



The Effect of Planning on Complexity, and Accuracy in Second Language Production: A Case Study in Learner's Writing

Komara Suhendar ¹

komarasuhendar@gmail.com

Abstract

This case study investigates the effect of planning on complexity, and accuracy in second language (L2) learners' writing. The subject of the research is a twenty-four-year-old-Indonesian student named Della. She is selected due to her most current IELTS score, and her first-time residence in English speaking country. The participant is asked to write two writing tasks which was taken from IELTS topics. While the duration of time is set for the first task, the second task is not limited by time. After that, the results are compared and analyzed by means of T-unit as in Hunt (1965). The result of the research shows that planning may lead to slight improvement in learner's writing. In terms of accuracy, there is 69.23% of error-free T-unit in task 1, and 72.22% in task 2. Similarly, in connection with complexity, the average length of T-unit and clauses in task 1 and task 2 is 12.92 and 15 respectively.

Keywords: Second Language Acquisition, Complexity, Accuracy

How to cite: Suhendar, K. (2018). The Effect of Planning on Complexity, and Accuracy in Second Language Production: A Case Study in Learner's Writing. *ELS Journal on Interdisciplinary Studies in Humanities*, 1 (4), 467-474.

1. Introduction

Skehan (1998) proposed a capacity model positing that humans' limited cognitive capacity may restrict learners to attend to meaning and form when performing task. Then this will trigger trade-off effect in one's language performance if the task complexity is demanding. However, this is rejected by Robinson (2003) which argues that such task complexity will not affect learners' performance.

Drawing on the debate above, second language researchers have investigated the best ways how to avoid the trade-off effects in their aspect of linguistic performance – complexity, accuracy, and fluency - during the task performance. One of them is by giving learners planning. Ellis (2009) had mentioned that there are three kinds of planning: rehearsal, pre-task and within-task planning. While *Pre-task Planning* consists of rehearsal and strategic planning, *Within-task Planning* involves pressured and unpressured task. Furthermore, planning is predicted to gain fruitful effect because learners are allowed to prepare what they are going to do for the sake of their successful performance.

¹ The Australian National University

In terms of performance, measuring to what extent one language user is more proficient than the other is a general question at the heart of research in second language learning. Before many researchers arrived at the consensus of the suitable measurement to quantify learners' proficiency, Brumfit (1984) distinguished between fluency and accuracy focusing on impromptu production and linguistic form respectively. Complexity, however, was incorporated after the trait of accuracy is insufficient to measure the richness and complexity of lexicons. For the definition of these three aspects, Ellis (2003) defined complexity as how complex and varied a language user produces output in the given task, accuracy as the skill to yield error-free production, and fluency as the skill to produce language in native-like rapidity in terms of the number of pauses made, hesitation, or reformulation.

A number of studies have investigated the effect of planning on L2 learners' performance which yields fruitful result (Ellis, 1987; Foster & Skehan, 1996; Ortega, 1999). However, those studies only measured learners' oral production, and there is a paucity of studies examining learners' written production skill. Therefore, this case study aims to prove whether planning contributes to significant effect on the participant's complexity, and accuracy in L2 learners' written performance.

2. Planning

The term *planning* in the study of SLA refers to allowing L2 learners to formulate their ideas to finish the provided task. There are two basic planning which then can be furthered into its subtype: pre-task and within-task planning (Ellis & Yuan, 2004). Pre-task planning is an initial period given to learners prior to doing task. Then it can be divided into two types of planning: rehearsal and strategic planning. Rehearsal is the planning given between two tasks, whereas, strategic planning is the planning to think about the content and language to express without rehearsal. For within-task planning, which occurs on-line while learners are doing the task, can also be divided into two categories: pressured and unpressured. While pressured means learners are given a time limit to finish the task, unpressured does not have any time limits. The following hierarchy summarizes the division of planning.



A number of studies reveal that planning gives significant effect on second language learner's performance. In terms of oral production, for example, Foster and Skehan (1996) conducted a study to investigate whether planning have an effect on complexity, accuracy, and fluency in thirty-two ESL learners in the UK. The participants are grouped into guided planning, unguided planning, and control group. They were give ten-minute planning. The result shows that the group with guided planning produced the least pauses, silence, repetition. They also produce a number of varieties in past tense form. Another example comes from the study undertaken by Yuan and Ellis (2003). They examined the effect of planning on complexity, accuracy, and fluency in an oral narrative in forty-two graduate students from China majoring in English with TOEFL score ranging from 373 to 520. The students in the experimental group are given ten-minute planning, whereas, the control group did not. The result exhibits the difference in fluency and complexity, but the accuracy is not statistically different.

Pioneered by the planning study that focuses on oral production, the researchers in SLA become interested in written production. Unlike the study of planning in oral production, in written production, planning has been proven to yield mixed results. For instance, The study conducted by Ellis and Yuan (2004). They examined the effect of different types of planning – *pre-task*, *on-line*, and *without planning* - on three aspects of learners' linguistic performance: complexity, accuracy, and fluency of forty-two ESL Chinese. The result shows that shows that different types of planning provide distinct result in complexity, accuracy, and fluency in learners' narrative writing. While pre-task and on-line planning promotes formulation and chances for monitoring respectively, no planning shows the need for formulating, executing, and monitoring under pressure, thus, provides negative consequences for complexity, accuracy and fluency. Another study investigating learners' writing was undertaken by Ojima (2006). He conducted a case study of three ESL Japanese students examining the role of planning in L2's writing performance. They each wrote four essays – two with planning and the other two without planning. In this study, he reported that pre-task planning contributes to increased complexity and fluency, not accuracy.

3. The Notion of CAF

The term CAF, which stands for complexity, accuracy, and fluency, has been a predominant variable in SLA research. Of this triad, accuracy initially appeared because at that time the linguistic output should refer to prescriptive point of view or target-like use in which the correctness became the primary emphasis of language learning, and errors should be avoided. This view then leads to the means of initial accuracy measurement. The proposal to measure accuracy is conducted by referring to target-like use and calculating error-free in 100-word production (Homburg, 1984; Wolfe-Quintero, Inagaki, & Kim, 1998)

However, accuracy only is insufficient to measures' one linguistic proficiency because it is argued that accuracy is not a comprehensive way as a determinant proficiency. Let's see the following examples:

- 1) Owl is nocturnal Ave.
- 2) Owl is bird which is active at night.

It can be seen that the two examples manifest similar errors – lack of article use. As a result, there has been a thorny issue whether same error is equal to same proficiency. Complexity, therefore, comes up with the equal treatment to deal with such cases.

The term complexity does not necessarily demonstrate something complex, but rather ‘the extent to which the language produced in performing a task is elaborate and varied’ (Ellis, 2003). Hunt (1965) used T-unit comprising number of clauses in T-unit to measure and analyses L1 writing. He argued that rather than length of sentence, T-unit is more suitable to capture children writing in their mother tongue because they generally write long sentences using coordination. After that, a number of studies attempted to employ that method (Larsen-Freeman, 1978,1983; Larsen-Freeman & Strom, 1977) and showed that the method managed to distinguish developmental level at least for ESL learners. Since then, researchers did not merely investigate accuracy to measure one’s proficiency.

Another variable of CAF is fluency. Ellis (2003) defines fluency as ‘the language produced in performing a task manifests pausing, hesitation, or reformulation. Davies (2003) argued that the difference between native and non-native in terms of pausing (in speech) is where it is more likely to occur. He suggests that mid-clause and end-clause are placed in which the both groups are likely to produce. However, it obviously requires distinct method to assess fluency in writing performance. While the number of syllables per minute is taken into account to assess oral production, the number of written words produced in specified time limit.

Even though the term CAF is always attached together, the reciprocal behavior among these constructs is at the expense of one another. For example, the greater the fluency, the more decreasing accuracy and complexity due to the difference in psychological process between the ways of how to internalize input and to monitor output, and doing those things simultaneously may affect fluency.

To sum up, CAF has widely been used to measure one’s proficiency instead of merely accuracy. Complexity means how complex language produced by learners in terms of lexical and syntactic variation. Accuracy is to what extent learners produce error-free clauses in T-unit, while, fluency is determined by how native-like learners produce language adhered to pausing, hesitation, and reformulation.

4. Procedure

The participant is an Indonesian female student named Della. She is twenty-four years old and currently doing master degree in biology. The participant is selected because:

- 1) her IELTS writing score is 6.5 – this band score is selected because at this stage, learners have coped with complex sentences

- 2) It is still her first time in English-speaking country as well as her first semester – If a participant who have been living in English-speaking country for more than a year is selected, the writing score might not be valid as his/her English may improve due to daily exposure to target language.

The participant was asked to do two writing tasks taken from real IELTS academic questions – *the benefit of learning foreign language, and transportation* - due to the fact that handwriting is still required in IELTS, unlike TOEFL iBT. Before doing the tasks, the participant was asked a few questions to make sure that she never had these tasks before. After that, she was asked to fill out a sheet of consent form prior to doing the tasks.

The procedure was conducted in two different ways – *within-task planning, and pre-task planning*. First of all, she was asked to do the first task entitled ‘benefit of learning foreign language’. In this task, the participant did not get an opportunity to make a plan or draft before she wrote her passages. In addition, she was limited by time for doing the first task. This was carried out as ‘within-task planning’ frame, and will create pressure during her writing. The result should strictly be submitted after the time was over. Secondly, after she had finished doing the first task, she was given the second task in the frame of ‘pre-task planning’ which means completing the task without any time limit and was given some preparation to make a plan. This was conducted so that the participant would not feel any pressure during the task completion. After that, she was interviewed regarding the task she had just completed and what she felt during the task. This was used to find out further explanation about this case study.

5. Result

The following table is the result of accuracy and complexity obtained from the data. (see appendix for the data).

No.	Item	First task (timed/unplanned)	Second task (untimed/planned)
1.	Total words	168	217
2.	Number of T-unit	13 T-units	18 T-units
3.	Number of clauses	18 clauses	31 clauses
Accuracy			
4.	Error-free T-unit	69.23%	72.22%
5.	Error-free clauses	77.78%	77.41%
Complexity			
6.	Average length of T-unit	12.92	15
7.	Average length of clauses	9.3	7
8.	Average number of clauses per T-unit	1.38	1.72

Overall, from the table above, it can be seen that there is very slight improvement between the first task and the second task in terms of accuracy and complexity. The total words and the number of T-unit and clauses between those two tasks are slightly increasing. With respect to accuracy, as can be seen in the percentage of error-free T-

units and clauses. there is not any considerable increase, either. Similar to accuracy, the complexity and fluency do not demonstrate any considerable increase.

The interview may describe further why very slight improvement occurred. When the participant was asked to rate the difficulty of the tasks, she replied that they were not difficult because the topic was general, but if she were to rate, task two was probably easier due to the fact that the topic was about the benefit of learning other language which she was experiencing the benefit itself. Besides, she added that she did not feel pressured when doing task 1 because she was just participating in the research without spending a lot of money. Compared to these research tasks, the real IELTS was very demanding because if she did not do well, she would have to take another IELTS, and of course, she also needed to spend much money on this. Therefore, the pressure in the real test was extremely demanding compared to her taking-part in this study. Regarding planning given before doing the task, she thought that it was a good idea because she needed to make a plan about what her writing will be like.

6. Discussion

The capacity model proposed by Skehan (1998) posits that learners' attention and processing ability may be limited when performing task due to cognitive capacity, therefore, leading to trade-off effect in language production. A number of studies have investigated the potential of planning to pre-empt the trade-off effects in their aspect of linguistic performance – complexity, accuracy, and fluency - during their task performance. It is predicted that planning may gain fruitful effect because learners are allowed to prepare what they are going to do for the sake of their successful performance.

Some researchers discovered that planning may lead to learners' better performance than no-planning with respect to three aspects of linguistic performance (Ellis & Yuan, 2004). However, Ojima (2006) found that planning may generate greater complexity and fluency, but did not increase accuracy. As gained in this study, it can be seen that planning may generate improvement, albeit very slight.

Task complexity might also be the factors which contribute to this result. While Skehan (1998) points out that increasing task complexity may reduce complexity, accuracy, and fluency due to the fact that the difficulties undergone by learners to attend to both meaning and form simultaneously, Robinson (2003) argues that the more demanding task complexity, the greater the complexity and accuracy, but not fluency. The result in this study seems to support Skehan's position as what is yielded in the interview, the participant felt that task 1 is more difficult than task 2. Consequently, task 1 which is considered more demanding, manifests low complexity, accuracy, and fluency compared to task 2.

Besides task complexity, the feeling of being pressured due to risky consequences seem to contribute to complexity, accuracy, and fluency. The elicitation method, for

example, is obviously different between collecting learners' language sample in the real test (e.g. IELTS) and just simply asking people to be participants in the research. The test takers will feel extremely great anxiety because they do not want to fail the exam and spend much money on another test. However, the participants in the research will feel much more relaxed as they will feel that they are just participating without being worried about failure.

7. Conclusion

This case study investigated the effect of planning on complexity, accuracy, and fluency. The participant was assigned two tasks with planning and without planning. The result indicates that there is very slight improvement in the participants' performance in terms of those three aspects of linguistic performance. Two factors contributing to the result of this study should be taken into account: task complexity, and risky consequences.

References

- Brumfit, C. J. (1984). *Communicative methodology in language teaching: The roles of fluency and accuracy* (Vol. 129): Cambridge University Press Cambridge.
- Ellis, R. (1987). Interlanguage variability in narrative discourse: Style shifting in the use of the past tense. *Studies in second language acquisition*, 9(01), 1-19.
- Ellis, R. (2003). *Task-based language learning and teaching*. Oxford: Oxford University Press.
- Ellis, R. (2009). The Differential Effects of Three Types of Task Planning on the Fluency, Complexity, and Accuracy in L2 Oral Production. *Applied Linguistics*, 30(4), 474-509. doi: 10.1093/applin/amp042
- 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.
- Foster, P., & Skehan, P. (1996). The influence of planning on performance in task-based learning. *Studies in second language acquisition*, 18(3), 299-324.
- Homburg, T. J. (1984). Holistic evaluation of ESL compositions: Can it be validated objectively? *Tesol Quarterly*, 87-107.
- Hunt, K. W. (1965). Grammatical Structures Written at Three Grade Levels. NCTE Research Report No. 3.
- Larsen-Freeman, D. (1978). An ESL index of development. *Tesol Quarterly*, 439-448.
- Larsen-Freeman, D. (1983). Assessing global second language proficiency. In H. S. a. M. Long (Ed.), *Classroom-oriented research in second language acquisition*: Newbury House.
- Larsen-Freeman, D., & Strom, V. (1977). The Construction of a Second language Acquisition Index of Development. *Language learning*, 27(1), 123-134.

- Ojima, M. (2006). Concept mapping as pre-task planning: A case study of three Japanese ESL writers. *System*, 34(4), 566-585.
- Ortega, L. (1999). Planning and focus on form in L2 oral performance. *Studies in second language acquisition*, 21(01), 109-148.
- Robinson, P. (2003). The cognition hypothesis, task design, and adult task-based language learning. *Second Language Studies*, 21(2), 45-105.
- Skehan, P. (1998). *A cognitive approach to language learning*. Oxford: Oxford University Press.
- Wolfe-Quintero, K., Inagaki, S., & Kim, H.-Y. (1998). *Second language development in writing: Measures of fluency, accuracy, & complexity*. University of Hawaii Press.