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Task Implementation and EFL Learners' Attention to Form: Examining the Effects of Pre-Task Planning and Post-Task Transcription

Masoud Saeedi^{*} 问

Assistant Professor of Applied Linguistics, Payame Nour University, Tehran, Iran

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Abstract

There is ample research evidence indicating that task implementation options and design features differentially affect the linguistic quality of second language (L2) oral output. The overarching aim of the current research was to add to the available body of research findings by investigating what effects the combination of two task implementation options, namely pre-task planning and post-task transcription, exerts on L2 learners' focus on form. The study involved sixty Iranian L2 learners who were presented with a picture story to be narrated under one of the following four conditions: pre-task planning (PTP), post-task transcription (PTT), both pre-task planning and post-task transcription (PTP/PTT), and control. Findings showed that while pre-task planning increased fluency and complexity, the anticipation of posttask transcription enhanced focus on form as indicated by more accurate performance. More importantly, pre-task planning along with the foreknowledge of post-task transcription of performance made for an exponential increase in accuracy, a gain which was achieved to the detriment of complexity. The outcomes are of pedagogical significance in that they lend support to the efficacy of using pre-task planning opportunity along with the anticipation of post-task transcription to elicit the highest accuracy level while learners are primarily concerned with conveying meaning.

Keywords: Pre- task planning, post- task transcription, complexity, accuracy, fluency

^{*} Corresponding author's email: saeedi.tefl@mail.pnu.ac.ir

INTRODUCTION

As a significant outgrowth of communicative language teaching (CLT), taskbased language teaching (TBLT) has been accorded considerable attention ever since the shift of paradigm from structural to the communicative approach, which underscored the centrality of meaning-based tasks as a means of initiating and promoting interaction among language learners (Ellis, 2003; Ellis, Skehan, Shintani, & Lambert, 2019; Skehan, 2003, 2018). Tasks are of high pedagogical value in current second language acquisition (SLA) because they help instructors elicit samples of learners' meaning-focused language use. Besides, they facilitate language acquisition through providing input to learners and giving them opportunities to use language meaningfully (Ellis, 2003; Swain, 1995, cited in Baleghizadeh & Asadi, 2013). Within taskbased research, a growing body of investigations has studied factors which are hypothesized to impact learners' oral performance. One strand of research in this area has been concerned with identifying those variables which prompt learners to focus on form while performing a meaning-based task. This endeavor has been primarily motivated by the assertion that the limited nature of attentional capacity prevents learners from simultaneously concentrating on both form and meaning; therefore, the meaning-based nature of a task may predispose them to mainly focus on conveying meaning at the expense of attention to form. The focus of form is also important in that when coming up as a result of communication, it can be relevant to learners' needs and experiences, problem-based, and consequently more timely and conducive to learning (Foster & Skehan, 2013; Long, 1988; Long & Robinson, 1998).

Pre-task planning, which is also called strategic planning, is one of the task implementation options whose effects on language learners' output have been documented. Previous research has established that planning before doing a task affects not only the aspect of meaning, i.e., fluency, but also form, i.e., complexity and/or accuracy (Ellis, 2009). By and large, the findings have suggested that though pre-task planning consistently advantages fluency and complexity, there is little evidence for its positive effects on accuracy

(Bui & Skehan, 2018; Skehan, 2018). The mixed findings regarding the effects of pre-task planning on accurate L2 production are attributed to such factors as learners' level of proficiency, amount and type of planning, task structure, and provision of guided or unguided planning (Bui, 2014; Foster & Skehan, 1996; Li, Chen, & Sun, 2015; O'Grady, 2019; Saeedi, 2015).

On the other hand, the act of transcribing as a post-task implementation variable has been shown to cause notable effects on L2 performance (Cooke, 2013; Foster & Skehan 2013; Hsu, 2017; Lynch, 2007; Qian, 2014). Overall, available findings indicate that learners' foreknowledge of the requirement to transcribe their task-based performance prompts them to notice and focus on the form in their output, hence more accurate and/or complex performance (Foster & Skehan, 2013).

As was briefly reviewed above, the implementation variables of pre-task planning and post-task transcription cause differential effects on L2 learners' production, in general and focus on form in particular. However, the way different combinations of the above variables affect learners' attention orientation and production remains to be investigated. In effect, to the best of the researcher's knowledge, no published research has addressed this issue. Thus, the current study was carried out to throw more light on the functioning of planning by investigating the conditions under which pre-task planning may be conducive to a focus on form. Such work can be a worthwhile undertaking as it provides further theoretical explanation and empirical evidence for the way planning interacts with other task implementation variables to develop complexity, accuracy, and fluency of L2 production which are key to achieving the functional proficiency underlying meaningful and effective L2 use (Ellis, 2009; Skehan, 1998).

LITERATURE REVIEW

As was mentioned previously, the main aim of the present investigation was to simultaneously examine the effects of pre-task planning and post-task transcription on L2 learners' oral performance in general and attention to form in particular. In what follows, the theoretical issues and empirical evidence related to the above variables are reviewed. First, we turn our attention to the variable of pre-task planning.

Pre-task Planning

Planning can happen either before or while performing a task (Ellis, 2005, 2009). In the case of pre-task planning, learners are allowed to get prepared before carrying out a given task. Based on Ahmadian (2012), what distinguishes careful online (also called within-task) planning from pressured online planning is that whilst in the case of the former learners are given unlimited time to prepare their speech when doing a task, in the latter case they are required to complete the task under time constraint. The psycholinguistic justification for providing unlimited online planning time, according to Ahmadian and Tavakoli (2011), is that given their limited attentional capacity, performing a meaning-based task under time limit prompts learners to primarily attend to communicating the message and, consequently, little attention is left for focusing on form. On the contrary, when their time is unlimited, they can take time to concentrate on form as well and monitor their production for accuracy.

As stated by Ellis (2005), pre-task planning is distinguished from rehearsal where the same or slightly changed task is completed before subsequently doing the main task more efficiently. While planning strategically, learners may encode and express content to prepare their message with respect to form and content before actually doing the task they are assigned. Of the different variations of planning, pre-task planning and repetition are two of the most extensively researched for their effects on L2 production (Stroud, 2019). Planning, in particular pre-task planning, can foster focus on form even as an activity outside the task itself (Ellis, 2016, cited in Hosseinzadeh, Shabani, & Ebadi, 2018).

From a theoretical point of view, the opportunity to plan helps learners more efficiently use their limited processing capacity (Schmidt, 2001), making it mentally difficult for them to simultaneously focus on form and meaning; a limitation which, according to Skehan (1998), leads to 'trading' one aspect of language for others. Tasks, by virtue of being meaning-based, would naturally induce learners to primarily pay attention to meaning not form (VanPatten, 1990). Pre-task intervention through planning is assumed to help learners direct their attention towards form during task performance by making more attentional capacity available and reducing the pressure on working memory (Skehan, 1996). To provide a plausible their psycholinguistic account as to the effects of planning on L2 output, previous studies (e.g., Ahmadian, 2012; Ahmadian and Tavakoli, 2011) have made reference to Levelt's (1989) account of the process of producing speech according to which speaking is the output of three stages: at the first stage, a message is conceptualized, then appropriate words are selected and grammatically correct sentences are built to formulate this message linguistically, and, finally, the appropriate muscles are moved to articulate overt speech sounds. Based on Ellis (2005, 2009), enhanced fluency is a result of the facilitated conceptualization. Pre-task planning also benefits formulation and even articulation leading to increased accuracy or complexity. According to Skehan's (1998) trade-off account of attentional capacity pointed to above, pre-task planning results in increased complexity and reduced accuracy, or vice versa.

To date, planning, either pre-task or online, has been explored in diverse contexts and from different perspectives. Adopting a process-oriented approach, a number of investigations have delved into what learners actually do and what strategies they employ when they plan in order to better perform a given task (Lee & Burch, 2017; Ortega, 2005; Pang & Skehan, 2014; Saeedi, 2021; Tabari, 2022). Whereas the above cited studies have focused on the planning process, a host of studies have researched the effect of planning on the linguistic product relative to complexity, accuracy, and fluency (e.g., Choe, Ryu, & Jeon, 2022; D'Ely et al., 2019; Ellis, 1987; Farahanynia & Khatib, 2021; Foster & Skehan, 1996; Khatib & Farahanynia, 2020; Li & Fu, 2016; Mochizuki & Ortega, 2008; Skehan, 2018; Tabari, 2020; Tabari & Wang, 2022; Tavakoli & Skehan, 2005; Yuan & Ellis, 2003). With respect to

the fluency and complexity of production, there is plethora of evidence showing that planning prior to task performance advantages these facets of L2 production (Khezrlou, 2020). The facilitative effects reported for fluency are ascribed to lower levels of stress learners experience while processing language and negotiating meaning online. More complex output is also explained in light of the conviction that the opportunity to plan helps learners build on the cutting edge of their L2 knowledge in terms of structure and lexis (Ortega, 1999).

Concerning accuracy, the literature on planning has yielded mixed results. While some researchers have claimed positive effects (Ellis, 1987; Mochizuki & Ortega, 2008; Tavakoli & Skehan, 2005), others have not observed any significant gains (Elder & Iwashita, 2005; Yuan & Ellis, 2003). Such mixed results have been attributed to variations with respect to learners' willingness and ability to monitor their output, their level of proficiency, motivation, or attitude, task complexity, task type, the length of planning, and whether the learners receive any guidance from the teacher during planning time (for a comprehensive review, see Yang, 2013). Hence, further research should be done to establish what variables mediate the way pre-task planning leads to focus on form.

Post-task Transcription

Language educators may use pedagogical intervention tools before, during, or after language use. The post-use intervention is particularly efficient in focusing learners' explicit attention to formal aspects of language (Doughty, 2001). In general, post-task activities may be either connected with learners' earlier task performance itself, or their interlanguage development (Skehan, 2014). In the case of language development, task design makes it possible to highlight certain language features which are supposed to develop through the post-task activity. As regards the first category of post-task activities, previous findings illustrate that the anticipation of two activities which link back to an earlier task completed by learners affects their performance. These activities include post-task public performance and transcription both of

which are reported to raise accuracy and also complexity (Bui & Skehan, 2018). It is argued that contrary to the act of speaking where the communicative pressure induces learners to prioritize meaning conveyance, transcribing their own performance gives them more processing time to reflect upon and monitor it for targetlikeness (Adams, 2006).

The post-task activity of transcription has been investigated by some researchers (e.g., Cooke, 2013; Foster & Skehan 2013; Hassanzadeh-Taleshi, Yaqubi, & Bozorgian, 2021; Hsu, 2017; Lynch, 2001, 2007; Mennim, 2003; Qian, 2014; Stillwell et al., 2010). Generally speaking, the results suggest that extracting, reviewing, and revising a transcript based on learners' oral performance leads to improvement in noticing several grammatical points which results in permanent changes in performance (Lynch, 2001; Stillwell et al., 2010). Interestingly, findings have also unveiled that what affects learners' complexity and accuracy of performance is the anticipation of a post-task activity not the transcription itself (Foster & Skehan, 2013). The results for post-task transcription done under variant conditions have also been of significance, pointing to advantageous effects of pair-based transcription on syntactic complexity and the positive influence of individualbased transcription on lexical complexity (Qian, 2014). Lastly, post-task transcription, when coupled with task implementation variables, has yielded notable results. It has been documented that post-task transcription in conjunction with task repetition generates higher levels of accuracy in oral performance, which could be observed even when performing a new task (Hsu, 2017).

To conclude, the above review shows that giving the learners time for planning before doing a given task and requiring them to transcribe their performance after doing it have been utilized as pre- and post-task pedagogical intervention tools to direct their attentional resources to aspects of form while performing a task, with the opportunity to plan easing the communicative pressure and processing demands and post-task transcription making form salient in task performance. Such interventions lead to variant results for the linguistic aspects of learners' oral output. Specifically, whereas pre-task renders beneficial effects on fluency and complexity, its effects on accuracy have been mixed. Post-task transcription also exerts a positive influence on accuracy and/or complexity.

PURPOSE OF THE STUDY

The inconclusive findings regarding pre-task planning effects on the accuracy of L2 speech pushed the researcher to investigate whether and how this variable interacts with post-task transcription to make form more salient in learners' speech while performing a meaning-based task. Thus, the present research was geared towards answering the following research questions:

- 1. What impact does pre-task planning exert on the complexity, accuracy, and fluency of L2 speech?
- 2. What impact does post-task transcription exert on the complexity, accuracy, and fluency of L2 speech?
- 3. What impact does pre-task planning in tandem with post-task transcription exert on the complexity, accuracy, and fluency of L2 speech?

METHOD

Participants

The participants were sixty male Iranian intermediate EFL learners from four intact classes of an Iranian language institute in the summer semester of 2019. They were native speakers of Persian whose age ranged from 16 to 23. Given that the study was conducted in an EFL context, these learners had limited communicative use of English outside the class. They had different motivations for learning English including immigration, furthering their careers, and getting ready for Iranian university entrance exam. The participants attended the classes twice a week in a twenty-session semester. They were taught a locally developed English Language Teaching (ELT) material. To ascertain that they were comparable in terms of proficiency, the Quick Oxford Placement Test was administered. The participants volunteered

to take part in the study; however, to allow for ethical considerations, they were asked to sign written consent forms prior to the study. They were also informed that the results would not be taken into account for their evaluation and would be used for research purposes. The learners were randomly assigned into four performance conditions of fifteen each: pre-task planning (PTP), post-task transcription (PTT), both pre-task planning and post-task transcription (PTP/PTT), and control. The details for each condition are provided below.

Design

Since the present research was based on a between-groups design, each learner carried out the assigned task under one of the following conditions: pre-task planning, post-task transcription, pre-task planning combined with post-task transcription, and control. Pre-task planning and post-task transcription were the independent variables whose effects on performance were analyzed relative to the complexity, accuracy, and fluency as the dependent variables.

Procedure

To collect samples of participants' speech, they were required to perform a narrative task. Doing such a task involves recounting a story developing in a series of related pictures. Second language educators have widely used narrative tasks in classrooms to promote learners' speech. The reason for the extensive use of this task type is that it gives learners a chance to get involved in real life communication, produce language, notice the gap in their interlanguage, and their performance (Ellis, 2003; Swain, 2005). The picture story employed in the present research was adopted from Swain and Walter (1990). The six sequenced set of pictures showed a passerby who is walking alone along busy streets, seemingly unaware of the commotion of city life. Because he is listening to music through a Walkman, he does not heed the

screaming of police siren, shoplifting, car accidents, or a tiger going past him! Finally, he safely gets home (see Appendix A).

To control for the potential influence of an unfamiliar setting on participants' performance (Skehan, 1998), the data were collected in intact classes during weekly scheduled class times. As was mentioned above, the participants narrated the picture-based story under one of the following conditions:

Those who were assigned to the control group did not have sufficient time for planning their speech before doing the task. In fact, they had only thirty seconds to look at the sequenced pictures and retell the story. Furthermore, they were not required to listen to their recorded performance and transcribe it later. The learners in the PTP group who carried out the same narrative task were given five minutes to plan their speech before their narration. The decision as to the length of planning time followed previous research findings (see Bui & Skehan, 2018). The participants in this group were not required to transcribe their speech for further analysis and practice. Participants in the PTT had to check the pictures in thirty seconds before narrating the story developing in them. However, they were notified that they would be required to transcribe their performance. Following Foster and Skehan (2013), the learners in this group were told that after task performance, the researcher would give them a copy of their recorded performance to take home to listen and transcribe. They were instructed to repeatedly listen to each phrase, accurately transcribe what they heard, and finally take note of their errors. It needs to be mentioned that they were informed that their transcripts would be discussed in the following sessions. More details are presented in Appendix B. Finally, learners who were in the PTP/PTT group were allowed to prepare their speech in five minutes. Besides, they were informed that they would be given a copy of their recorded performance to listen and transcribe later at home.

Having recorded each participant's performance, the researcher subsequently transcribed, segmented, and analyzed it with respect to the operational definitions of complexity, accuracy and fluency provided below. Given that raters' inconsistent and variable application of the same set of criteria as well as human error, subjectivity, bias, inattention, lack of experience, or preconceived bias may lead to unreliable evaluation (Brown, 2004, cited in Doosti & Ahmadi Safa, 2021), they were advised to take measures to address this serious concern. Therefore, to alleviate possible inconsistent ratings caused by the above factors, the researcher asked a colleague to randomly check about ten percent of the transcripts to make sure of the reliability of the coding procedure. To enhance the likelihood of consistent and invariable ratings, we had some brainstorming prior to her checking. The obtained inter-rater reliability coefficients for each measure of complexity, accuracy, and fluency were greater than .80, which ensured reliable coding. It should be noted that, in the case of disagreement between the raters, they discussed the item until they reached an agreement. The disagreement cases chiefly pertained to measuring syntactic complexity and, in particular, defining the analysis of speech (AS)-unit boundaries. To illustrate, the following sentence extracted from one participant's narration was coded as two AS-units by the second rater:

• ^{AS}₁[*The pedestrian does not pay any attention*]^{AS}₂[*to his environment.*]

However, based on Foster, Tonkyn, and Wigglesworth's (2000) definition, the above extract should be considered a single AS-unit:

• ^{AS}₁[*The pedestrian does not pay any attention to his environment.*]

As was previously mentioned, each participant's elicited speech was analyzed with regard to complexity, accuracy, and fluency; performance areas which constitute the most viable goals distinguished in the current approach taken by the researchers (Ellis, 2003; Ellis & Barkhuizen, 2005; Skehan, 2009). In general terms, complexity of speech is defined with respect to such criteria as its size, elaborateness, richness, and diversity. Accuracy refers to how target-like and error-free language use is. Fluency is characterized in terms of the number of pauses, hesitations, or reformulations in speech and also the extent to which it is smooth, easy, and eloquent (Michel, 2017). As displayed in Table 1, of the various working definitions put forward for the CAF, the researcher adopted the following measures previously used in similar studies and specified by Ellis and Barkhuizen (2005) to measure participants' speech in a more reliable manner:

Complexity	Accuracy	Fluency					
Syntactic complexity: the	Error-free clauses: the	Speech rate A: the number					
number of clauses divided by	percentage of error-free	of syllables in each					
the number of to AS-units	clauses in terms of syntax,	participant's speech					
(i.e., an independent clause or	morphology, and lexis.	divided by the total					
sub-clausal unit, together with	Correct verb forms: the	number of seconds spent					
any subordinate clause(s)	percentage of correct verbs	on task performance and					
associated with it) in each	with respect to tense,	multiplied by 60.					
speaker's utterance (Foster et	aspect, modality, and	Speech rate B: the number					
al., 2000).	subject-verb agreement in	of meaningful syllables					
Syntactic variety: the total	each participant's speech.	(excluding repeated,					
number of different		reformulated, and replaced					
grammatical verb forms in		syllables, words, and					
terms of tense and modality in		phrases).					
each participant's speech.							

Table1: Measures used to tap complexity, accuracy, and fluency

It should be pointed out that in analyzing the complexity of performances, AS-units were preferred over T-units because whereas the definition of the latter is inadequate to deal with a comprehensive analysis of oral production, the former is a clearly defined measure which because of its flexibility can be easily applied for different research purposes (Foster et al., 2000). Besides, related previous studies have employed this measure of complexity which renders the findings obtained here more comparable with theirs.

Data analysis

Having coded the data, the researcher quantitatively analyzed them. First, the means and standard deviations related to complexity, accuracy, and fluency were calculated using the SPSS. Next, one-way between-groups ANOVAs were run to determine the statistical significance of mean differences across the groups. Effect sizes were obtained for all omnibus F-tests through η^2

calculated by dividing the sum of squares between groups by the total sum of squares. The obtained values were interpreted based on Cohen's criterion according to which .01, .06, and .14 indicate small, moderate, and large effects, respectively. Finally, Scheffe post-hoc test was used to specify the exact locations of significant mean differences.

RESULTS

The major aim of this investigation was examining whether and to what extent EFL learners' focus on form was influenced by the combination of pre-task planning and post-task transcription. Descriptive statistics related to the dependent variables of the study are displayed in the following table.

	Mean (SD)				
	Control	РТР	PTT	PTP/PTT	
C/AS	1.018 (.021)	1.088 (.031)	1.034 (.03)	1.05 (.033)	
DGV	5.77 (.61)	8.87 (1.06)	6.53 (.91)	7.24 (1.9)	
Correct clauses	28.71 (1.24)	29.54 (.98)	29.91 (.99)	31.75 (.77)	
Correct verbs	17.55 (1.37)	18.76 (1.52)	19.32 (1.68)	21.04 (1.85)	
Rate A	47.52 (.407)	49.88 (.92)	47.31 (.602)	49.64 (1.47)	
Rate B	42.61(.52)	45.5 (.63)	42.3 (.68)	45.3 (1.01)	

Table 2: Group means and standard deviations for complexity, accuracy and fluency

Notes: C/AS = Ration of clauses to AS units; DGV = Different grammatical verbs used.

In order to determine whether the mean differences across the groups were of statistical significance, one-way between-groups ANOVAs were run (see Table 3). It should be noted that though the normality assumption is required by many statistical tests such as ANOVA, it is often overlooked that such

tests are robust against a violation of this assumption if sample sizes are reasonable (i.e., $N \ge 25$). Therefore, normality tests are only needed for small sample sizes. However, to enhance the statistical power of the analyses, prior to running ANOVA, the Kolmogorov-Smirnov test was used to check the suitability of the obtained data with regard to meeting its assumptions (see Appendix C).

Dependent Variable		Mean Square	Eta Squared	F	Sig.
Syntactic complexity	Between Groups	.014	.51	16.386	.000
Syntactic variety	Between Groups	26.279	.50	17.608	.000
Correct clauses	Between Groups	24.667	.62	23.926	.000
Correct verbs	Between Groups	31.641	.36	12.089	.000
Rate A	Between Groups	27.772	.53	31.275	.000
Rate B	Between Groups	43.739	.76	80.396	.000

Table 3: Results of one-way between-groups ANOVAs on the effects of task

 implementation on participants' speech

As displayed in the above table, implementing the narrative task under different conditions differentially affects participants' performances as measured in terms of syntactic complexity, F(3, 56) = 16.38, p = .000, syntactic variety, F(3, 56) = 17.6, p = .000, correct clauses, F(3, 56) = 23.92, p = .000, correct verbs, F(3, 56) = 12.08, p = .000, rate A, F(3, 56) = 31.27, p = .000, and rate B, F(3, 56) = 80.39, p = .000.

The results of one-way ANOVAs suggest that different combinations of pre-task planning and post-task transcription have caused statistically significant effects on learners' oral performances across the groups. The large effect sizes reported in Table 3 ($\eta^2 = .51, .50, .62, .36, .53,$ and .76) confirm strong associations between task implementation conditions and oral performance in terms of syntactic complexity, syntactic variety, correct clauses, correct verbs, Rate A, and Rate B, respectively. To pinpoint the exact locations of significant mean differences, post-hoc Scheffe test was run (see Table 4 below).

The first research question was posed to determine how pre-task planning affected the CAF of L2 speech. With complexity, the findings set out in Table 1 showed that planning strategically prior to task performance benefits complexity of learners' task-based speech. As shown in Table 4 below, the mean complexity difference between the PTP and control groups was statistically significant (p<.000). Thus, compared with the control group, participants in the PTP group generated a significantly higher level of syntactic complexity as well as variety in terms of grammatical verbs used.

With respect to accuracy, on the other hand, though planners performed more accurately than those who were in the control group, the mean differences were not statistically significant (p= .096; p= .166). Hence, pretask planning is not associated with increased accuracy. Regarding fluency, the statistical analyses reported in Table 4 uphold the facilitative influence of pre-task planning on this aspect of speech (p=.000). Therefore, it can be deduced that allowing learners to prepare their speech before task performance, enhances the fluency of their production.

Table 4: Statistics for post-hoc Scheffe tests on the impact of task implementation

 on participants' speech

Measure	Locations of Significant Mean Differences						
	Control PTP	Control PTP/PTT	Control PTT	PTP PTP/PTT	PTP PTT	PTT PTP/PTT	
C/AS	.000*	.009*	.56	.037*	.000*	.22	
DGV	.000*	.019*	.418	.007*	.000*	.475	
Correct clauses	.184	.000*	.023*	.000*	.812	.000*	
Correct verbs	.249	.000*	.038*	.004*	.828	.046*	
Rate A	.000*	.000*	.947	.915	.000*	.000*	
Rate B	.000*	.000*	.716	.897	.000*	.000*	

*Mean difference is significant at the .05 level

The second question related to the impact of post-task transcription on the CAF of participants' speech. Concerning complexity, the findings show that expecting a post-task transcription work does not exert a statistically significant effect on syntactic complexity (p = .56) and syntactic variety (p = .418). By contrast, the mean accuracy differences between the PTT and control group were of significance with respect to correct clauses (p = .023) and correct verbs (p = .038), which confirms the better performance of the former group. Regarding fluency, the results of Scheffe statistical analyses reported in Table 4 fail to show any significant mean fluency differences between the PTT and control groups (p > .05). In summary, anticipation of post-task transcription enhances focus on form as measured in terms of correct clauses and verbs; however, this implementation option does not yield any significant effects on complexity and fluency.

The third research question was asked to examine the effects combination of pre-task planning and post-task transcription might exert on the CAF in L2 speech. The answer to this question was provided by comparing the performances of participants in the PTP/PTT group with those who performed under the control condition. Concerning complexity, the findings presented in Table 4 make it clear that pre-task planning together with the foreknowledge of doing a post- task activity generates more complex L2 speech (p<.05). More precisely, planners who were also required to transcribe their performance after task performance produced more complex narrations. Nevertheless, a closer scrutiny of the post hoc Scheffe results set out in Table 4 lays it bare that the PTP/PTT group produced significantly less complex speech than the PTP group (p<.05). The theoretical significance of this interesting finding will be explained in the following section.

In the case of accuracy, the inferential statistics established the significance of mean differences between the PTP/PTT and control group, pointing to the better performance of the former (p<.000). Interestingly, this condition seems to be the most efficient for focusing on form as it caused the highest level of accuracy among the four performance conditions. The significance of this observation will also be expounded below. In summary, it might be safe to conclude that the synergistic effects of pre-task planning and foreknowledge of post-task transcription activity are reflected in the highest level of accuracy. Finally, the comparison of fluency means across the PTP/PTT and control group indicates that the participants in the former exceeded those in the latter group (p<.000). Hence, with respect to the third research question, the findings suggest that the combination of pre-task planning and expectation of post-task transcription brings about gains in all performance areas.

DISCUSSION

This research sought to examine the way pedagogical intervention via manipulating task implementation variables impacts resultant speech. In doing so, the synergistic effects of pre-task planning and post-task transcription were examined. In this section, the results reported above are summarized and discussed with respect to available research outcomes and pertinent theoretical issues.

As regards the influence of planning before doing a task on different dimensions of L2 speech, it was observed that pre-task planning makes for more complex oral discourse. This finding accords with the results presented by earlier research (e.g., Foster & Skehan, 1996; Gilabert, 2007; Li & Fu, 2016; Wendel, 1997; Yuan & Ellis, 2003), lending further support to the contribution of pre-task planning to higher levels of complexity. For accuracy, however, a different picture emerged as the mean differences between the PTP and control groups were insignificant. This finding upholds the conclusion reached by Yuan and Ellis (2003) and Li, Chen, and Sun (2015) who failed to find any significant accuracy gains accrued from the presence of pre-task planning but runs counter to the outcomes of Ellis (1987) and Mehnert (1998) who documented more accurate performance elicited under pre-task planning condition. With respect to fluency, the results provide further evidence for the clear and consistent beneficial effects previously offered in the literature (Gilabert, 2007; Li & Fu, 2016; Li et al., 2015; Tavakoli & Skehan, 2005).

Yuan and Ellis (2003) present a viable psycholinguistic explanation for the effects of planning before task performance on L2 speech, attributing its favorable effects to facilitated conceptualization where the speaker forms the propositional content and accesses the isolated chunks of language needed to encode such content. More detailed conceptualization, they reason, leads to gains in complexity and fluency not accuracy. Though learners might carefully formulate their speech during planning time, online processing pressure caused by limited attentional capacity prevents them from focusing on the forms they have already planned. Yuan and Ellis reason that although learners might try to effectuate a detailed formulation, during task performance they are unlikely to remember the forms they have previously planned. In effect, during task performance they are more likely to remember content not linguistic encodings. Along the same lines, there are grounds to deduce that the opportunity to plan makes for an elaborate conceptual plan of the content learners wish to express rather than linguistic forms (Ellis, 2005).

Concerning the way predicting a post-task transcription activity influences the linguistic quality of L2 speech, the results indicated a favorable impact on accuracy. The inclusion of this task implementation option, however, did not result in any significant changes in complexity and fluency. These results were in accordance with Foster and Skehan (2013) whose findings confirmed the hypothesis that the anticipation of an additional activity following the task performance (i.e., transcription) can affect learners' focus of attention by channeling attention towards form. These researchers documented positive effects on accuracy of production elicited through both narrative and decision-making tasks. Facilitative effect on complexity was observed only for the decision task and fluency was not affected. The fact that when learners are informed of the requirement to do a post-task transcription work they generate more accurate speech may be accounted for by reasoning that asking learners to transcribe involves converting and confronting their output to a kind of accessible and salient self-input which is more likely to be accessible and salient; a performance condition which pushes them to more attentively monitor their production and check it in terms of targetlikeness (Foster & Skehan, 2013). It may also be plausible to reason that the act of transcribing assists learners in monitoring their output as a seemingly error free utterance may turn out to be erroneous once it is converted into written form (Cooke, 2013, cited in Hsu, 2017).

Regarding the synergistic influence of pre-task planning and post task transcription, which was actually the main focus of the present investigation, the outcomes presented evidence for the advantageous impact of this condition on all performance areas. More precisely, though pre-task planning elicits more fluent and complex speech, the combination of planning and posttask transcription brings about increased fluency, complexity and, accuracy. More importantly, this performance condition generated the highest accuracy level across the four conditions. This noteworthy finding advances our current wealth of research evidence regarding the effects of planning, providing another possible explanation for the mixed accuracy results reported to date. As was pointed to above, planning research suggests a clear and consistent positive impact on fluency and complexity, but mixed effects on accuracy of L2 output. Accordingly, it seems reasonable to hypothesize that the effect planning causes on accuracy of speech is regulated by the existence of post-task pedagogic intervention in the form of learners' foreknowledge of transcribing their performance. In other words, planning enhances accuracy if learners anticipate transcribing their performance.

Lastly, as reported above, in comparison with the pre-task only, the combination of pre- task planning and post-task transcription made for more accurate but less complex speech. This result would seem to accord with the limited capacity view of attention (Schmidt, 2001), and provides confirmation for Skehan's Trade-off Hypothesis (Skehan, 1998), in that focusing limited attention on one aspect of speech may lead to negative effects on other components. Specifically, the results chime with Foster and Skehan (1996) who reason that the trade-off involves complexity and accuracy, such that an exponential gain in accuracy is achieved at the cost of complexity. This piece of evidence, however, runs counter to Wendel's (1997) postulation whereby language learners' attention is divided between fluency and accuracy.

CONCLUSIONS AND IMPLICATIONS

The major aim of the current investigation was examining whether and how the combination of pre-task planning and post-task transcription influences the resultant speech. The findings confirmed previous results as to the overall facilitative effects pre-task planning causes on generating more complex and fluent L2 speech. However, the most notable contribution of this study to the available body of findings in the literature is that pre-task planning, when coupled with the anticipation of doing a post-task transcription activity prompts L2 learners to concentrate on both the content and form of their speech as indicated by increased complexity, accuracy, and fluency. This piece of evidence is of particular theoretical significance as it helps render a well-documented and empirically robust theory of the functioning of planning by considering what factors mediate its influence on L2 production (Ellis, 2009). The results presented here also bear pedagogical significance highlighting the importance of manipulating task implementation options as effective pedagogical intervention tools with the aim of fostering a simultaneous focus on not only meaning but also form in learners' production. Analyzing task design and implementation relative to such a tripartite view of performance is of central importance because it is related to a sequence through which L2 is acquired and developed (Bui & Skehan, 2018). Nevertheless, the study has some limitations which should be acknowledged. Firstly, given that the current research was not a longitudinal one, a degree of caution is required in generalizing from the findings. Secondly, the findings are limited to narrative tasks based on picture prompts. Thus, further longitudinal investigations in different settings with diverse tasks (e.g., direction giving, decision making, and opinion gap) are definitely needed to offer more robust empirically grounded evidence for the extent to which such effects may carry over to other tasks assigned to be completed on dissimilar occasions.

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ORCID

Masoud Saeedi (D) http://orcid.org/0000-0003-4558-1366

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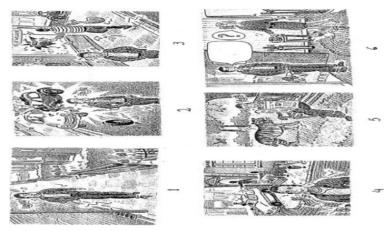
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APPENDICES

APPENDIX A

The narrative task (the Walkman, adopted from Swain and Walter, 1990) Task Instruction

Please describe the story which these six pictures show in English. You should produce at least 4 sentences and your story should be as detailed as possible.



Sample rater's transcriptions of learners' audio-recorded performances

1) The photo showsa man... He walks....on the street which very.... busy.... Because he is.... listening music, he doesn't hear the voice of.... accidents. He can't notice the danger ofwild animal, accident and thiefs.

2) I see the young man in pictures. Man has....wife. He isnot careful because... he listens to the music.... street has many dangers but ...the man is not careful... there istiger but doesn't kill him... there is accident and... thief in photo

3) The story is about a man. He is young and listens to.... somethings He passes the street and doesn't look at things.... A robber takes away somethings and police comes. After that.... a tiger isnear to himbut he goes to home and.... his woman is surprised

APPENDIX B

Post-task transcription instruction

Please play your recorded speech and repeatedly listen to each phrase and closely transcribe the actual words you hear in a *Microsoft Word* document. Then, use the *track changes* function to check your transcription and correct the mistakes related to grammar, structure, and vocabulary.

Sample students' post-task transcription with their corrections

1) In the pictures I see the young man who walk is walking in the street. the street is full of accident-accidents. I think because he listens is listening to the music, he can't hear any sounds noise. he doesn't see the thief and the accident. At the end, the tiger pass passes but don't doesn't kill him. he escapes to home safely

2) This is the story-is about young person man. He is walking on in the-street streets. very busy street streets. this place-city is very dangerous because there is a the robber robbery, a tiger and an accidents accident. The man is very lucky because the tiger does not eat-kill him and he goes to home and sees a girl-his wife at last

3) The person in picture pictures is uses using headphones for listening to music. He is walking in street and many thing things happen. I think because music noise sound is loud he does not hear the noise of accident and the window break breaks. the police come comes and he does not see it. his woman wife is in the home and is surprised

APPENDIX C

Kolmogorov-	Smirnov Test						
		Syntactic	Syntactic	Correct	Correct	Rate A	Rate B
		complexity	variety	clauses	verbs		
N		45	45	45	45	45	45
Normal	Mean	1.0558	7.2960	30.0062	18.9284	49.0171	44.4758
Parameters ^a	Std.	.04054	1.80995	1.63519	2.01235	1.47217	1.52275
	Deviation						
	Absolute	.090	.154	.084	.091	.133	.140
	Positive	.090	.154	.084	.060	.133	.140

Most	Negative	043	106	072	091	073	128
Extreme							
Differences	5						
Kolmogoro	v-Smirnov Z	.604	1.036	.563	.609	.892	.939
Asymp. Sig	. (2-tailed)	.859*	.233*	. <i>910*</i>	.852*	.404*	.342*

a. Test distribution is normal.

*Since p values are larger than 0.05, it can be deduced that the variables follow a normal distribution.