familiarity of activity) and two task conditions (native vs. nonnative speaker interlocutor and planning time). Planning time was operationalized at two levels of no planning time vs. 5-minute planning time. Three external measures used were the analytical ratings of learners' oral output, a Rasch analysis using FACETS, and learners' evaluation of task difficulty. After the implementation of all three measures, the results surprisingly showed a detrimental effect for the provision of planning in structured and unstructured tasks. Additionally, familiar tasks benefited from absence of

planning time. However, planning exerted no influence with regard to unfamiliar tasks.

Springing from a concern with synergistic effects of task design features in a testing context, Iwashita, McNamara and Elder (2001) investigated the differential effects of manipulation of +/– planning time (3.5 mins. vs. 0.5 min) on the performance of ESL learners through eight oral narrative tasks. Data were analyzed by discourse-analytic measures and multifaceted-Rasch analysis of analytical ratings. Regarding discourse-analytic measures, results did not accord with the existing findings pertaining to Limited Attentional Capacity Model (Skehan, 1998; Skehan & Foster, 1999, 2001). Concerning subjective scoring of learners' speech, no systematic variation between performance conditions was found.

Elder and Iwashita (2005) investigated the effect of pre-task planning on oral performance in a testing context and on test takers' perceptions of task difficulty. External ratings registered no influence of planning on oral output of L2 learners. In addition, discourse-analytic measures of accuracy, complexity, and fluency did not show any difference between planning conditions. It was found that the perceptions of task difficulty and task enjoyment were unaffected by the provision of pre-task planning time. In conclusion, the researchers questioned the contribution of pre-task planning to language testing by saying that "due to the fact that language behavior in a test situation is fundamentally different from language of the classroom or of real world encounters and therefore that findings of SLA classroom research may not be generalizable to testing contexts" (p. 235).

Kawauchi (2005) explored three proficiency level groups' performance on narrative tasks. Planning was defined using pre-task activities of rehearsal, reading a related L2 model, and writing a draft, for all of which the 10-minute planning time was allowed. Participants initially completed an unplanned version of the task. Having done a planning activity prior to the real performance, the participants executed the same task at the end. The results showed that pre-task planning had fostered fluency, particularly for the high proficiency group. However, the advanced proficiency group's fluency was scathed by opportunities for planning. Regarding complexity, the advanced group did not benefit much from planning. The advanced group also did not have significant accuracy gains. The irregular past forms were the highest scoring accuracy measure for all the three groups in the no-planning condition, which was significantly given a boost for all groups in the planned condition.

In general terms, the above documented studies indicate that planning favors fluency and complexity of production. However, despite the growing interest in the effect of planning time on task performance in the area of task-based research, the effect of pre-task planning time (PTP) on discourse-analytic measures in *writing* and its relationship with external

ratings has been scarcely researched. To compound the problem, different lengths of planning time have been used in different studies sparingly. The present study, therefore, was a two-fold attempt to first compare the effects of different lengths of PTP on discourse-analytic measures in the written narrative production of the Iranian intermediate EFL learners and second, to examine whether the provision of different lengths of planning time and the results from discourse-analytic measures is reflected in the scores obtained by the participants' writing.

Research Questions

This study was designed to answer the following research questions:

1. Does manipulation of pre-task planning time affect written performance in terms of analytic ratings?

2. Does manipulation of pre-task planning time affect written performance in terms of accuracy?

3. Does manipulation of pre-task planning time affect written performance in terms of syntactic complexity?

4. Does manipulation of pre-task planning time affect written performance in terms of lexical complexity?

5. Does manipulation of pre-task planning time affect written performance in terms of fluency?

Method

Participants

The participants of the present study were 45 Iranian EFL learners who had been placed in a class with the same level of English by an internal placement test (comprising written and oral components) in Farhikhtegan-e-Daneshgah Institute. The participants who were selected from *Interchange 2* classes took the Nelson Placement Test. Those who scored 50%-60% were selected for the study. They were told that the study would not have any impact on their final score and their production would be used for research purposes solely.

There were three groups of participants each of which was assigned to one of the conditions in the study. The number of participants in each group was as follows: The no-planning group consisted of 16 language learners; the 3-minute pre-task planning group consisted of 13 participants; the 10-minute pre-task planning group consisted of 16 language learners.

Task

The task used in the present study was a structured picture narrative consisting of eight pictures taken from Ishikawa (2007). A narrative task was chosen because in addition to being used by some international testing

organizations (e.g., Test of Spoken English, University of Cambridge's YLE), narrative tasks enjoy a long tradition in task-based research (Ortega, 1999) in the wake of their being monologic and thus ease of greater control (Tavakoli & Skehan, 2005).

Procedure

As explicated in the foregoing, planning was defined at three levels of no planning, 3-minute pre-task planning, and 10-minute pre-task planning time. These operationalizations rendered the following groups (See Table 1): no pre-task planning (NPP); 3-minute pre-task planning (3PP), and 10-minute pre-task planning (10PP).

In the NPP condition, the participants performed the task under normal classroom settings. Having received the picture set, the participants wrote the story embedded in the picture series in 17 minutes and had to write at least 200 words. The time limit for task execution was established based on a pilot study in which participants had to write out the same narrative as the one used in the main study. No time limit was fixed. All spent times were jutted down and then averaged to set a time limit for the study. The resultant mean, and thereby the time limit, was 17 minutes. Following Ellis and Yuan (2004) and Yuan and Ellis (2003), this procedure was utilized to curtail on-line planning.

In the 3PP condition, the participants performed the task under normal classroom settings. Like the NPP condition, they were required to finish the task in 17 minutes and write at least 200 words so that on-line planning was partially limited. Having been provided with the picture set, they were given a piece of paper to write notes on during the pre-task planning time, which was set at 3 minutes in this condition. The provision of 3-minute pre-task planning time was based on previous research (Mehnert, 1998). Following Foster and Skehan (1996), no detailed instruction was provided for the participants; they were told to plan their output in terms of content, organization, and language. Upon the completion of 3 minutes of pre-task planning time, the notes were removed with participants' prior knowledge. According to Ellis and Yuan (2004), the removal of written notes is to ensure that the language produced during task completion is generated solely during that spell.

The 10PP condition resembled the 3PP condition in terms of design, the difference being the length of pre-task planning time in this condition, i.e., 10 minutes. The choice of 10-minutes of pre-task planning time was premised on research (Ellis & Yuan, 2004; Foster & Skehan, 1996; Gilabert, 2007; Ortega, 1999, to name but a few).

Table 1.*The Experimental Design*

NPP	3PP	10PP
n = 16	**n = 13**	**n = 16**
No pre-task planning time	3 minutes for planning	10 minutes for planning
17 minutes to perform the task	17 minutes to perform the task	17 minutes to perform the task
Picture set accessible during execution	Picture set accessible during execution	Picture set accessible during execution

Design

This study is a single-factor between-measures design with three levels of planning conditions: no planning, 3-minute pre-task planning time, and 10-minute pre-task planning time.

Data Analysis

In order to detect any possible variations across conditions, an analytic rating scale was used. The scales represented those utilized by IELTS, namely task achievement, cohesion and coherence, grammatical range and accuracy, and lexical richness. Furthermore, the participants' output was coded in terms of production measures.

Accuracy was operationalized as the percentage of error-free clauses (EFC) and the number of errors per 100 words (NER). Regarding structural complexity, two production measures were used: the number of S-nodes per T-unit (S-nodes/T) and the number of clauses per T-unit (C/T). Following Mehnert (1998), S-nodes included both finite and nonfinite clauses. S-nodes are also thought to be a better measure of syntactic complexity in comparison to subordinate clauses (Crookes, 1989). T-units were taken as the clauses, which encompassed a main clause in addition to any subordinate clause (Richards, Platt, & Weber, 1985). Sentence fragments were not deemed T-units. Clauses were defined as those, which had finite verbs (Polio, 1997). In addition, lexical complexity was assessed through one measure of lexical variation, namely MSTTR (Mean Segmental Type-Token Ratio), based on Ellis and Yuan (2004) and Yuan and Ellis (2003). For the calculation of this index of lexical complexity, each narrative was divided into segments of 40 words and the Type-Token Ratio of each segment was computed by dividing the total number of words by the total number of different words in the segment. Subsequently, the MSTTR was calculated by adding the mean score of the segments and dividing the total by the total number of segments in the text for each

participant. Fluency was assessed through the calculation of the number of dysfluencies, i.e., the total number of words a participant reformulated (crossed out and changed) (Ellis & Yuan, 2004; Rouhi, 2004).

The participants' performance was first subjected to analytic ratings by one of the researchers who had extensive experience of rating written tests as well as teaching EFL. Another rater coded Fifteen percent of all performances. The inter-rater reliability was calculated as .86 for the analytic ratings and over .81 for the discourse-analytic measures.

Considering the dataset, the normal distribution of the four groups' scores was tested in terms of skewness and kurtosis. As all the datasets were found to be normally distributed, one-way ANOVAs were subsequently conducted.

Results

Table 2 presents the descriptive statistics for the interlanguage measures. As it is evident, both planning groups clearly outperformed no-planners in terms of grammatical accuracy, syntactic complexity, and fluency. In order to estimate the effects of different lengths of planning time on these measures in light of the normal distribution of data in all data sets, a series of one-way ANOVAs were conducted.

Table 2. *Descriptive Statistics and Results of ANOVAs for Analytic Ratings, Grammatical Accuracy, Syntactic Complexity, Lexical Complexity, and Fluency Across the Three Groups*

Dependent Variables	*M (SD)* of planning	conditions		ANOVA		Location of significance: Scheffe's *p*		
	NPP	3PP	10PP	F	p	NPP-3PP	NPP-10PP	3PP-10PP
Ratings								
Analytic ratings	4.70	4.80	4.59	1.255	.296	.300	.672	.769
	.29	.39	.35					
Accuracy								
% of EFC	68.04	81.97	76.85	5.489	.008*	.009*	.138	.416
	9.44	10.82	8.56					
NER	8.37	5.07	5.59	7.162	.002*	.005*	.016*	.846
	2.55	2.32	2.19					
Syntactic Complexity								
S-nodes per T-unit	1.33	1.45	1.49	3.494	.039*	.205	.058	.835
	.17	.19	.15					
Clauses per T-unit	1.16	1.21	1.22	3.827	.030*	.095	.055	.992
	.077	.056	.054					
Lexical complexity								
MSTTR	.77	.80	.79	0.969	.388	.394	.718	.833
	.06	.06	.07					
Fluency								
Dysfluencies	8.18	4.76	5.43	9.785	.000*	.001*	.005*	.731
	2.88	1.92	1.71					

* = Statistically significant at *p* < .05

As it can be seen in Table 2, there was no significant difference across the groups of participants in terms of analytic ratings assigned by the raters ($F_{(1, 44)} = 1.255$, $p = .296$) which rendered the first null hypothesis tenable.

As regards the first measure of accuracy, namely the percentage of error-free clauses, a significant main effect was registered as the function of provision of pre-task planning time ($F_{(1, 44)} = 5.489$, $p = .008$). Further analysis showed that only 3-minute planners outperformed no-planners ($p = 009$). In addition, there was no significant difference between the performances of the two planning groups. Regarding the number of errors per 100 words, the second measure of accuracy, the 3-minute planners and 10-min planners significantly outperformed no-planners in terms of accuracy ($p = .005$, $p = .016$, respectively). However, no significant differences were found between the two planning groups. In light of these findings, the second null hypothesis was rejected.

In terms of the measures of syntactic complexity, namely the number of S-nodes per T-unit and the number of clauses per T-unit, significant main effects were found as a function of manipulation of pre-task planning time ($F_{(1, 44)} = 3.494$, $p = .039$, $F_{(1, 44)} = 3.827$, $p = .030$, respectively). Nevertheless, post-hoc analyses only revealed that the difference between 10-minute planners and no planners approached significance ($p = 058$ for the number of S-nodes per T-unit and $p = 055$ for the number of clauses per T-unit). Therefore, the third null hypothesis was accepted.

The lexical complexity measure, MSTTR, showed that all groups equally lexicalized their output ($F_{(1, 44)} = 0.969$, $p = .388$); hence, the fourth null hypothesis was also accepted.

As far as the fluency of written production is concerned, a significant main effect was found ($F_{(1, 44)} = 9.785$, $p = .000$). Both 3-minute and 10-minute planners outperformed no-planners significantly ($p = .001$, $p = .005$, respectively) rendering the last null hypothesis untenable.

Discussion

The findings of the present study lend little support for the conception that pre-task planning would lead to significantly improved written performance in terms of scores assigned by raters. These findings are in line with those of previous research, which have used ratings (Elder & Iwashita, 2005; Iwashita, McNamara & Elder, 2001; Wigglesworth, 1997). This may have transpired, as Wigglesworth (1997) maintains, inasmuch as scores assigned by raters address output generated by L2 learners at a macrolevel (communicative effectiveness), while differentials exist at the microlevel which can be estimated by discourse-analytic measures of accuracy, fluency, and complexity or that the descriptors on the basis of which raters assign scores do not target the features that provision of planning time

improves. It seems that more detailed descriptors of criteria for assessing writing are needed to gauge such subtle differences.

Considering the discourse-analytic measures, research has revealed consistent standard beneficial gains as a function of pre-task planning time on syntactic complexity and fluency of L2 production (e.g., Crookes, 1989; Ellis & Yuan; 2004; Foster & Skehan, 1996; Kawauchi, 2005; Ortega, 1999; Sangarun, 2005; Skehan & Foster, 1997, 2005; Tavakoli & Skehan, 2005; Yuan & Ellis, 2003). However, the findings of the present investigation are in harmony with those of Gilabert (2004, 2007), Rouhi (2004), Rouhi and Marefat (2006), and Wigglesworth (1997) who found no significant difference as a function of manipulation of pre-task planning time on syntactic complexity.

Previous research has found blurred results for accuracy. In the light of verbal protocols, Ortega (1999) maintained that planners channeled their attention to both form and meaning and utilized different focus-on-form strategies to prepare their language. However, it was argued that there are different orientations towards meaning or form: some learners are oriented toward meaning conveyance while others are disposed towards using well-formed sentences. This, however, was not empirically endorsed in her study. In the same vein, Sangarun (2005) chalked up the failure of planning in advantaging accuracy to two reasons: (a) whether L2 learners are disposed toward focusing on form, and (b) whether sufficient attentional resources are at learners' disposal for the monitoring of language. In addition, following Rouhi and Marefat (2006), it can be contended that pre-task planning allows L2 learners to focus on form when they execute a task; therefore, accuracy is fostered. Furthermore, the cognitive load that is diminished because of the propositional organization of the task may have been another contributing factor to higher accuracy scores. Along the same lines, it seems that the learners in the present study were inclined to organize their available attentional resources towards focusing on form. Also, it may have been the case that since during the pre-task planning time the participants had worked on the rehearsal of their narratives, less cognitive load was incurred on them during the task, availing them of more free attentional resources resulting in rendering their output more grammatically accurate.

Regarding the non-significant results for syntactic complexity, it can be argued, as Gilabert (2004) observes that the rigid structure of the task used in the present study yielded such results, which means that the relations among the consecutive or simultaneous actions as well as among characters in the stories were so clearly established which may have ordained the conceptual plans learners designed for their narratives, leaving little space for more complex relations that would have produced higher syntactic

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complexity. This might have been the case in the present study. Further, he goes on to say:

> I do not think that any satisfactory explanation has been provided so far as to why planning per se should lead to more complex syntactic structures. Beyond that, I would speculate that planning time may have had a greater effect on other task types. (p. 316)

In planning research, most studies have not measured lexical complexity, which might have sprung from essentially different definitions of the concept in the literature. In the present investigation, the lexical complexity gains were in line with those of Ellis and Yuan (2005), Ortega (1999), and Wigglesworth (1997).

Notably, the potential difference between lexical sophistication measures (e.g., percentage of L/F) and lexical variation measures (MSTTR) has to be factored in. Ortega (1999) argues that previous research, which has found significant gains for lexical complexity as the result of planning, has run mostly lexical sophistication measures in lieu of lexical variation measures. Also, the storyline of the picture series might have hindered the use of more lexicalized discourse, as lexical range may be enmeshed with the story told by the pictures.

The present study also found a beneficial effect for fluency in accordance with that of previous research (e.g., Ellis & Yuan, 2004; Foster & Skehan, 1996; Gilabert, 2004; Kawauchi, 2005; Mehnert, 1998; Ortega, 1999; Rouhi & Marefat, 2006; Sangarun, 2005; Skehan & Foster, 2005; Tavakoli & Skehan, 2005; Yuan & Ellis, 2003), as fluency was fostered by the provision of the planning time. This might have happened as learners may have tried to rehearse, review, and write to remember the content of what they wanted to say. Therefore, during the on-line performance of the task, the cognitive load of the task incurred learners less, and since they were accoutered with newly developed plans, they were able to produce discourse that is more fluent.

As regards theories of attention, namely Skehan's (1998) limited attentional capacity model and Robinson's (2001) multiple resource models, the present investigation supported the former, as accuracy was promoted to the detriment of syntactic complexity. In addition, the absence of pre-task planning time led to attenuated performance in terms of all measures, which is in line with prediction of both theories.

An important point that needs to be taken up here is the fact that 3-minute planners and 10-minute planners did equally well in terms of all interlanguage measures and analytic ratings. This is in harmony with the findings of Mehnert (1998) who found that in oral performance lengthening

planning time would not progressively improve performance. Therefore, based on this finding, it can be hypothesized that instead of the orthodox 10-minute planning time, 3-minute planning time can be used which may sustain the participants' interest more than the prolonged 10 minutes of planning time.

Given the assumption that in light of their limited attentional resources L2 learners can fall behind on at least one area of production (accuracy, complexity, or fluency), teachers should tweak task features so that they could selectively direct their learners' attention to the areas of production in which they are weak. This is of pronounced importance since previous research has shown that learners' limited attentional resources make them prioritize one aspect of production (meaning) over form (Van Patten, 2002). Therefore, if attention is not selectively channeled to strike a balance between the three areas of development (accuracy, complexity, and fluency), learners will progress in some areas at the expense of other areas of development.

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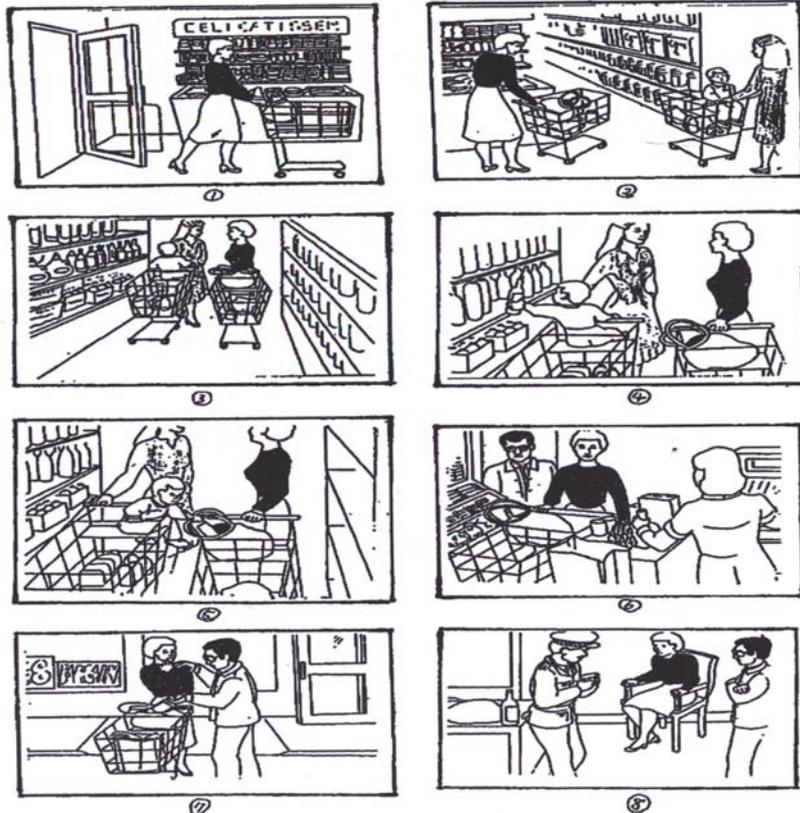Email Address: farahani@ut.ac.ir

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Appendix

Look at the picture story below starting with picture 1 and ending with picture 8. Write the story down on the paper provided.