The Effects of Planning on Writing Narrative Task Performance with Low and High EFL Proficiency

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Abstract

The impetus of the present study was to scrutinize the impact of planning and proficiency on 172 EFL learners' written task performance regarding concept load, fluency, complexity and accuracy. Planning was operationalized at two levels: pretask planning (PTP) and on- line planning (OLP). Participants of this study were two groups, high and low proficiency learners who were randomly chosen. The first group was required to plan for their performance for 10 minutes and take notes before they performed the tasks, whilst the participants in the second group began writing immediately and took time as long as they like. The participants' performances were then analyzed utilizing paired samples t-test. The results of statistical analysis showed that low-proficiency learners appear to benefit more from planning time with respect to concept load, fluency, and complexity. On the other hand, high-proficiency learners were advantaged by planning time concerning concept load and accuracy.

Keywords: Task, Planning, Proficiency, Concept Load, Fluency, Complexity, Accuracy, Writing Performance

1. Introduction

Second language acquisition (SLA) researchers and language teachers both seek to elicit samples of language use from learners. In the case of researchers these samples are needed to investigate how second language (L2) learning takes place. In the case of teachers, these samples serve as evidence that successful learning is taking place. Increasingly, both researchers and teachers acknowledge the need to elicit samples of language use that is representative of how learners perform when they are not attending to accuracy. The question arises, then, as to how these samples of meaning- focused language use can be elicited. The means that both have employed are 'tasks' (Ellis, 2004). Tasks, then, hold a central place in current SLA research and also in language pedagogy. Thus, in recent years, a number of researchers and teachers have called for a move towards task-based language instruction (e.g. Skehan, 1998; Ellis, 2004). On the other hand, planning is an inseparable part of all spoken and written language use. That is, all speakers and writers need to decide what to say and write and how to do it (Ellis, 2005). Planning and its role in task- based performance are of both theoretical interest to second language acquisition (SLA) researchers and of practical significance to language teachers. For SLA researchers, planning serves as one of studying what students attend to and what effect it has on the way they use language. Its significance for language teachers lies in the fact that planning is a relatively straightforward way of influencing the kind of language that learners produce.

Therefore, a number of studies have investigated the effects of planning on L2 learner's performance of oral narratives (Foster and Skehan, 1996; Skehan and Foster, 1997, 1999; Ortega, 1999; Yuan and Ellis, 2003). These studies showed that giving learners opportunity to plan a narrative before they speak it (i.e., pretask planning) resulted in significant gains in both fluency and complexity. However, these studies produced mixed results when the focus was accuracy measured by the percentage of error- free clauses.

Moreover, although applied linguists have come to recognize the importance of writing in its own right as well as its complexity, writing remains one of the least well- understood, if not misunderstood, subjects in applied linguistics in general (Silva and Matsuda, 2002). In addition, somewhat surprisingly there has been little research into what effects different task conditions have on production (Ellis, 2004). Present study is set out to investigate the effect of task condition and proficiency on aspects of language production namely concept load, fluency, complexity, and accuracy on writing narrative tasks. Thus, to achieve the purpose of the study, the following research questions and hypotheses were formulated:

1. What effect does proficiency have on L2 learner's performance of written narrative task under planned vs.

unplanned conditions in terms of concept load?

2. What effect does proficiency have on L2 learner's performance of written narrative task under planned vs. unplanned conditions in terms of fluency?

3. What effect does proficiency have on L2 learner's performance of written narrative task under planned vs. unplanned conditions in terms of complexity?

4. What effect does proficiency have on L2 learner's performance of written narrative task under planned vs. unplanned conditions in terms of accuracy?

2. Study

2.1. Design

A 2×2×1 factorial design was used in the current study with planning condition and proficiency as the independent variables. Language proficiency was between-participants variables and each had two levels. Planning condition was a within-participant variable, i.e. the participants performed all the tasks in both on-line planning and pre-task planning condition. In effect, the study employed a "within subjects" design, in which learners completed both the unplanned and planned tasks, rather than a "between subjects" design, in which learners were assigned to either an unplanned or planned task. By using a "within subjects" design, language production under both planning and no-planning conditions can be compared to reveal differences between conditions more clearly (Kawauchi 2005).

2.2 Participants

172 participants were recruited for this study. They were Iranian learners of English in the Tabriz University. They formed two proficiency groups: 81 higher proficiency students and 87 lower proficiency students. They were all between 18 and 25 years old, and all were both females and males. The L1 of the participants varied, but the majority were speakers of Azari. At the time of data collection, most of them had been learning English as a foreign language in Iranian schools for 6 years, first in Junior school and then in high school. They had little opportunity to use English for communicative purposes outside the classroom. Of the 172 students, only 144 performed all tasks. Thus, the students selected were simply those who attended during all tasks of the study. It was only the selected students whose data were analyzed.

The researcher was introduced to them by their regular tutor as a research student needing their cooperation in testing the effects of planning and proficiency on written performance. All students in four classes in low-proficiency and high- proficiency learners were invited and agreed to participate in the study. They were told that the test and tasks were for research purposes only. They were informed that all findings would be confidential. They were not told the precise purpose of the study and were assured that the information collected would not impact their course grades.

All data were collected during normally scheduled class times. The participants had randomly enrolled in one of many classes available for low- proficiency and high- proficiency levels. Because of random enrolling and since learners had enrolled in classes of different times no randomization on the part of the researcher took place. Thus, learners were randomly assigned to four groups: two groups for planning condition in low- proficiency and high-proficiency levels and two groups for on-line planning condition in low- proficiency and high- proficiency levels.

2.3 Materials

Task was carried out by participants in dyads. The task (See Appendix A) used was a narrative based on pictures from Foster and Skehan (1996). This type of task was chosen for a number of reasons. First similar tasks have been used in other studies (e.g. Foster & Skehan, 1996; Skehan & Foster, 1997; Skehan & Foster, 1999) and thus comparison with the results of these studies would be easier. Second, this task is monologic rather than dialogic; it offers a basis for deriving measures of learner performance that are not influenced by interactional variables. It was, furthermore, hypothesized to require different levels of attention on participants, with progressively less familiar and less predictable information causing an increasingly cognitive load and, as a consequence, influencing performance on the task (Foster and Skehan, 1996).

2.4 Data collection procedures

After the participants and the materials were chosen, the procedure commenced. Two of the four classes were randomly assigned to either the unplanned or planned conditions.

In this study, planning was operationalized at two levels: pretask planning (PTP) and on- line planning (OLP). The participants performed the tasks in their normal classroom setting. Both their regular teacher and the researcher were present.

In the pretask planning condition, the participants were requested to finish writing the story within 17 minutes and to produce at least 200 words. In this way, the participants were pressured to perform the task with limited opportunities for on- line planning. The participants were given 10 minutes to plan their performance of the task. The choice of planning time is based on Foster and Skehan (1996) and Ellis and Yuan (2004). Mehnert's (1998) study showed that only when at least a 10- minute planning time was provided, there were measureable effects on all three aspects of language use- fluency, complexity, and accuracy - in the case of oral production. No detailed guidance was provided, but the participants were asked to plan their written task in terms of content, organization, and language. The task instructions (See Appendix B) were given both in Persian and English to ensure comprehension. The participants were given a sheet of paper to write notes but told not to write out the whole story. The notes were taken away before starting the task.

In on- line planning condition, the participants were given a piece of paper and told to write down the story. They were told they could take as long as they like. Unlike the other group the participants were not required to write a minimum of 200 words, as this may have been interpreted as requiring them to write quickly. Thus, the participants in this condition were allocated no time for pretask planning but ample time for on-line planning.

2.5 Measures

Measures of concept load, fluency, complexity, and accuracy were developed to evaluate the quality of the participants' written production. These measures were the same as those used in studies of oral production (e.g., Foster and Skehan, 1996; Yuan and Ellis, 2003). However, changes to the fluency measures were needed to make them appropriate to written production as temporal phenomena, such as length of pauses, cannot be measured in writing. Thus, what follows is a detailed description of how the written samples were analyzed.

2.5.1 *Concept Load Measure* (Word Types per Square Root of Two Times the Words)

Concept load (Lexical Density or Type- Token Ratio) is a measure of the ratio of different words to the total number of words in a text. Concept load is normally expressed as a percentage and is calculated by the formula (Richards and Schmidt, 2002):

$$\text{Lexical density} = \frac{number\ of\ seprate\ words}{total\ number\ of\ words\ in\ the\ text} \times 100$$

However, regular Type- Token ratios are affected by length; that is, it is easier to obtain a high type- token ratio in a short text than in a long one (Ellis and Barkuizen, 2005). Thus, the present study used a complex type- token ratio, that is, word types per square root of two times the words that take the length of the sample into account.

2.5.2 *Fluency* (Words per T-units)

Fluency was measured by words per T- units (Ishikawa, 2006; Kuiken and Vedder, 2007). The term T- unit was coined by Hunt (1965). It is defined as "a main clause plus any subordinating clauses" (Hunt, 1965: 20). In addition, sentence fragments were not counted as T- units following Ishikawa (2006), and Foster and Skehan (1996) who argued that the definition of the T- unit excludes ellipsis.

2.5.3 *Complexity* (Ratio of Clauses to T- units)

Regarding Syntactic complexity a measure of the ratio of clauses to T- units was adopted (Mehnet, 1998; Yuan and Ellis, 2003; Ellis and Yuan, 2004). T- units rather than C- units are used because the task performance is monologic and contained few elided utterances (See Foster, Tonkyn, and Wigglesworth, 2000 for a discussion of the relative merits of using T- units or C- units).

2.5.4 *Accuracy* (Error- free T-units)

To code accuracy, following the studies of Rahimpour (1997, 2008), Errasti (2003), and Larsen- Freeman (2006), it was operationalized as the number of Error- free T-units i.e., the percentage of T-units that do not contain errors. All errors in syntax, morphology, lexical choice, and spelling errors were considered. Lexical errors are defined as errors in lexical form or collocation. These measures were used for analysis because these indices have been determined to be the best measures of second language development in writing (Larsen- Freeman, 2006).

Thus, in this study the word types per square root of two times the words was used as a measure of lexical variation, the number of words per T- unit was used as a measure of fluency, the ratio of clauses to T- units was used as a measure of complexity, and the number of error- free T- units per t-units was used as a measure of accuracy. These measures were used for analysis because these indices have been determined to be best measures of second language development in writing (Larsen- Freeman, 2006).

3. Results

To test the hypotheses of the study and find how the independent variables affect the dependent variables, the raw scores of the participants were fed into the computer software SPSS (version15) for further data analysis. Next, the paired samples t-test was employed to find out the impact of planning, which was the within-subjects variable, on the participants' performance.

To establish that the two planning conditions worked as anticipated, the length of time the participants in the two groups spent on tasks was measured. In accordance with the instructions given to the two groups, the on-line planning group spent longer on tasks than the other group as Table 1 shows.

In order to find out the effect of proficiency in unplanned vs. planned conditions, series of paired- samples t-test were used on each of the four dependent variables. In other words, to answer the research questions, the linguistic outcomes from the unplanned and planned performance were compared.

Table 2 presents a summary of the descriptive statistics for all the measures for the low proficiency learners. It provides the number of participants, means, standard deviations, and standard errors of mean of concept load, fluency, complexity, and accuracy for low proficiency participants in unplanned vs. planned conditions. As can be seen in Table 2, almost all the measures favored planned over unplanned conditions.

In order to make above conclusions more justifiable, the results were compared using paired samples test. The results of paired samples test in Table 3 demonstrate that none of the measures yielded significance difference. In other words, although all the measures favored planned over unplanned conditions, they were not significant.

Table 4 displays a summary of the descriptive statistics for all the measures for the high proficiency learners. It provides the number of participants, means, standard deviations, and standard errors of mean of concept load, fluency, complexity, and accuracy for high proficiency participants in unplanned vs. planned conditions. As Table 4 shows, the mean of concept load (X=4.6333) and the mean of accuracy (X=0.6722) are higher under planned conditions, but the mean of fluency (X=9.3589) and the mean of complexity (X=1.2964) are higher under unplanned conditions.

The results of paired samples test in Table 5 depicts that although none of the measures yielded significance difference, they reach almost significant.

4. Discussions

4.1 Concept Load

The results provide a support for the hypothesis regarding concept load. They are in line with others (Ortega, 1999; Wigglesworth, 1997; Kawauchi, 2005). As Wigglesworth (1997) suggested the high proficiency candidates may focus on the form and complexity of their linguistic output, while the low proficiency candidates may focus on content. Thus, in this study, the low proficiency learners may use planning time to focus on content of their linguistic output which in turn gives rise to more concept load performance. Also, Wigglesworth (1997) postulated that for the high-level candidates, planning time may be beneficial in a situation where the cognitive load required of the task is heavy. Consequently, in the more difficult tasks, it is possible that planning time plays an essential role in reducing the load on cognitive resources to manageable level. With simple tasks, there is no need to planning time as cognitive capacity is never reached. In fact, for the high proficiency candidates, on the easier tasks planning time does not make difference, but where the task is more difficult and the candidates are running out of cognitive resources, some differences emerge. This difference is not pronounced in low proficiency group. Hence, the findings of this study confirm that. Highly proficient learners produced more concept load in narrative tasks under planned condition.

4.2 Fluency

The present research depicts that more fluent performance was produced under planned condition by low proficiency learners. Quite the reverse, the high proficiency learners produced more fluent performance under unplanned condition. This finding provides a partial support for the second hypothesis. There may be a number of reasons for this finding of the study. It may be that planning time is used only by some participants; as a result, it may be that planning time is of little practical value. Otherwise it may be that the measures adopted and operationalized here may not be optimal measures of the features they support to measure.

4.3 Complexity

In addition, this study sets up that the participants in low proficiency produced more complex performance just in narrative tasks under planned condition. Conversely, more complex performance was produced by the participants in high proficiency under unplanned condition in all tasks. This is constant with the result of the studies by Foster and

Skehan (1996), Yuan and Ellis (2003), and Ellis and Yuan (2004) in the case of the low proficiency learners. However, in these studies proficiency was not considered as a variable, that is, the participants were only pre-intermediate level students and the two others were undergraduate English students. Thus, the findings of these studies can be compared with the low proficiency learners of this study. This finding can be put in plain words according to Foster and Skehan (1996). These authors assumed that with tasks that are most demanding cognitively, planning suggestions provided to participants enable them to make more inroads to a problem they might otherwise not to be able to analyze so effectively. In other words, when more complex language needs to be used, limited attentional resources force participants to concentrate on complexity to the disadvantage of fluency and accuracy. Nevertheless, this finding is at odds with Wigglesworth's (1997) claim that it appears that planning time may allow high proficiency learners to produce more complex language in the more difficult tasks. However, the low proficiency learners do not appear to be advantaged by planning time. Even so, in this study it seems that the low proficiency learners benefited from planning time in narrative task. It is likely that the low proficiency learners employed the planning time to compensate the cognitive load required of the task to access their explicit knowledge and thus produced more complex language in narrative tasks. Pertaining to the high proficiency learners, it is likely that they did not make use of planning time efficiently.

4.4 Accuracy

Furthermore, the findings of the study discovered that planning does not lead to more accurate performance in narrative tasks for low proficiency learners. In contrast, planning leads to the production of more accurate performance in narrative for high proficiency learners. As stated before, for the high proficiency learners planning time makes a difference where the task is more difficult. In more difficult tasks, it is possible that planning time plays an essential role in reducing the cognitive recourses to manageable levels. Thus, for the high proficiency learners cognitive load is a factor, with participants using planning time to focus on the subskills which may be viewed as the most relevant to the situation.

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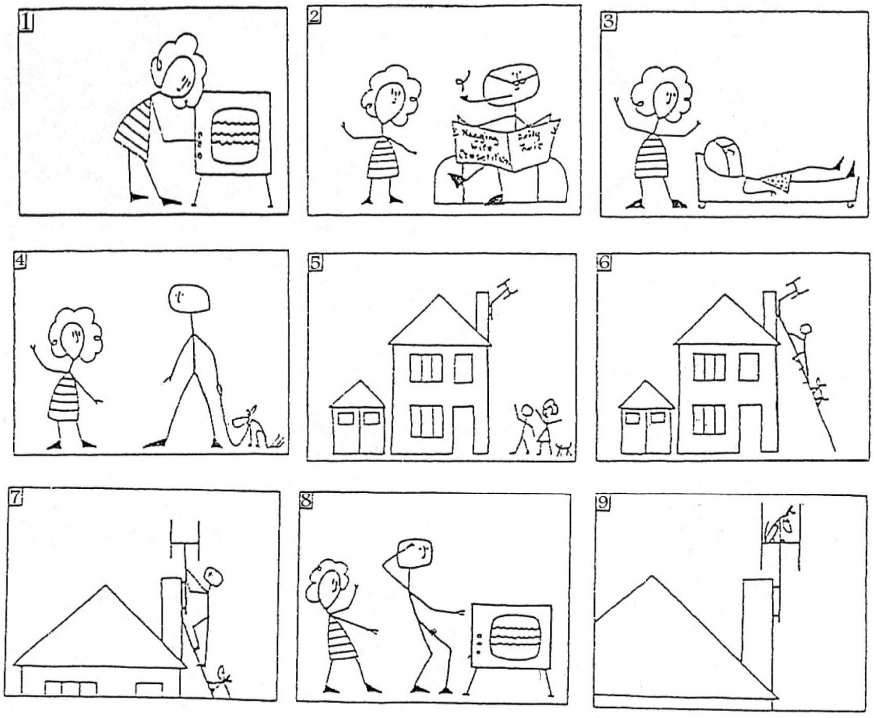
Appendix A: Task given to the participants in each class

Narrative Task

Write a story based on the following picture series



From Foster and Skehan (1996)

Appendix B: Instructions given to the participants in each condition

Pre- task planning

You have just seen a set of pictures. These pictures tell us a story. In a short while, I would like you to retell this story in English. Before you retell the story, you have 10 minutes to plan what you are going to write. Imagine that somebody has never seen these pictures and this is his/ her first time to learn about the story from you. So please tell the story in as much detail as you can. To assist you to prepare, you are given a sheet of paper and a pencil. You can use them to write some notes. But please don't write a complete sentence either in Persian or English. *When you began to tell the story, I will take the paper away*. You have 17 minutes to retell the story and you must produce at least 200 words.

You can begin your story like this: this morning, Tom, Susan, and George… Please prepare now.

(After 10 minutes)

It is time for you to begin. Please begin.

On- line planning

You have just seen a set of pictures. These pictures tell us a story. Now, I would like you to retell this story in English. Imagine that somebody has never seen these pictures and this is his/ her first time to learn about the story from you. So please tell the story in as detailed as you can. You can take as long time as you can when telling the story. If you think you say something not correct or not to your satisfaction, you can correct it as many times as you can. For each of 9 pictures you must produce at least four sentences. If you like, you can produce more than four sentences for each picture.

You can begin your story like this: this morning, Tom, Susan, and George…

Please begin.

Table 1. Paired Samples Statistics for Comparing the Length of Time Spent on Tasks

Planning	N	Mean	Std. Deviation	Std. Error Mean
Length of time (min.) Unplanned	216	20.7963	4.79294	.32612
planned	216	17.000	.00000	.00000

Table 2. Descriptive Statistics for Concept Load, Fluency, Complexity, Accuracy of the Two Groups

		N	Mean	Std. Deviation	Std. Error Mean
Concept Load	Unplanned	36	5.1586	.76076	.12679
	Planned	36	5.1811	.65852	.10975
Fluency	Unplanned	36	9.0575	1.62662	.27110
	Planned	36	9.1597	1.73580	.28930
Complexity	Unplanned	36	1.2594	.12793	.02132
	Planned	36	1.2825	.15465	.02577
Accuracy	Unplanned	36	.6833	.13858	.02310
	Planned	36	.6497	.18540	.03090

Table 3. Paired Samples Test Results for Concept Load, Fluency, Complexity, Accuracy of the Two Groups groups

		Paired Differences			t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean			
Concept Load	Unplanned Planned	-.02250	.62056	.10343	-.218	35	.829
Fluency	Unplanned Planned	-.10222	1.69706	.28284	-.361	35	.720
Complexity	Unplanned Planned	-.02306	.16060	.02677	-.861	35	.395
Accuracy	Unplanned Planned	.03361	.20312	.03385	.993	35	.328

Table 4. Descriptive Statistics for Concept Load, Fluency, Complexity, Accuracy of the Two Groups

		N	Mean	Std. Deviation	Std. Error Mean
Concept Load	Unplanned	36	4.4636	.54256	.09043
	Planned	36	4.6333	.56430	.09405
Fluency	Unplanned	36	9.3589	1.72301	.28717
	Planned	36	9.1517	1.90176	.31696
Complexity	Unplanned	36	1.2964	.18309	.03051
	Planned	36	1.2558	.18512	.03085
Accuracy	Unplanned	36	.6594	.18727	.03121
	Planned	36	.6722	.19625	.03271

Table 5. Paired Samples Test Results for Concept Load, Fluency, Complexity, Accuracy of the Two Groups

		Paired Differences			t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean			
Concept Load	Unplanned Planned	-.16972	.54257	.09043	-1.877	35	.069
Fluency	Unplanned Planned	.20722	1.82721	.30454	.680	35	.501
Complexity	Unplanned Planned	.04056	.18424	.03071	1.321	35	.195
Accuracy	Unplanned Planned	-.01278	.18683	.03114	-.410	35	.684