

The Differential Effects of Pre-Task Planning and On-Line Planning on the Fluency, Complexity, and Accuracy in L2 Oral Production

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Abstract: The purpose of this literature review was twofold: First, to examine the effect of pre-task planning on the fluency, complexity, and accuracy in second language oral production; and, second, to examine the impact of on-line planning on the fluency, complexity, and accuracy in second language (L2) oral production. By investigating twenty-five papers concerning the effect of task planning on L2 oral production, it is found that pre-task planning promoted fluency and complexity, whereas on-line planning resulted in both greater grammatical complexity and accuracy but not fluency. Additionally, the effect of pre-task planning on accuracy remains controversial. Through this research, the paper also points out factors of mediation (e.g. individual differences) that may inspire researchers to do further pedagogical research to figure out the relationship between task planning and L2 oral production.

1. Introduction

Tasks have a central place in second language acquisition. Research in Task-Based Language Teaching (TBLT) has inspired broad perspectives for pedagogical innovations in the second language teaching. However, Skehan (1996) claims that second language (L2) learners, especially those with limited proficiency in the second language, find the difficulty in attending to meaning and form at the same time and therefore have to decide to prioritize one aspect of language over others. Based on this, Ellis (2005) argues that when L2 learners are given the opportunity to plan the linguistic content of tasks, they can compensate the limitations of proficiency by accessing information of various linguistic aspects, which enhances the quality of linguistic output. Hence, planning is regarded as one of the significant factors in the studies of TBLT. Research in the last few decades has also explored the impact of planning on L2 oral production (Mojavezi, 2013), especially where fluency and complexity are concerned. According to Ellis (2009), fluency, accuracy, and complexity have been considered to be the three important aspects of language production. In this literature review, the article will focus on the effects of pre-task planning and on-line planning on the fluency, complexity, accuracy in L2 oral production.

2. Task Planning

Ellis (2009) argues that planning includes pre-task planning and within-task planning (also called on-line planning). They are distinguished based on when the planning is taken either before the task itself or during the performance of the task. Pre-task can be further divided into rehearsal (i.e. learners have the opportunity to perform the task before performing it a second time) or strategic planning (i.e. learners plan the content and language of the task without opportunity to rehearse it), while on-line planning being divided into pressured (i.e. learners are required to complete the task under time limitation) and unpressured (see Figure 1). Yuan and Ellis (2003, p. 6) characterize on-line planning as “the process by which speakers focus on the formulation stage during speech planning and engage in production monitoring of their speech acts”.

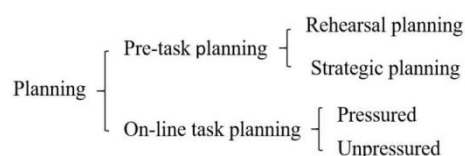


Figure 1 Types of planning (according to Ellis, 2009, p. 476).

3. Definitions of Fluency, Complexity and Accuracy

How planning affects oral task performance has been explored concerning three aspects of language production—fluency, complexity and accuracy. Notional definitions of these are shown in Table 1 with reference to the explanation of Skehan and Foster (1999).

Table 1 Definitions of Fluency, complexity, and accuracy (based on Skehan and Foster 1999:96-97).

Aspect	Definition
Fluency	The capacity to use language in real time, to emphasize meanings, possibly drawing on more lexicalized systems.
Complexity/Range	The capacity to use more advanced language, with the possibility that such language may not be controlled so effectively. This may also involve a greater willingness to take risks, and use fewer controlled language subsystems. This area is also taken to correlate with a greater likelihood of restructuring, that is, change and development in the inter-language system. ¹
Accuracy	The ability to avoid error in performance, possibly reflecting higher levels of control in the language as well as a conservative orientation, that is, avoidance of challenging structures that might provoke error.

3.1. Fluency

Based on the definition of fluency given by Skehan and Foster (1999), it demonstrates that fluency concerns the learners' ability to produce language by focusing on meaning. Yuan and Ellis (2003) claim that there are various ways of measuring this—length of run, speech rate (e.g. the number of syllables per minute of speech), silence, repetitions and reformulations.

3.2. Complexity

According to Skehan and Foster (1999), complexity concerns the elaboration of language that learners produce, which suggests that learners have the tendency to take risks of using advanced language and to reconstruct their interlanguages. Correspondingly, Yuan and Ellis (2003) have mentioned some measures of complexity (e.g. the number of clauses and lexical complexity).

3.3. Accuracy

Skehan and Foster (1999) demonstrate that accuracy concerns the capacity to avoid provoking error that challenges structures of target language norms. Researchers (e.g. Crookes, 1989; Wigglesworth, 1997) have adopted ways to measure accuracy by examining the accurate use of specific grammatical features (e.g. articles).

4. The effect of task planning on L2 Oral Production

4.1. The effect of Pre-Task Planning on Fluency in L2 Oral Production

In the earlier classroom studies, Crookes (1989), Foster and Skehan (1996), and Wendel (1997) reported that pre-task planning increased fluency in L2 oral production. One of studies in this field was conducted by Foster (1996), who used number of pauses, total silence and repetitions to measure fluency to investigate the effect of planning time on oral production of 32 ESL learners. Foster found that learners could speak more fluently after planning time in three different tasks, namely personal information, narrative and decision-making tasks. With the same designed content, Foster and Skehan (1996) reported that planning did not have positive effect on fluency in the decision-making task. Later, in Foster and Skehan (1997), the researchers figured out planners

paused less, which corresponds the results of Foster and Skehan (1996).

In the more recent classroom study, Yuan and Ellis (2003) found the positive effect of pre-task planning on fluency, which was measured by counting the number of syllables per minute. In addition, the finding of Tajima (2003) indicates that pre-task planning resulted in an increased speech rate and fewer pauses. Gilabert (2006) also found the greater fluency in planned conditions by measuring the pruned speech rate (the number of syllables per minute). In contrast, Kawauchi (2005) concluded that strategic pre-task planning only benefited low-intermediate participants but not advanced ones. Bamanger and Gashan (2015) argued that this inconsistency results did not motivate advanced learners to use time planning.

Although many studies have found the positive effect of pre-task planning on fluency in L2 oral production, Elder and Washita (2005) reported no effect of planning on narrative tasks in a testing situation by analyzing their scores. Ellis (2005) mentioned that testing context can be confounded with another variable, length of planning time, as testing studies typically provide a much shorter time for planning than classroom or laboratory studies. Therefore, he speculated that the reason why planning is generally ineffective in a testing context is that learners perceive they are being assessed which causes them to focus on accuracy rather than fluency.

4.2. The effect of Pre-Task Planning on Complexity in L2 Oral Production

In the earlier classroom studies, Crookes (1989) reported that L2 learners could produce more complex language if given more planning time. In a subsequent study, Foster and Skehan (1996) reported that strategic planning led to grammatical complexity in learners' personal information and narrative tasks but not in the decision-making task. However, Foster and Skehan (1997) reported that planning resulted in greater grammatical richness learners' personal and decision-making tasks but not in the narrative tasks. Wendel (1997) mentioned that the planning group achieved syntactic complexity but did not use many word families, while Mehnert's results (1998) showed no effect of planning on complexity by investigating different amounts of planning time on L2 oral production.

In the more recent research, mixed results with reference to the effect of pre-task planning on complexity in L2 oral production are presented. Yuan and Ellis (2003) found that planning had positive effect on grammatical complexity by measuring the number of sentence nodes per T-unit, the mean segmental type-token ratio and the variety of verb forms that L2 learners used. Similarly, Foster and Skehan (2005) pointed out that the guided planning promoted students to produce more subordinate clauses than those provided with unguided planning or no planning. In contrast, Gilabert (2006) failed to find the effect of planning on lexical complexity in laboratory study. In 2008, Mochizuki and Ortega also found no differences in general complexity with low proficiency learners.

Considering task factors and planning variables, there is no clear evidence that the pre-task planning affects complexity positively. More research is needed to establish how these two variables interact with planning to influence complexity.

4.3. The effect of Pre-Task Planning on Accuracy in L2 Oral Production

Previous studies have provided mixed results regarding an effect of planning on accuracy. The research of Foster and Skehan (1996) showed that undetailed planning benefited the accurate oral output of L2 learners, who could produce more error-free clauses. Nevertheless, Wendel (1997) failed to find the usefulness of planning for accuracy by measuring percentage of correct verbs and clauses that L2 learners produced. Additionally, Mehnert (1998) reported that the time of planning for producing fewer errors per 100 words was determined by the type of task (i.e. structured or unstructured), which suggests the interaction between task types and planning time.

In recent research of this field, Yuan and Ellis (2003) found that there was no significant effect of planning on accuracy while Skehan and Foster (2005) argued that detailed planners were able to produce more accurate speech. Nevertheless, Gilabert (2006) showed no differential effects of planning on accuracy contrast to the study of Mochizuki and Ortega (2008), which demonstrated that planning participants with guidance could make more accurate relative clauses. Rafie et al. (2015) also pointed out that rehearsal task planning induced accuracy in L2 oral production.

Based on the results that only the low proficiency L2 learners made improvement on the use of regular past tense, Kawauchi (2005) commented that learner's proficiency should be taken into consideration for the investigation of the effects of planning on accuracy. Meanwhile, Tajima (2003) discussed the importance of learners' attitudes towards planning. Ellis (2009) also argued that learner's orientation to the task affected results of the research. Therefore, it is suggested that the mediating roles played by individual factors (i.e. learners' proficiency, attitudes and orientation) in the effects of pre-task planning can be further investigated.

4.4. The effect of On-line Planning on Fluency in L2 Oral Production

Although a great amount of studies (e.g. Ellis 1987) compared task performance under pressured and unpressured conditions that are closely associated with on-line planning, they did not address the influence of these conditions on fluency, complexity and accuracy. Until 1989, Levelt reported learners noticed less to articulation of language (fluency). Probably, as Van Pattern (1990, p. 269) argued that, when given time to have on-line planning, L2 learners had conscious attention to form, which is responsible for accuracy and complexity, prior to meaning, which represents fluency.

In the more recent research, Yuan and Ellis (2003) showed no effect of on-line planning on fluency. However, Skehan and Foster (2005) adopted false-starts, mid-clause pausing, filled pauses, and reformulation as measurements of on-line planning and reported that dysfluency and repair reduced, which only existed in the beginning of a task. Similar to what Ahmadian and Tavakoli (2011) had found, Ahmadian (2012) figured out that careful on-line planning resulted in L2 learners' focus on explicit knowledge while the rate of speech (fluency) decreases remarkably. Despite these discoveries, Samuda and Bygate (2008) argued the insufficient measurements made it difficult to study the effect of on-line planning on L2 production.

4.5. The effect of On-line Planning on Complexity in L2 Oral Production

To date, research findings support the claim that careful online planning leads to greater complexity in L2 learners oral production. Yuan and Ellis (2003) found that on-line planning works enhanced syntactical complexity but not lexical variety. On the contrary, Mochizuki and Ortega (2008) showed no effect of different planning conditions on complexity of L2 oral communication. Ellis (2009) discussed that unpressured on-line planning gave L2 learners benefits to language formulation and also to spare time for the controlled processing that was required for monitoring. Later Ahmadian and Tavakoli (2011), and Ahmadian (2012) found the similar results concerning the positive effect of careful on-line planning on L2 oral production.

Nevertheless, Gilabert (2006) argued that individual difference factors (e.g. working memory, language aptitude and willingness to risk-taking) could play mediating roles on the effect of planning, which influences the complexity of learners' production. Clearly, more relevant studies are deserved to investigate learner variables that interact with planning in various ways to affect L2 production.

4.6. The effect of On-line Planning on Accuracy in L2 Oral Production

Ellis (1987) reported L2 learners provided with on-line planning were able to produce the rule-governed past tense verbs (e.g. helped) more accurately than those in no-planning group. Levelt (1989) also found that L2 learners with unpressured task planning were able to take time to formulate accurate structures and correct inaccurate ones in the formulation phase.

More recently, in correspondence with the results from Ellis (1987), Yuan and Ellis (2003) reported the on-line planning resulted in more accurate clauses and verbs. Rafie et al. (2015) also figured out the positive effect of unpressured on-line task planning on the accuracy of L2 oral production which is in line with the results provided by Ellis (2009). In the study of Ahmadian (2012), it was noted that pressured on-line planners could produce more syllables, words and phrases that were repeated, reformulated and replaced. Nevertheless, Yuan and Ellis (2003) critiqued previous studies for not controlling tasks of on-line planning. Hence, future studies are suggested to attend to the conditions under which tasks are completed with the aim to manipulate on-line planning.

5. General Comments

The present study has shown that when second language learners are given time to prepare before performing a task, their fluency and complexity are significantly enhanced (Crookes, 1989; Foster, 1996; Foster & Skehan, 1996; Wendel, 1997; Ortega, 1999; Yuan & Ellis, 2003; Skehan & Foster, 2005), while on-line planning affects accuracy and complexity positively, but reduces fluency (Levelt, 1989; Yuan and Ellis, 2003; Ahmadian & Tavakoli, 2011; Ahmadian, 2012). However, there is some disagreement as to the effect of pre-task planning on accuracy. What's more, there are trade-off evidences in the relationship of fluency, complexity and accuracy, which is supported theoretically and empirically mentioned by many studies (e.g. Foster & Skehan, 1996; Wendel 1997). According to Yuan and Ellis (2003), when given the opportunity to plan before tasks, L2 learners attended to fluency at the expense of accuracy while the result was opposite if they were given on-line planning. Skehan (2009) predicted that when L2 learners could not simultaneously allocate equal resources to all dimensions of performance (i.e. fluency, complexity and accuracy). However, it is possible for L2 learners to give enough attention to all dimensions of language proficiency if they are provided with sufficient time to plan. In the future studies of planning, further discussion is suggested for trade-off hypothesis to have substance.

6. The Gaps for Future Study to Fill in

To better study of the effect that planning has on L2 language production, Ellis (2009) put forward a framework depicting the four sets of variables deserved to be further investigated: (i) task variables (e.g. the complexity of the task design), (ii) individual factors (e.g. L2 learners' proficiency and attitudes), (iii) planning variables, and (iv) L2 production variables. This model shown in Figure 2, hypothesized the interaction of mediating roles and planning that influence L2 performance. Thus, there is still a need for more research in this area.

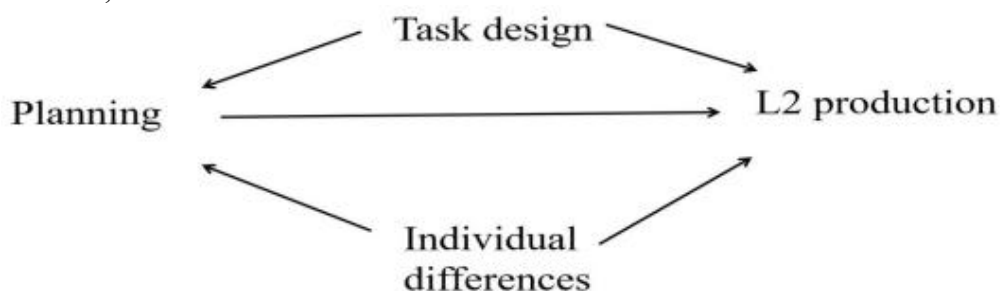


Figure 2 A framework for investigating the role of planning in task-based production (according to Ellis, 2009, p. 504).

Additionally, it should be noted that what task performers actually do as they engage in on-line planning is still unanswered. Hence, Ellis (2009) mentioned that more attention needs to be paid to on-line task planning because of the limited investigation of it to date. Moreover, researchers pointed out that various results of on-line planning in previous studies could be caused by uncontrollable strategic planning. Therefore, Ellis (2009) recommended that investigation of joint effect of pre-task planning and on-line task planning in the future should be taken to fill the gap of this field, and therefore more evidence can be provided to support the validity task-based teaching.

7. Conclusion

This passage has made a full review of the differential effects of pre-task planning and on-line planning on the fluency, complexity, and accuracy in L2 oral production. On the basis of the results of previous investigation, it can be concluded that pre-task planning advantaged fluency and complexity, while on-line planning resulted in both greater grammatical complexity and accuracy but not fluency. The effect of pre-task planning on accuracy remains controversial, for which more investigations can be provided. Finally, these findings have significant implications for language

pedagogy, in which instructors can select appropriate plannings to ensure L2 learners' capacity that is balanced to achieve the fluency, complexity and accuracy of oral production.

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