

**The Effects of Pre-Task Planning on Iranian EFL Undergraduates’
Argumentative Writing Task Performance**

Ali Akbar Khomeijani Farahani*

Associate Professor, University of Tehran

Fatemeh Faryabi

MA in TEFL, University of Tehran

Abstract

Despite the growing body of research documented on pre-task planning in oral and written domain, the results of pre-task planning studies are still inconsistent in second language writing research (e.g. Ellis & Yuan, 2004; Johnson, Mercedo, & Acevedo, 2012; Johnson & Nicodemus 2016; Ong & Zhang, 2010). The current study set out to investigate the effects of two planning conditions (pre-task planning and no planning) on the argumentative writing task performance of Iranian EFL undergraduates in terms of multiple measures of complexity, accuracy, and fluency (CAF). To this end, 44 Iranian EFL undergraduates majoring in English literature at the University of Tehran were recruited based on convenience sampling to participate in this study. Employing a counterbalanced ‘within participants’ design, the participants were required to perform an argumentative writing task under both pre-task planning and no planning conditions. In the pre-task planning condition, in addition to 17 minutes for performing the task, the participants were provided with 10 minutes to plan prior to the task, whereas in the no planning condition, they were not provided with any time to plan. The results of paired sample t-test failed to reveal any significant difference between writing task performance in terms of measures of CAF under pre-task planning and no planning conditions. Thus, it was shown that pre-task planning did not benefit any of the measures (CAF) of argumentative writing task. Possible explanations for the results of this study and pedagogical implications of the findings are discussed.

Key words: argumentative writing task, EFL undergraduates, planning conditions, pre-task planning and no planning.

* Associate Professor, University of Tehran, Tehran ,Iran

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Email: *farahani@ut.ac.ir*

1. Introduction

Task based language teaching has been a flourishing area of research in the field of second language acquisition (SLA) from the 1980s to the present. The growing interest in researching the interplay between tasks and second language (L2) performance has increased the popularity of tasks in SLA research (Tavakoli, 2014). In the same vein, there is a long running debate over how tasks should be designed and implemented in L2 classrooms (e.g. Ellis, 2012; García Mayo, 2007; Robinson, 2001, 2003, 2005, 2007; Robinson & Gilabert, 2007). Pedagogically, it is claimed that the way in which tasks are designed and implemented influences students' language learning and performance (Ellis, 2012; Robinson, 2005, 2011; Skehan & Foster, 2001). Robinson (2011b) argues that a focal topic of research in second language task is exploring how "to design and deliver a sequence of tasks" (p. 7) that most effectively result in language use and most efficiently develop language learning. Despite the hot debate over task design features, how to best design and implement tasks "in the systematic and sequenced organizations of classroom practice" (Candlin, 2001, p. 230) have not been well established by research studies, yet. In this regard, one issue of controversy in task based research is the role of planning in task implementation.

Based on cognitive theories of writing (Hayes 1996; Flower & Hayes, 1981), a key phase in writing is planning. Planning particularly holds an important place in writing, whereas oral communication rarely allows for planning time (Byrnes & Manchón, 2014). The existing literature on writing reveals that planning has been an important and contestable issue in first language (L1) writing and has captivated the interest of a good number of researchers (e.g. Galbraith, 1999, 2009; Galbraith & Torrance, 2004; Hayes & Nash, 1996; Kellogg, 1990). Interest in studying planning has continued to recent years and has developed into a burgeoning area of research in SLA. Based on Ellis' (2005b) typology of planning (strategic planning & within-task planning), a bunch of studies have been documented mostly in oral performance domain (e.g. Bygate & Samuda, 2005; Gilabert, 2007; Kawauchi, 2005; Nitta & Nakatsuhara, 2014; Yuan & Ellis, 2003). In light of the literature, the results of studies conducted on planning are mixed. In contrast to the studies which show a positive effect for planning time on different dimensions of language production (CAF), Johnson et al. (2012) and Johnson and Nicodemus (2016) indicated that pre-task planning did not significantly affect L2 writing performance. More interestingly, Ong and Zhang (2010) showed that pre-task planning negatively affected lexical complexity and fluency of L2 writers. Therefore, as Johnson (2014) argues, planning as a task implementation variable merits further attention and requires additional qualification in writing domain. In view of the preceding discussion, the present study aims to address the issue of pre-task planning in

writing by exploring Iranian EFL undergraduates' writing task performance in relation to measures of CAF in pre-task planning and no planning conditions.

2. Literature Review

2.1. Theoretical Framework of Task based Planning

Skehan and Foster (1997, 1999, 2001) and Robinson (2001, 2003, 2005, 2011b) propose two opposite views about task design and implementation features (task complexity) termed Cognition Hypothesis and Limited Attentional Capacity Model, respectively. These task performance models have resulted in controversies among SLA researchers. Subsequently, a growing wave of research with varying results has sprung up in this area (e.g. Ellis, 2004; Gilabert, 2007; Kawauchi, 2005; Ojima, 2006). Skehan and Foster's Limited Attentional Capacity Model draws on theories of working memory (Ruiz-Funes, 2014) and as its name implies, assumes that human processing capacity is limited and can attend only to one aspect of language performance at one time. It means when a task is difficult and needs simultaneous multiple processing, the quality of performance decreases due to a trade-off effect. Thus, task sequencing ought to range from less cognitively difficult to more cognitively difficult. Skehan (1996) argues that the grading and sequencing of tasks should be in a way that motivate learners to simultaneously allocate their processes to the three performance dimensions (CAF) which are in competition with each other. On the other hand, in Robinson's view, human's attentional resources are not limited. He takes "a multiple-resources view of processing" (Ruiz-Funes, 2014, p. 167) and stipulates that task sequencing should be based on increase in cognitive complexity of tasks. In Robinson's framework, cognitive complexity is further divided into resource directing and resource dispersing dimensions. The first cognitive factor, resource directing dimension of cognitive complexity (e.g. +/- Here and now, +/- few or many elements), "directs learners' and attentional memory resources to the way the L2 structures and codes concepts," (p. 4) and brings about the development of learner language. The second cognitive factor, the resource dispersing dimension of cognitive complexity (e.g. +/-planning time, +/-prior knowledge) does not have the attentional directing function of the former dimension. In fact, it serves the function of 'dispersing attentional and memory resources'. Robinson stipulates that increasing task complexity along with resource dispersing dimension (depriving learners of planning time) would result in decreased performance in CAF. Whereas, increasing task complexity along with resource directing dimensions would bring about improvement in task performance (CAF). Although these two models are different in their assumptions and predictions with respect to how tasks should be designed

and sequenced in L2 classroom, they both hypothesize that depriving learners of planning time negatively impacts task performance.

2.2. Planning in First Language Writing

Different models and frameworks underlying planning time in L1 writing have been offered, such as the Interaction Hypothesis and Overload Hypothesis proposed by Kellogg (1990) and Galbraith's Knowledge Constituting Model (1999, 2009) which hold differing views regarding the efficacy of planning time. The Interaction Hypothesis and Overload Hypothesis put forwarded by Kellogg (1990) imply contrasting views for the effects of planning in L1 writing. The Interaction Hypothesis, as its name suggests, claims that writing is an interactive process in which there is an interplay among different phases of writing. Kellogg theorizes that writing is a 'nonlinear' processes and planning cannot be an effective strategy improving writing. Contrastively, the Overload Hypothesis which stems from theory of working memory asserts that planning benefits writing performance as it reduces the cognitive load of the task (Kellogg, 1990). Basically, the Overload Hypothesis postulate that the act of planning maximizes learners' focusing on different aspects of writing processes (Kellogg, 1990). In the same vein, Galbraith (1999, 2009) speculates the knowledge constituting model for writing process. He conducts an experiment to examine the effects of planning on development of new ideas. Galbraith finds that syntactic planning in which the writer had to start writing without any planning (free writing) was more effective than planning in creating new ideas.

2.3. Previous Research on Task Planning and Writing Performance

Khomeijani Farahani and Meraji (2011) explored the effect of the manipulation of pre-task planning time on narrative written performance of Iranian EFL learners. They operationalized planning at three levels of no planning, three minutes planning and ten minutes planning. The participants were 45 Iranian EFL learners who were divided into three groups and randomly assigned to one the planning conditions. The results revealed that the two planning groups' performance in terms of fluency and accuracy was significantly better than the no planner group. No significant difference was observed between the two planning groups in terms of accuracy, fluency, and complexity of their narrative writing performance.

Johnson et al. (2012) studied the effects of planning sub-processes (idea generation, organization, goal settings, and goal setting+ organization, and a control) on L2 writing fluency, grammatical complexity, lexical complexity. The participant included 968 EFL learners. The participants were randomly allocated along the five planning conditions and performed a similar writing task. Their study revealed that pre task planning did not have any significant effects on fluency, complexity, and accuracy of writing. They

also suggested that the results of previous studies on planning might have been influenced by some interacting factors, including the level of proficiency, knowledge of genre, pre-task planning instructions.

Tavakoli and Rezazadeh (2014) examined the differential effects of individual and collaborative pre-task planning on argumentative writing task performance of Iranian EFL learners. The participants were assigned to individual and collaborative pre task planning conditions and their performance was measured in terms complexity, accuracy, and fluency. The results showed that collaborative planners produced more accurate text while individual planners produced more fluent text. With respect to complexity of their performance, no significant difference was observed between the two groups.

Biria and Karimi (2015) investigated the impact of pre task planning on the fluency of fifty Iranian Intermediate EFL learners' argumentative writing task performance. They randomly divided their participants into experimental and control groups. The control group received structure based traditional instruction while the experimental group received task based instruction. Both groups completed an argumentative writing task under two different planning conditions. The statistical results indicated that the experimental group (pre task planning) outperformed the control group in terms of the fluency of their written performance.

Johnson and Nicodemus (2016) replicated the study of Johnson et al. (2012). Their study also attempted to test a threshold of proficiency with respect to pre-task planning and writing. The results showed that pre-task planning did not have any statistically significant effect on complexity and fluency. Moreover their hypothesis with regard to the moderating effect of language proficiency was not supported.

This study addresses the following research questions:

1. Is there any significant difference between the complexity of Iranian EFL undergraduates' writing task performance under pre-task planning and no planning conditions?
2. Is there any significant difference between the accuracy of Iranian EFL undergraduates' writing task performance under pre-task planning and no planning conditions?
3. Is there any significant difference between the fluency of Iranian EFL undergraduates' writing task performance under pre-task planning and no planning conditions?

3. Method

3.1. Design

This study employed a counterbalanced 'within participants' design in which all participants performed the argumentative writing task under both planning

conditions (pre-task planning and no planning). In contrast to a ‘between participants’ design in which the participants are divided into separate groups and each group is assigned to one of the conditions. The independent variable was planning condition with two levels: pre-task planning and no planning. Measures of CAF in writing task performance were the dependent variables.

To control for order effect (Dancy & Reidy, 2011), because all participants were required to take part in both conditions, planning conditions were counterbalanced across the participants which means about one half of the participants completed the task first under planning and then no planning condition. While, the other half of participants completed the task in the opposite order (first under no planning and then planning condition).

Heiman (2002) contends that performing the same task twice would cause practice effect. As in this study, the participants were required to complete the same task under two conditions, two different topics were chosen to control for practice effect. One of the advantages of using a within participants design is that it allows to compare the conditions more precisely as it “controls for many inter-individual confounding variables” (Dancy & Reidy, 2011, p. 14). Kawauchi (2005), Nariman-Jahan and Rahimpour (2011), along with Nitta and Nakatsuhara (2014) also employed a within participants design for carrying out their studies on planning time and task performance. Design of this study is represented in figure 1.

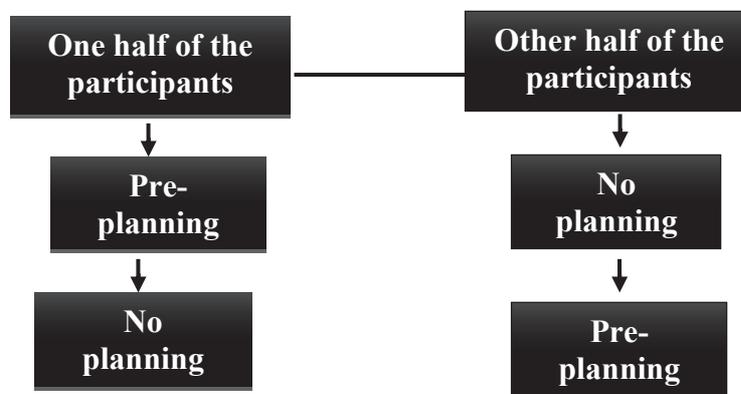


Figure 1. The design of the study

3.2. Participants

The participants of this study were 44 Iranian EFL full time undergraduate students, majoring in English literature at the University of Tehran, who were recruited based on convenience sampling. They were 18 males and 26 females between 19 and 26 years old. They were homogenous in terms of their first language and educational background. All the participants were

EFL learners with little access to English outside the classroom. Additionally, they had learned English as a subject for six years at school and for two semesters at university. They all gave their informed consent to participate in the study. The participants were not told about the purpose of the study but were informed that the data was collected for research purposes. To this end, each participant was assigned a number. Furthermore, they were assured that their performance would not have any effects on their course grades. Since, this study adopted a within participants design in which each participant's score under one condition was compared to his/her own score under the other condition and no comparison was made between the students, the students were not tested on their level of proficiency prior to the study. In the same line, Dancy and Reidy (2011) note that using a within participants design exerts greater control over extraneous variables as participants are the same across all conditions

3.3. Materials

3.3.1. Experimental Tasks

Two argumentative writing tasks were used in the study. The tasks were adapted from Phillips (2001). As mentioned earlier, each student was required to participate in both conditions. It is stated that performing the same task twice would cause practice effect (Heiman, 2002). Hence, two different topics were chosen to minimize practice effect as far as possible. The first argumentative writing task required the students to discuss the advantages and disadvantages of courses in which there is only one final exam vs. courses in which there are multiple exams then indicate which type of course they prefer and why. The second argumentative writing task required the students to discuss the advantages and disadvantages of classes in which teachers do all of the talking vs. classes in which students do some of the talking then indicate which type of class they prefer and why.

Ellis (2003, 2012) introduces different design and implementation variables based on a number of interaction and L2 production studies (see table 1). Following Ellis (2003, 2012), the tasks were completely identical in design variables, such as discourse mode, cognitive complexity, and topic familiarity. Both topics were selected based on participants' equal familiarity criteria. As the students were EFL undergraduates and had complete familiarity with academic contexts and different courses and classes, topics related to their courses and classes were selected. Therefore, the tasks used in the planning conditions were identical.

3.5. Pilot Study

A pilot study was carried out to determine the amount of time required for completing the tasks. Following Ellis and Yuan (2004) and Sanguran (2001), a group of EFL undergraduates (n=18) similar to the target participants were

recruited for piloting the argumentative writing task. They were asked to write an argumentative essay in at least 200 words for one of those topics selected for the main study. The fastest writer took sixteen minutes and forty seconds to complete the task. Thus, seventeen minutes was allocated to the tasks in the main study. In order to better identify the effects of pre-task planning time, the amount of online planning was limited by making the task pressured (Ellis & Yuan, 2004). The participants in the main study were required to complete the task within 17 minutes. Ellis and Yuan (2004) and Nariman-Jahan and Rahimpour (2011) allocated the same amount of time to the writing tasks in their studies on planning and task performance.

Table 1

Task Design and Implementation Variables

<i>Design variable</i>	<i>Implementation variables</i>
1. Required vs. optional information exchange	1. Strategic(pre-task)planning
2. Information gap: one-way vs. two-way	2. Online (within task) planning
3. Dual vs. single task	3. Rehearsal (task repetition)
4. Topic (e.g. topic familiarity)	4. Post task requirements
5. Discourse mode (argument vs. description)	
6. Cognitive complexity (e.g. context-embedded vs. context-reduced)	

Note: Adapted from “Language Teaching Research and Language Pedagogy”, by R. Ellis, 2012, pp. 214 & 217. Chichester: Wiley Blackwell.

3.4. Data Collection Procedure

3.6. Procedure

The study was carried out in regular classroom setting where both the researcher and teacher were present. Data collection lasted two weeks. In this study, planning was operationalized at two levels of pre-task planning and no planning. Pre-task planning condition comprised two phases. In the first phase, following previous research (e.g. Ellis & Yuan, 2004, 2005; Kawauchi, 2005; Johnson et al., 2012; Nitta & Nakatsuhara, 2014; Ong, 2013; Sanguran, 2005; Skehan & Foster, 1998), the participants were told that they had 10 minutes to plan their writing before they started performing the task. For determining the suitable amount of pre-task planning time, Mehnert (1998) compared the effects of different planning times (1, 5, & 10) on the speech production of L2 speakers. The results of his study revealed that scores of CAF enhanced with increase in planning time. Many researchers (e.g. Crooks, 1989; Ellis & Yuan, 2004, 2005; Mehnert, 1998) have asserted that 10 minutes planning time is appropriate for allowing participants to engage in the act of planning and producing measurable effects on CAF measures.

On the basis of previous studies in the literature (e.g. Ellis & Yuan, 2004, 2005; Sanguran, 2005), the participants received some instruction as follows. Before distributing the planning sheets among the students, they

were informed that the researcher would collect their planning notes after 10 minutes and they would not have access to their notes while completing the task. The planning sheets were collected to avoid increase in length of participants' writing because of the extra time that they had been provided for planning (Ellis & Yuan, 2004; Sanguran, 2005). It should be noted that the pre-task planning was unguided and the participants did not receive any specific instruction about how to plan. To avoid memorization, they were told that to plan in words and phrases about the content, structure, and organization of their essay and not to start writing the prompt until they receive the main sheet.

After 10 minutes, the planning sheets were collected. In the second phase, before allowing the students to pick up the task sheets, they received some instructions as follows. They were told to write with pen and not to use correction pen, because it was aimed to count the number of dysfluencies in their writing tasks (the number of words that the participants crossed out). To identify the number of words which were at the cutting edge of their interlanguage, the students were requested not to check their dictionaries. Additionally, the researcher informed the students that they had to perform the task in 17 minutes and write at least 200 words. The students completed the task in the given time. Finally, the researcher collected the students' papers after their time finished.

In the no planning condition, the same students were asked to perform the same task but with a different topic and without planning time. Similar to the previous task, they were requested to write with pen, not to use correction pen, and not to check their dictionaries. After distributing the task sheets among the students, they were given seventeen minutes to complete the task and write at least 200 words. Finally, the sheets were collected after the given time. As stated earlier, this study employed a within participants design in which the planning conditions were counterbalanced. Thus, the other half of the participant were assigned to the same tasks and planning conditions using similar procedure but in opposite order.

3.7. Data Analysis Procedure

3.7.1. Writing Performance Measures

For scoring and analyzing the argumentative writing performance of the participants, three dimensions of task performance in terms of CAF were taken into consideration. Each dimension further was divided into two measures which are discussed in the following section.

3.7.1.1. Lexical Complexity Measures

In this study, complexity was measured through Mean Segmental Type Token Ratio and the proportion of lexical to function words. Measures of lexical complexity were adopted from Ellis and Yuan (2004).

3.7.1.1. Mean Segmental Type Token Ratio

It is claimed that the traditional type token ratio is influenced by the length of the text that is, the longer the text is the lower its type token ratio will be (Richards & Malvern, 2004). To this end, following Ellis and Yuan (2004, 2005), each participants' written text was divided into segments of forty words and the type token ratio was calculated in each segment. Finally, the type token ratio of all segments were added and divided by the total number of the text's segments. The obtained number was reported as percentage.

3.7.1.2. The Proportion of Lexical to Function Words

As the name of the measure implies, the total number of produced lexical words was divided by the total number of produced function words. To precisely distinguish lexical words from function words, some linguistic sources (e.g. Carnie, 2006; Hudson, 2000; Yule, 1996) were examined. Consequently, nouns, lexical verbs, adjectives, and adverbs were identified as lexical words; determiners (articles, quantifiers, cardinal numbers, possessive pronouns, and wh words), conjunctions, prepositions, modals, auxiliaries, particles, negation, and complementizers were identified as function words.

3.7.1.2. Accuracy Measures

Error-free clauses were adopted from Ellis & Yuan (2004) and number of errors per 100 words were coded to measure accuracy.

3.7.1.2.1. Percentage of Error Free Clauses

This global measure of accuracy was obtained by dividing the total number of error free clauses by the total number of produced clauses in the text and then reporting it as percentage (Skehan & Foster, 1999). Firstly each written text was divided into clauses. Polio (1997) provides a set of guidelines for identifying clauses. According to Polio, "a clause equals an overt subject and a finite verb" (p. 139). Then, error free clauses were identified. Error free clauses included the clauses which did not have any syntactical, morphological, and word order errors. Following Ellis and Yuan (2004, 2005), errors pertain to capitalization, punctuation, and spelling (until it did not change the meaning) were not considered in this measure. Adams, Amani, Newton, and Alwi (2014), Kormos (2014), and Ruiz-Funes (2014) also adopted the same measure.

3.7.1.2.2. Number of Errors per 100 words

As the number of error free clauses is a holistic measure of accuracy (Adams et al., 2014), number of errors in written texts including syntactical, morphological, and word order errors (Ellis & Yuan, 2004) were also measured. To obtain this measure, the total number of each participant's errors in his/her writing was divided by the total number of words he/she had

produced and then was multiplied by 100 (Sanguran, 2001). Errors Kormos (2014) and Ruiz-Funes (2014) utilized the same measure in their studies on task based writing.

3.7.1.3. Fluency Measures

Fluency is an often reported measure of language production (Adams, et al., 2014). To give an indication of the fluency of writing performance the number of syllables per minutes and dysfluencies were counted.

3.7.1.3.1. Syllables per Minutes

This measure was calculated by dividing the total number of produced syllables by the total minutes spent on task. Chenoweth and Hayes (2001) and Ellis and Yuan (2004, 2005) used the same measure in their studies.

3.7.1.3.2. Dysfluencies

Based on Ellis and Yuan (2004, 2005), dysfluencies were calculated by dividing the total number of crossed out words by the total number of produced words. For counting the number of words in each text, words separated by spaces, contractions, and hyphenated words were counted as one word (Biber, Johansson, Leech, Conrad, & Finegan, 1999).

4. Results and Discussion

Tables 2 shows the summary of descriptive statistics for different measures of writing (CAF). It presents the number of participants, means, and standard deviations of measures of CAF in argumentative writing task performance under pre-task planning and no planning conditions.

Table 2
Descriptive Statistics for CAF under Pre-Task Planning vs. No Planning Conditions

Measures	Mean	SD	N
MSTTR planned	81.1804	4.56048	44
L/F planned	69.0285	12.10639	44
PEFC planned	82.3320	10.31866	44
NER planned	2.0737	1.38114	44
SM planned	15.7005	4.62741	44
DYS planned	2.1055	1.80950	44
PEFC unplanned	82.6874	10.76015	44
NER unplanned	2.1217	1.50827	44
MSTTR unplanned	79.4830	4.14833	44
LF unplanned	67.4494	10.70653	44
SM unplanned	15.8888	3.88177	44
DYS unplanned	2.4527	1.82925	44

Note: PEFC= perfect error free clause, NER= number of errors per 100 words, MSTTR= mean segmental type token ratio, L/F= proportion of lexical words to function words, SM= syllables per minute, DYS= dysfluencies.

In order to answer the research questions, a paired-sample t-test was run to investigate any significant difference between the mean scores of different measures of writing tasks (CAF) across pre-task planning and no planning conditions.

As shown in Table 3

A: there is not any significant difference between the lexical complexity of writing tasks under pre-task planning and no planning conditions ($t(42) = -208, P=.83 > 0.05$).

B: there is not any significant difference between the grammatical accuracy of writing tasks under pre-task planning and no planning conditions ($t(42) = .072, P=.94 > 0.05$).

C: there is not any significant difference between the fluency of writing tasks under pre-task planning and no planning conditions ($t(42) = -.748, P=.64 > 0.05$).

This study sought to investigate the difference between two types of planning, namely pre-task planning and no planning in the CAF measures of Iranian EFL undergraduates' argumentative writing task performance. As discussed earlier, the results of task planning studies within writing domain are mixed. To this end, forty four Iranian EFL undergraduates majoring in English literature took part in the study and performed an argumentative writing task under both planning conditions. The current study was concerned with the difference between writing task performance of EFL undergraduates in relation to CAF under pre-task planning and no planning conditions. To this end, the writing tasks were analyzed based on measures of CAF to determine whether pre-task planning and no planning conditions influenced the writing task performance of undergraduates.

The results showed that there was not any significant difference between the participants' task performance in terms of measures of CAF under pre-task planning and no planning conditions. In other words, the participant's writing performance did not differ significantly under the planning conditions. Regarding the first research question, the results of this study are in contrast to previous studies which showed a positive effect for planning time on CAF measures of writing production. For instance, Ellis and Yuan (2004) showed that pre-task planning benefited lexical complexity and fluency of narrative writing performance and online planning benefited accuracy of narrative writing performance. Rahimpour and Safarie (2011) indicated that pre-task planning time had no significant effect on the lexical complexity and accuracy of Iranian EFL learners' descriptive writing performance but significantly affected the fluency of their performance. In the same line, Ghavamnia, Tavakoli, and Esteki (2012) showed that pre-task planning led to

more complex and fluent language while online planning led to more accurate language in written performance of EFL learners. Moreover, Seyyedi, Ismal, Orang, and Sharifi Nejad (2013) investigated the effects of pre-task planning time on EFL learners' narrative writing task performance. The results of their study showed that providing learners with planning time enhanced complexity and fluency of their narrative writing performance but it had no effect on the accuracy of their performance. Tavakoli and Rezazadeh (2014) compared the effects of individual and collaborative pre-task planning on the fluency, accuracy, and complexity of argumentative writing performance of EFL learners. Their findings revealed that individual pre-task planning had a positive effect on the fluency while collaborative pre-task planning had a positive effect on accuracy. However, none of the planning conditions increased complexity.

Table 3
Paired Sample Test Results for CAF under Planned vs. Unplanned Condition

Measures	Mean	D	Paired differences				f	DSig. (2-tailed)
			Std. error mean	95% Confidence interval of the difference				
				Lower	Upper			
Pair 1 Complexity planned/unplanned	-.59350	6.14832	2.85465	-6.41559	5.22859	-.208	42.837	
Pair 2 Accuracy Planned/unplanned	.20141	15.77033	2.78783	-5.48440	5.88722	.072	42.943	
Pair 3 Fluency planned/Unplanned	-.81706	6.17613	1.09179	-3.04379	1.40967	-.748	42.460	

The findings of this study are in contrast to the study of Ong and Zhang (2010). In their study, Ong and Zhang showed that pre-task planning had a negative effect on complexity and fluency of writing. As for the first research question, the results of this study are in a way in line with three studies in the literature as follows. Nariman-Jahan and Rahimpour (2011) compared the effects of pre-task planning time and no planning time on writing performance EFL learners with two levels of proficiency (high & low). Their study revealed that low proficiency learners benefited from pre-task planning in relation to concept load and fluency of their writing task performance while high proficiency learners' task performance under the two conditions did not differ significantly. They concluded that proficiency level is a significant factor in predicting the effects of planning time. Johnson et al. (2012) conducted a large scale study on pre-task planning sub-processes of Spanish EFL learners' writing performance. Their study revealed that pre task planning did not have any significant effects on fluency, complexity, and

accuracy of writing. They also suggested that the results of previous studies on planning might have been influenced by some interacting factors, including the level of proficiency, knowledge of genre, and pre-task planning instructions. In the same vein, Johnson and Nicodemus (2016) replicated the study of Johnson et al. (2012) to test a ‘hypothesized threshold of proficiency’ in pre-task planning and writing performance. The findings of their study rejected the proposed hypothesis of proficiency and indicated no significant effect for pre-task planning in relation to measures of CAF in written production of the participants. As this study did not show any significant difference between performance under pre-task planning and no planning conditions, three explanations obtained from Johnson et al (2012) and Johnson (2014) are offered as follows. Firstly, although writing and speaking are both productive skills, they are different in their processes. Speaking is a linear process while writing is a recursive process in which the writer continuously engages in monitoring and online planning. Thus, pre-task planning may not result in measurable effects on writing task performance. More significantly, Limited Attentional Capacity Model and Cognition Hypothesis have been proposed for oral production and most of the studies based on the aforementioned hypotheses have been carried out in oral domain. Therefore, they may not apply to written production. Secondly, the contrasting finding of prior research on pre-task planning (Ong & Zhang, 2010; Johnson et al., 2012) and the present study can be explained by what Johnson (2014) and Johnson et al. (2012) call ‘threshold of general language proficiency’. They claim that pre-task planning may affect writing of learners with different proficiency levels differently. They further hypothesize that learners who have reached the threshold benefit from pre-task planning (e.g. Ellis & Yuan, 2004), whereas pre-task planning impede learners who have not reached the threshold (e.g. Ong & Zhang, 2010). In addition, according to Johnson (2014), pre-task planning does not have any significant impact on learners’ performance who are at the level of threshold (Johnson, 2014). As Adams et al. (2014) note, empirical evidence has shown that language proficiency variable influences the quality and efficiency of pre-task planning (e.g. Marín & Murphy, 2001; Manchón & Roca de Larios, 2007). However their hypothesis with respect to the threshold of proficiency was rejected by Johnson and Nicodemus (2016). Thirdly, knowledge of genre was reported as another influential factor in pre-task planning studies. It was stipulated that pre-task planning effect is moderated by genres familiarity. In other words, students’ familiarity with genre releases working memory capacity and allows students benefit from pre-task planning. This hypothesis pertains to the findings of Ellis and Yuan (2004) who employed a narrative genre and Ong and Zhang (2010), Johnson et al. (2012), and Johnson and Nicodemus (2016) who employed an argumentative genre. Lastly, in their explanations for pre-task planning in writing, Johnson (2014) and Johnson et al. (2012)

claim that instructing students how to plan may have a different effect on their performance.

In the same line, Park (2010) argues that task planning studies have not clearly separated pre-task planning instructions from planning time which makes it difficult to identify that improvement in performance is due to planning time or pre-task instructions. In this study, pre-task planning was unguided and the students did not receive any specific instruction regarding how to do planning. Following Johnson et al. (2012), it can be hypothesized that instructing students how to plan may have a different effect on their performance. Following Adams et al. (2014), it can also be hypothesized that measures of CAF employed in this study were not adequate for probing the effect of planning as a task implementation variable on writing task performance.

5. Conclusions and Implications

This study aimed to explore the difference between two planning conditions in CAF of EFL undergraduates' argumentative writing task performance. Employing a within participants design, the effect of pre-task planning and no planning conditions on multiple measures of writing performance of EFL undergraduates was examined. In contrast to previous research which showed a positive effect on pre-task planning, the results of this research failed to reveal any significant difference between Iranian EFL undergraduates' writing task performance under pre-task planning and no planning conditions. It was shown that pre-task planning did not have any significant and measurable effect on multiple measures of writing performance (CAF). The findings of the current study did not display any connections with predictions of Limited Attentional Capacity Model and called its applicability into question. This study did not reject the efficacy of planning as a writing strategy but indicated that providing learners with extra time to plan their writing task was not beneficial. Some explanations for these contrary findings can be offered from previous research on pre-task planning (Johnson et al., 2012; Johnson, 2014) as follows: a) knowledge of genre (students' familiarity and unfamiliarity with genre) may moderate the effects of pre-task planning, b) pre-task planning may be mediated by proficiency level of the students, c) writing and speaking are different which means that predictions of Limited Attentional Capacity Model may not suit writing production, d) providing students with pre-task planning instructions (guiding them how to plan) or depriving them of pre-task planning instruction may yield different results. Theoretically, the results of this study rejected the predictions of limited attentional capacity hypothesis. The efficacy and applicability of pre task planning time in second/foreign language writing was also called into question based on the obtained results. Pedagogically, the results of this study imply that pre-task planning does not improve writing task

performance measures (CAF). In addition, the obtained findings shed light on task based writing pedagogy regarding the efficacy of pre-task planning.

References

- Adams, R., Amani, S., Newton, J., & Alwi, N. (2014). Planning and production in computer-mediated communication (CMC) writing. In H. Byrnes & R. Manchón (Eds.) *Task-based language learning-insights from and for L2 learning* (pp. 137-161). John Benjamins Publishing Company.
- Biber, D., Johansson, S., Leech, G., Conrad, S., & Finegan, E. (1999). *Longman grammar of spoken and written English*. London: Longman.
- Biria, R., & Karimi, Z. (2015). The effects of pre-task planning on the writing fluency of Iranian EFL learners. *Journal of Language Teaching and Research*, 6(2), 357-365.
- Bygate, M. & Samuda, V. (2005). Integrative planning through the use of task repetition. In R. Ellis, (Ed.), *Planning and task performance in second language* (pp. 37-74). Amsterdam: John Benjamins Publishing.
- Byrnes, H. & Manchón, R. (2014) *Task-based language learning-insights from and for L2 learning*. John Benjamins Publishing Company.
- Candlin, C. N. (2001). Afterword: Taking the curriculum to task. In M. Bygate, P. Skehan, & M. Swain (Eds.), *Researching pedagogic tasks: Second language learning, teaching, and testing* (pp. 229-243). Harlow, UK: Pearson Education.
- Carnie, A. (2006). *Syntax*. Oxford: Blackwell.
- Chenoweth, A., & Hayes, J. (2001). Fluency in writing: Generating text in L1 and L2. *Written Communication*, 18, 80-98.
- Crookes, G. (1989). Planning and interlanguage variation. *Studies in Second Language Acquisition*, 11, 367-383.
- Dancey, C. & Reidy, J. (2011). *Statistics without maths for psychology*. Harlow, England: Prentice Hall/Pearson.
- Ellis, R. (2003). *Task-based language learning and teaching*. Oxford: Oxford University press.
- Ellis, R. (2004). The definition and measurement of explicit knowledge. *Language Learning*, 54, 227-275.
- Ellis, R. (2012). *Language teaching research and language pedagogy*. Chichester: Wiley Blackwell.
- Ellis, R., & Barkhuizen, G. (2005). *Analyzing learner language*. Oxford: Oxford University Press.
- Ellis, R., & Yuan, F. (2004). The effects of planning on fluency, complexity, and accuracy in second language narrative writing. *Studies in Second Language Acquisition*, 26(01), 59-84.
- Ellis, R., & Yuan, F. (2005). The effects of careful within task planning on oral and written task performance. In R. Ellis

- (Ed.), *Planning and task performance in second language learning* (pp. 167-192). Amsterdam: Benjamins.
- Flower, L., & Hayes, J. R. (1981). A cognitive process theory of writing. *College composition and communication*, 32(4), 365-387.
- Galbraith, D. (1999). Writing as a knowledge-constituting process. In M. Torrance & D. Galbraith (Eds.), *Knowing what to write: Conceptual processes in text production* (pp.79-97). Amsterdam: Amsterdam University Press.
- Galbraith, D. (2009). Writing as discovery. *British Journal of Educational Psychology*, 2(6), 26. <http://dx.doi.org/10.1348/978185409x421129>
- Galbraith, D., & Torrance, M. (2004). Revision in the context of different drafting strategies. In G. Rijlaarsdam, L. Allal, L. Chanquoy & P. Largy (eds.), *Studies in writing: Cognitive and instructional processes* (pp.63-85). Dordrecht: Kluwer Academic Publishers.
- García Mayo, M. (2007). *Investigating tasks in formal language learning*. Clevedon [England]: Multilingual Matters.
- Ghavamnia, M., Tavakoli, M., & Esteki, M. (2013).The effect of Pre-Task and online planning conditions on complexity, accuracy, and fluency on EFL learners' written production. *Porta Linguarum Junio*, 6(2), 31-43
- Gilbert, R. (2007). Effects of manipulating task complexity on self-repairs during L2 oral production. *IRAL - International Review of Applied Linguistics in Language Teaching*, 45(3). <http://dx.doi.org/10.1515/iral.2007.010>
- Hayes, J. R. (1996). A new framework for understanding cognition and affect in writing. In C. M. Levy & S. Ransdell (Eds.), *The science of writing: Theories, methods, individual differences, and applications* (pp. 1-27). Mahwah, NJ: Lawrence Erlbaum.
- Hayes, J. R., & Nash, J. G. (1996). On the nature of planning. In C. M. Levy & S. Ransdell (eds.), *The science of writing: Theories, methods, individual differences, and applications* (pp. 29-55). Mahwah, NJ: Lawrence Erlbaum.
- Hudson, G. (2000). *Essential introductory linguistics*. Malden, Mass.: Blackwell Publishers.
- Heiman, G. (2002). *Research methods in psychology*. Boston: Houghton Mifflin Co.
- Johnson, M. D. (2014). Does planning really help? Effectiveness of planning in L2 writing. *Journal of Second Language Teaching and Research*, 3(1), 107-118.
- Johnson, M. D., Mercado, L., & Acevedo, A. (2012). The effect of planning sub-processes on L2 writing fluency, grammatical complexity, and lexical complexity. *Journal of Second Language Writing*, 21, 264-282.

- Johnson, M. D., & Nicodemus, C. (2016). Testing a threshold: an approximate replication of Johnson, Mercado & Acevedo 2012. *Language Teaching*, 49(2), 251-274. <http://dx.doi.org/10.1017/s0261444815000087>
- Kawauchi, C. (2005). The effects of strategic planning on the oral narratives of learners with low and high intermediate proficiency. In R. Ellis (Ed.), *Planning and task performance in a second language* (pp. 143–164). Amsterdam/Philadelphia: John Benjamins.
- Kellogg, R. T. (1990). Effectiveness of prewriting strategies as a function of task demands. *The American Journal of Psychology*, 103(3), 327-342.
- Khomeijani Farahani, A. A., & Meraji, S. R. (2011). Cognitive task complexity and L2 narrative writing performance. *Journal of Language Teaching and Research*, 2(2), 445-456.
- Kormos, J. (2014). Differences across modalities of performance: An investigation of linguistic and discourse complexity in narrative tasks. In Byrnes, H. & Manchón, R. (Eds.) *Task-based language learning-insights from and for L2 learning* (193-216). John Benjamins Publishing Company.
- Mehnert, U. (1998). The effects of different lengths of time for planning on second language performance. *Studies in Second Language Acquisition*, 20(1), 83-108.
- Nitta, R., & Nakatsuhara, F. (2014). A multifaceted approach to investigating pre-task planning effects on paired oral test performance. *Language Testing*, 31 (2), 147-175.
- Ojima M. (2006). Concept-mapping as pre-task planning: A case study of three Japanese ESL writers. *System*, 34, 566-585.
- Ong, J., & Zhang, L. J. (2010). Effects of task complexity on the fluency and lexical complexity in EFL students' argumentative writing. *Journal of Second Language Writing*, 19(4), 218-233.
- Philips, D. (2001). *Longman Introductory Course for the TOEFL test*. London: Longman.
- Polio, C. (1997). Measures of linguistic accuracy in second language writing research. *Language Learning*, 47(1), 101-143.
- Rahimpour, M., & Safarie, M. (2011). The effects of on-line and pre-task planning on descriptive writing of Iranian EFL learners. *International Journal of English Linguistics*, 1(2), 274-277.
- Richards, B. J. & Malvern, D. D. (2004). Investigating the validity of a new measure of lexical diversity for root and inflected forms. In K. Trott, S. Dobbinson, & P. Griffith (eds.). *The child language reader* (pp. 81-9). London: Routledge.
- Robinson, P. (2001). Task complexity, task difficulty and task production: Exploring interactions in a componential framework. *Applied Linguistics*, 22, 7-57.

- Robinson, P. (2003). The cognition hypothesis, task design, and adult task-based language learning. *Second Language Studies*, 21, 45-105.
- Robinson, P. (2005). Cognitive complexity and task sequencing: Studies in a componential framework for second language task design. *IRAL - International Review of Applied Linguistics in Language Teaching*, 43(1), 1-32.
- Robinson, P. (2007). Criteria for classifying and sequencing pedagogic tasks. In M. P. García Mayo (Ed.), *Investigating tasks in formal language learning* (pp. 7-26). Clevedon: Multilingual Matters.
- Robinson, P. (2011). *Second language task complexity: Researching the Cognition Hypothesis of language learning and performance*. Amsterdam: John Benjamins
- Robinson, P. & Gilabert, R. (2007). Task complexity, the cognition hypothesis and second language learning and performance. *IRAL - International Review of Applied Linguistics in Language Teaching*, 45(3).
- Ruiz-Funes, M. (2014). Task complexity and linguistic performance in advanced college level foreign language writing. In Byrnes, H. & Manchón, R. (Eds.) *Task-based language learning-insights from and for L2 learning* (163-191). John Benjamins Publishing Company.
- Sanguran, J. (2001). *The effects of pre-task planning on foreign language performance*. Unpublished doctoral thesis, University of Toronto, Canada.
- Sanguran, J. (2005). The effects of focusing on meaning and form in strategic planning. In R. Ellis (Ed.), *Planning and task performance in a second language* (pp. 111-143). Amsterdam: John Benjamins Publishing.
- Seyyedi, K., Ismal A. M., Orang, M., & Sharifi Nejad, M. (2013). The effect of pre-task planning time on L2 learners' narrative writing performance. *English Language Teaching*, 6(12), 110.
- Skehan, P. (1996). A framework for the implementation of task-based instruction. *Applied linguistics*, 17, 38-62
- Skehan, P., & Foster, P. (1997). Task type and task processing conditions as influences on foreign language performance. *Language Teaching Research*, 1(3), 185-211.
- Skehan, P., & Foster, P. (1999). The influence of task structure and processing conditions on narrative retellings. *Language Learning*, 49 (1), 93-120.
- Skehan, P., & Foster, P. (2001). Cognition and tasks. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 183-205). New York: Cambridge University Press.
- Tavakoli, P. (2014). Storyline complexity and syntactic complexity in writing and speaking tasks. In: H. Byrnes & R. Manchon (eds.) *Task based*

- language learning: Insights from and for L2 writing* (pp. 217-236). John Benjamins, Amsterdam.
- Tavakoli, M., & Rezazadeh, M. (2014). Individual and collaborative planning conditions: Effects on fluency, complexity and accuracy in L2 argumentative writing. *The Journal of Teaching Language Skills*, (JTLS) 5(4), 85-110.
- Yuan, F., & Ellis, R. (2003). The effects of pre-task and on-line planning on fluency, complexity and accuracy in L2 monologic oral production. *Applied Linguistics*, 24, 1-27.
- Yule, G. (1996). *The study of language*. Cambridge: Cambridge University Press.