Effects of Task Sequencing in the Cognition Hypothesis on EFL Learner Perception of Task Difficulty

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Abstract

According to Robinson's cognition hypothesis, sequencing tasks in the Triadic Componential Framework (TCF) could drive learners to create better outputs as a result of the cognitive demand of tasks. However, there is a need to prove that task conditions in TCF demand different cognitive loads. The purpose of the current study was to investigate perceptions toward task difficulty of EFL learners performing tasks designed in the Triadic Componential Framework (TCF). The participants were 30 EFL students at Rajabhat Maha Sarakham University selected by purposive sampling. The instruments were a task sequence having a set of three tasks designed in the Triadic Componential Framework (TCF), a task difficulty assessment questionnaire, a report on time needed to complete the tasks, and a stimulated recall session. The results of the study indicated that the task sequence designed in the cognition hypothesis was proved to be in ascending order of cognitive demand by two assessments - the questionnaire and the stimulated recall. Meanwhile, learners seemed to spend the comparative amounts of time doing tasks in the sequence. It could be concluded that sequencing task conditions in TCF could

lead to a task sequence that consists of tasks with different levels of cognitive demand as introduced by the principles of the cognition hypothesis.

Keywords: cognition hypothesis, SLA, perception of task difficulty

Introduction

The idea of promoting learners' language acquisition and learning using a set of task sequences has been an issue discussed in task-based language teaching (TBLT). Since the late 1980s, scholars have presented procedures for managing task sequencing to benefit language classrooms (e.g., Candlin, 1984; Ellis; 2003; Long & Crook, 1992; Prabhu, 1987; Skehan; 1996; Robinson, 2001a). At the beginning, it was debated whether tasks should be sequenced, by whom, and in what manner, and it seemed to conclude with the recommendation that syllabus designers sequence tasks by the idea of not making the sequence contain tasks from simple ones that are too easy until they bore the students to those that are so difficult that they exceed levels of learners' competency.

What could be observed is that the cognitive demand of tasks is taken into consideration in order to justify the levels of task complexity and difficulty. To illustrate, tasks that demand performers to pass through more thinking processes to finish could be considered as more complex and difficult (Ellis, 2003). Moreover, tasks designed to have a structure that demands learners to allocate attention and working memory, provide reasons, and process more information could also be considered more complex (Robinson, 2007).

Robinson (2001a, 2001b, 2005, 2008) and Robinson and Gilabert (2007) presented the cognition hypothesis in order to utilize task cognitive demand. According to the authors, managing learners to pass through a sequence of tasks that are at different levels of

cognitive demand could drive them to produce a greater quality of output. They introduced the Triadic Componential Framework (TCF) to guide task designers on how to create task sequences that could benefit learners. Robinson (2010) also presented the SSARC model as the principle of sequencing tasks in TCF to develop learners' performance as he suggested simplicity (S), stability (S), automatization (A), restructuring (R), and complexity (C) as components that could be manipulated by TCF task conditions. Robinson's idea of task sequencing plays a great role in the area of study but it led to inconclusive results of the studies - whether increasing cognitive demand of tasks would lead to greater accuracy and complexity of learners' output as claimed by Robinson, or lead to a trade-off effect as claimed by Skehan (1998; Skehan & Foster, 2001).

Task cognitive demand is an important component in Robinson's idea of task sequencing design (Robinson, 2001a, 2001b, 2005, 2008; Robinson & Gilabert, 2007). According to the principle of the cognition hypothesis, learners performing a task that is more complex than one they did before could develop their language skills. Therefore, tasks in a sequence should be proved to be in order of cognitive demanding levels and difficulty. Even though the model presented by Robinson has been investigated widely, empirical evidence proving that task conditions in TCF demand different cognitive loads on learners is still needed (Sasayama, 2016). According to Snow (1993), examining learners' perceptions toward the task difficulty could indicate task cognitive demand and levels of difficulty. In the current study, the effect of task cognitive demand present in Robinson's idea of task sequencing and learners' perception of task difficulty were studied in order to provide empirical evidence to support the theoretical models of the task sequencing. The main purpose of the study was to investigate perception toward task difficulty of EFL learners performing tasks designed in the TCF.

Consequently, the cognitive demand of tasks is theoretically highlighted as a component contributing to task levels of difficulty. According to Snow (1993), examining learners' perception of the task difficulty driven by task conditions should be investigated to provide evidence to support the theories. In other words, tasks should be examined to indicate their cognitive demand and levels of difficulty according to learners' perceptions toward task difficulty. Moreover, even though the model presented by Robinson (2001a, 2001b, 2005, 2008) and Robinson and Gilabert (2007) has been investigated widely, effects of the task sequencing on learners' perception toward the difficulty of each task condition are still underexplored, and empirical evidence proving that task conditions in TCF demand different cognitive loads of learners is still needed (Sasayama, 2016). In the current study, the effect of task cognitive demand present in Robinson's idea of task sequencing and learners' perception of task difficulty were studied in order to provide empirical evidence to support the theoretical models of task sequencing.

Literature Review

Cognitive Demand and Task-Based Language Teaching

One of the issues discussed in Task-based Language Teaching (TBLT) is how the cognitive demand of tasks affects performers' information processing. According to the model presented by Wicken, Gordon, and Lui. (1997, p. 47), task cognitive demand plays an important role in information processing stages as it contributes to difficulty in allocating resources in responding to messages. According to the authors, three stages of human processing of information take place. In the first stage, the input is perceptually encoded through sensory registers. Input processing takes place in the second stage, as people could allocate attention to synthesize the information leading to decision making. At this point, task cognitive demand would drive

task performers to pass through more stages of information processing in responding to the perceptual input in stage three. From this perspective, theories have been presented to predict how cognitive demand plays a role in indicating levels of task difficulty and complexity.

Effects of Cognitive Demand on Task Difficulty and Complexity

Skehan (1996, 1998, 2002, 2003) labeled code complexity, cognitive complexity, and communicative stress as components that contribute to levels of task difficulty. According to the author, more cognitive processes lead to a greater amount of information plotted by task conditions for learners to evaluate. For example, a student asked to perform tasks about which he/she has background knowledge processes less information than students who perform tasks with which they have little or no experience. This cognitive demand of tasks increases levels of task difficulty along with code complexity and communicative stress.

Cognitive demand is also presented as a component contributing to levels of task complexity in the assessing procedure presented by Ellis (2003). Despite using different terms, similarities could be seen between Ellis's task complexity and Skehan's task difficulty. According to Ellis (2003), task conditions demanding learners to pass through longer processing or distance of thinking from input processing to output production contribute to higher levels of task complexity. The author purposed four criteria used in assessing task complexity, namely: input, condition, processes, and outcomes highlighting cognitive demand as the main components task complexity. For example, in the task condition aspect, learners asked to perform tasks requiring causal reasoning have to pass through more cognitive processes than those who perform using picture descriptions. The former need to consider the persuasive aspect of task demands to convince massage receivers while the latter only have to explain what is already provided in the

tasks. Therefore, cognitive demand, in Ellis's principle, could lead to stages of complex circumstance for task performers.

Learners' Perception of Task Difficulty

Learner perception has been studied widely in the area of second language studies (Ilins, Inozu & Yumru, 2007; McDonough & Chaikitmongkol, 2007). However, less attention has been paid to the perception of learners toward the difficulty of tasks in TBLT (Tavakoli, 2009). Ellis (2003) indicated that task cognitive demand could be assessed by learners' perception of task difficulty. The more difficulty the learners experience while performing tasks, the more likely the condition contains cognitive demand. According to Snow (1993), understanding learners' perception of task difficulty would help task designers to use them in a stable manner. While the effects of task difficulty and complexity on learners' performances have been studied, it is also important to investigate how the current models of task sequencing leading to the state of task difficulty represent and reflect learners' perspectives (Tavakoli, 2009).

Tasks in the Cognition Hypothesis and Learners' Perception of Task Difficulty

Tasks in the cognition hypothesis were presented by Robinson (2001a, 2001b, 2005, 2008) and Robinson and Gilabert (2007) to be leveled up in terms of complexity by increasing cognitive demand driven by task conditions. These conditions are presented in Robinson's Triadic Componential Framework (TCF) and are claimed to have effects on learners' output production (Robinson & Gilabert, 2007, p. 164). Specifically, increasing the levels of task complexity in resource directing dimensions could contribute to greater linguistic complexity and accuracy of learners' output while increasing task levels of complexity in the resource dispersing dimension is predicted to contribute automatization of the output production. Robinson (2010) later presented his SSARC model of task sequencing as a guideline of

using task conditions in the TCF to benefit learners' language acquisition. In detail, task sequences in the SSARC model could be designed by combined task conditions in both resource directing and resource dispersing dimensions to develop learners' language skills. Robinson's idea leads to arguments in predicting effects of cognition demand of tasks on learners' performances (e.g., Attarzade & Farahani, 2014; Frear & Bitchener, 2015; Ishisawa, 2007; Johnson, Mercado, & Acevedo, 2012; Kormos, 2011; Kuiken & Vedder, 2007, 2008, 2012; Ong & Zhang, 2010; Rahimpour & Hosseini, 2010; Révész, 2011; Shajeri & Izadpanah, 2016).

According to the Triadic Componential Framework, the crucial rationale making learners who pass through a task sequence consisting of +/- here and now tasks to be improved is that when the learners change from performing a picture description task with the sequence of the story (+ here and now) to a picture description task without the sequence of the story (- here and now), the greater cognitive demand of the later task condition would drive them to create a more accurate and complex output. However, it is not certain that learners performing – here and now tasks would face the greater cognitive demand than ones who perform + here and now. Therefore, in order to widen the possibility that learners would gain benefit from a task sequence, the tasks in the sequence should be proved to demand different levels of cognitive load on the learners. By this principle, studies were conducted to prove the cognitive demand of each task in a task sequence in the cognition hypothesis. The results of the studies appeared in Robinson (2001a, 2001b, 2005, 2008) and Robinson and Gilabert (2007). However, it could be noticed that most of the studies were done on the oral mode of communication (e.g., Barrat, 2013; Kim, 2013; Levkina & Gilabert, 2012; Révész, Sachs, & Hama, 2014; Sasayama, 2016; Sanajou, Zohali, & Zabihi, 2017) while less attention was paid to written output production (e.g., Sanajou et al., 2017).

In addition, most studies on the issue have been conducted by employing self-rating methods. (Baralt, 2013; Kim & Tracy-Ventura, 2011; Levkina & Gilabert, 2012; Michel, 2011; Révész, 2009; Sanajou et al., 2017). According to a synthesis study on the cognitive load of the task condition of Sasayama, Malicka, and Norris (2015), 70% of studies used the method to assess learners' perception of difficulty. The self-assessment rating questionnaire introduced by Robinson (2001b) is mainly used as the research instrument. Participants generally were asked to complete a set of questionnaires consisting of the issues regarding task difficulty, stress, confidence, interest, and motivation in order to report their perception of task difficulty and task cognitive load. However, a self-rating questionnaire might not be reliable as it shows only a report of what leaners believe they are doing. Few studies employ more methods in data collection to validate the result.

Time estimation used in task performances could also be considered a component of how learners engage with task difficulty. According to Baralt (2013), learners spend a longer time in completing tasks with more cognitive demand than tasks designed to be simpler. Introspective methods are another measuring tool used to indicate learners' perception of task difficulty. Stimulating recall was used in the studies of Kim (2013). Learners watched videos of their performances and were asked questions regarding what they were thinking at that time. The interview data reviewed more cognitive processes in learners performing more complex tasks.

In summary, it has been accepted that a sequence of tasks starting from a simple task to one that is neither too easy nor too difficult for learners could benefit language classrooms (Candlin, 1984; Ellis, 2003; Long & Crook, 1992; Prabhu, 1987; Robinson, 2001b; Skehan, 1996). Moreover, task cognitive demand has been heightened as the main component contributing to levels of task complexity. In accordance

with this principle, Robinson (2001a, 2001b, 2005, 2008) and Robinson and Gilabert (2007) presented the cognition hypothesis claiming that a sequence of tasks with greater cognitive demand could lead to the development of L2 production. However, there is still a need to investigate the cognitive demand of task conditions since it could ensure that the conditions used in the sequence are in descending order of complexity. The previous studies on learners' perception toward task difficulty seem to pay more attention to oral output production. (e.g., Barrat, 2013; Kim, 2013; Levkina & Gilabert, 2012; Révész et al., 2014; Sasayama, 2016) than to written output production. In addition, in written output production, a study employing a mixed method of data collection is rarely found. For example, Sanajou et al. (2017) employed only a questionnaire in their study. Furthermore, the previous studies were scoped to investigate only on task conditions in TCF while the sequence designed in the SSARC principle was not yet explored. Consequently, the current study was conducted with an interest to measure EFL learners' perception of writing task difficulty in tasks designed with the SSARC model. In order to fill the niches unexplored by the previous studies, a mixed method of data collection was applied. The sole purpose of the study was to examine the effect of task conditions in the SSRAC model on EFL learners' perception of task difficulty.

Research Methodology

Participants

The participants were 30 second-year English-major students at a university in Thailand. The participants studied English as a foreign language and their English proficiency was at an intermediate level. The participants were selected purposively because they were in the middle of the curriculum that requires them to pass four academic writing courses. Therefore, the participants were neither too new to academic writing nor too familiar to the skill.

Research Instruments

Tasks. The sequence of tasks used in the study was designed following the SSARC model presented by Robinson (2010). According to the author, task conditions in the resource directing and resource dispersing dimension of the Triadic Componential Framework should be combined. An SSARC task sequence could consist of three tasks. The least complex task should begin with the simple version (task 1) of both resource directing and resource dispersing dimensions. In the complex version (task 2), the task condition in the resource dispersing dimension would be changed to the complex version while the condition of the resource directing dimension remains simple. In the most complex task (task 3), task conditions in both dimensions should both be designed to be in complex versions. The detail of the task design in the current study can be seen below.

In the simple task, the task was designed to be simple (S) and stable (S) using the principle of the SSRAC model. Therefore, + task structure and – causal reasoning were chosen. In task operationalization, participants were given a picture of a beautiful garden that they were situated to see when they visit a friend's house. They were so impressed that they wanted to write an e-mail to describe it to their friend who lives abroad. They were also given hints of paragraph structure as the task structure that could lead to the possible ways and steps needed to be taken in order to complete the task. Consequently, the simple task did not demand learners to provide any reasons (- causal reasoning). Meanwhile, it gave procedural guidance to learners (+ task structure).

The complex task was designed along the automatization (A) of the SSARC model. In this condition, the provision of task structure was removed (- task structure), and participants were assigned to perform a similar picture description task (- casual reasoning). In detail, participants were situated to take a trip to a beach. Now, they had to write an e-mail to describe the beach to their friend again. They were

given the new picture of the beach and asked to write the composition to describe the beach. Task structure was not provided in this task.

In the most complex task condition, the task condition was designed along with the restructuring (R) and complexity (C) component of the SSARC model. In this condition, the participants were asked to perform a writing task that demanded them to provide reasons (+ casual reasoning). Similar to the complex task, task structure was not also provided to the participants (- task structure). Particularly, the participants were situated to the condition that a friend was impressed by Thai tourism, and he/she wanted to visit Thailand. The participants were given information about three tourist attractions. They had to write a letter to convince the friend to travel to one of the places. Task structure was not provided in this task. The summary of the task design can be seen in Table 1 below.

Table 1

Task Design in the SSARC Model

Simple task Simple (S) Stable (S)	Complex task Automatization (A)	Most complex task Restructuring (R) Complexity (C)
+ Resource dispersing (task structure) (Paragraph structure and guideline were given) **-Resource directing (causal reasoning)** (No reasoning demand was needed)	**- Resource dispersing (task structure)** (Paragraph structure and guideline were not given) **- Resource directing (causal reasoning)** (No reasoning demand was needed)	**- Resource dispersing (task structure)** (Paragraph structure and guideline were not given) **+ Resource directing (causal reasoning)** (Reasoning demand was needed)

Tasks Difficulty Assessing Questionnaire. Learners' perception of task difficulty was assessed by using the subjective self-rating questionnaire (Robinson, 2001a). The questionnaire consists of five questions regarding perceived levels of task difficulty, stress, confidence, interest, and motivation using 9-point Likert scales. The questionnaire can be seen in Appendix A.

Time Recoding. According to Baralt (2010, 2013), tasks with more cognitive demands are hypothesized to take longer to complete. The participants were asked to inform the time when they handed in each task, and the execution time of tasks was recorded to provide another validation of task cognitive demand.

Stimulated Recall Interview. Following the principle used in Kim (2013), a stimulated recall interview was employed to provide validation to the data. Three randomly selected participants were given their writing papers back after finishing all tasks. They were asked about what they were thinking while performing each writing task. The interview questions focused on how the tasks in the SSARC sequence drove them to face difficulty in writing.

Data collection

The data were collected in a writing class. The participants were asked to complete three writing tasks designed by the SSARC model. They had a 30-minute break after taking each task. They were asked to complete the task difficulty assessing questionnaire during the breaks, and the time spent on each task was also recorded. After, task 3, three random participants were asked to participate in a stimulated recall session. The data were analyzed by Mean score, Standard deviation, Kruskal-Wallis H test, Chi-square, and one way ANOVA.

Results

Normality of Variables

In terms of perception toward task difficulty, the descriptive analysis of the variables indicated that most of the variables were found not to be normally distributed. The Shapiro–Wilk test indicated that all the comparative variables were found with at least one variable having non-normality of distribution with a significant difference at the statistical level of .05. Considering the normality of variables, non-parametric statistics were employed to indicate the results of the study. However, in terms of time consumption, the data were found in the normal distribution. Therefore, One-way ANOVA as a parametric statistic was employed to compare the result of the study.

Task Difficulty

According to Table 2, there were significant differences between the students' perceptions toward task difficulty in all aspects at the statistical level of .05. In terms of ability, the Kruskal-Wallis H test indicated that there was a statistically significant difference in students' perception toward task difficulty, $\chi^2(2) = 22.45$, $p = .00$, with a mean rank perception score of 30.58 for task 1, 44.00 for task 2, and 61.92 for task 3. In terms of stress, the result of the study indicated that the statistically significant difference was indicated between students' perception toward task difficulty, $\chi^2(2) = 27.15$, $p = .00$, with a mean rank perception score of 25.27 for task 1, 52.33 for task 2, and 58.42 for task 3. Likewise, there was a statistically significant difference between students' perception toward task difficulty in terms of confidence, $\chi^2(2) = 12.28$, $p = .02$. The mean rank perception scores were found at 55.62 for task 1, 47.98 for task 2, and 32.90 for task 3. Moreover, the significant difference was found between students' perception toward task difficulty in terms of interest at the statistical level of .05 ($p = .00$, $\chi^2(2) = 20.54$). The mean rank perception scores were found at 50.92 for task 1, 45.02 for task 2, and 40.57 for task 3.

Lastly, the Kruskal-Wallis H test indicated that there was a statistically significant difference in students' perception toward task difficulty in terms of motivation, $\chi^2(2) = 24.87$, $p = .00$, with a mean rank perception score of 51.77 for task 1, 44.78 for task 2, and 39.95 for task 3.

Table 2
Task Difficulty Assessment Result

Aspects	Task 1 (SS) Mean Rank	Task 2 (A) Mean Rank	Task 3 (RC) Mean Rank	Kruskal-Wallis H test (*p*)	Chi-square $\chi^2(2)$
Ability	30.58	44.00	61.92	.00*	22.45
Stress	25.75	52.33	58.42	.00*	27.15
Confidence	55.62	47.98	32.90	.02*	12.28
Interest	50.92	45.02	40.57	.00*	20.54
Motivation	51.77	44.78	39.95	.00*	24.87

Note. $*p < .05$

Time Consumption

One of the factors indicating the cognitive demands of tasks on students writing in the current study was amount of time needed to complete tasks. It was claimed that when learners face more cognitive demand, they spend more time operating tasks (Baralt, 2013). The data were in the normal distribution as there was no statistical significance found in the students' performances of all tasks when tested with the Shapiro-Wilk test. The result of the study indicated that students spent more time performing task 3 ($\bar{X}$ = 57.44, S.D. = 2.15), task 2 ($\bar{X}$ = 57.36, S.D. = 1.87), and task 1 ($\bar{X}$ = 56.57, S.D. = 1.36), respectively (see Table 3). However, there was no significant difference between

the times that students spent on task performances. It seems that types of tasks had no effect on the time that the participants needed to perform them.

Table 3

Students' Average Time of Task Performance

Task 1 time spent (minutes) $\bar{X}$ (S.D.)	Task 2 time spent (minutes) $\bar{X}$ (S.D.)	Task 3 time spent (minutes) $\bar{X}$ (S.D.)	ANOVA (*p*)
56.57 (1.36)	57.36 (1.87)	57.44 (2.15)	.128

Stimulated Recall Interview

In order to provide qualitative evidence to the result of the study, a stimulated recall session was set. Three students were randomly selected to participate in the session. They were given back all three pieces of the writing tasks and interviewed with the questions related to how they encountered the tasks. The responses to the interview questions could be summarized below.

"Providing task structure was a good supporting task component"

All interviewees reported that guidance of how tasks should be structured provided in task 1 greatly assisted the processes of their writing. They similarly stated that the given task structure guided them throughout planning, writing, and revision of their paragraph. However, the task structure seemed to be only supportive in terms of organizational components of writing as the interviewees reported that they still felt the difficulty performing the tasks. It was because linguistic structures

and lexical knowledge demanded by tasks made it difficult for the learners to complete them.

"Familiarity played a great role in perception toward difficulty"

However, even though the organizational guideline was provided, what made the task difficult was still the complexity of linguistic structures demanded by task conditions. All interviewees reported that the provided guidelines might make them see how the task should be constructed. Nevertheless, the most important thing is the knowledge used to transfer ideas into the written texts. They also reported that in the picture description tasks (task 1 and task 2), the structures were not difficult because they were able to use the like of salient grammatical structures (e.g., simple tense, verb to be, existential clause) to describe what they saw in the pictures. The participants reported that they were familiar with the structures as they were instructed in them previously both in other courses and other educational levels. Meanwhile, the reasoning tasks drove them to produce more complex structures. The participants reported that they recognized the components that lead them to complete the tasks; however, they did not know how to express in English. The interview data indicated that the participants felt it was difficult to create long sentences to express reasons requested by the task condition.

"Reasoning is more difficult than fact reporting"

Moreover, the participants reported that it was more difficult when they were asked to provide reasons in task 3 than to describe the picture in tasks 1 and 2 in detail. The participants claimed that they had to think of the reasons to persuade readers while they just had to

illustrate what they saw in the pictures in the simpler conditions. The processes of reasoning took time and demanded more effort; therefore, the participants felt it was more difficult for them to complete the task.

Discussion

The results of the study indicated that learners rated task 3 to be the most difficult task while task 2 was more difficult than task 1. In the time indicator, there was no significant difference among times participants spent in performing the tasks. In the stimulated recall, the participants reported three aspects including task guidance, grammar, and processes demanded by task conditions that could affect task difficulty. The results of the study could lead to the following conclusions.

The results of the study indicated that task 3 designed to drive learners to restructure and complicate their written output was the most difficult task reflected from learners' perception. Moreover, the second most difficult task was task 2 while task 1 was found to be the least difficult task. The results of the study were in line with the previous studies that prove how tasks designed with Robinson's cognition hypothesis (Robinson, 2001a, 2001b, 2005, 2008; Robinson & Gilabert, 2007) affected the learners' perception toward task difficulty (e.g., Sasayama, 2016; Sanajou et al., 2017). According to Robinson (2001a) sequences of tasks in Triadic Componential Framework drive learners to face more stress and difficulty throughout the processes of task execution. Moreover, the results of the study indicated that other indicators including confidence, interest, and motivation in the self-rating questionnaire highlight similar results. Therefore, the designed tasks were in a sequence of simple to complex considering cognitive demands of each condition.

In addition, the results of the study could also be discussed in other principles explaining task conditions and levels of task difficulty

and complexity (Ellis, 2003; Skehan, 1996, 1998, 2002, 2003). According to the result of the study, the learners felt more stressed performing the more complex conditions of tasks. It could be explained by task conditions demanding learners to process more information in task 3 which drove them to provide casual reasoning and task 2 which drove them to recall task guidance than in task 1 which only asked them to describe the picture. According to Skehan (1996, 1998, 2002, 2003), the different amounts of information processing reflected the different levels of perception toward task difficulty reported by the learners.

Furthermore, the results of the study indicated that task structure was the task component that simplified task 1 for the learners. They reported that the provided guidance illustrated how the task should be performed. In other words, the task condition drove them to pass through shorter processes of task performances. Instead of processing information related to paragraph components, learners only had to follow the steps provided in task structures and create written output to complete the task. According to Ellis (2003), tasks could be considered more complex when they demand learners take more steps in information processing. In this case, task structure could help learners to take fewer steps, and it could explain the result of the study where task 1 was rated to be the least difficult task.

The only measure that could not differentiate learners' perceptions toward task difficulty was the amount of time needed to complete the tasks. According to Baralt (2013), learners spend a longer time on completing tasks with more cognitive demand than the tasks designed to be simpler. However, writing is one of the most difficult skills to master for EFL learners (Hyland, 2004). Therefore, it could be assumed that learners spend much time no matter what the task conditions are. This could be supported by the results of the stimulated recall pointing that learners struggled to create written output mainly

because of their grammatical knowledge even though they were guided by the provided task structures. Consequently, it could be explainable that they spent a comparable amount of time doing the three tasks.

Conclusion

The main purpose of the study was to provide empirical evidence for task conditions in the Triadic Componential Framework (TCF) to prove that they can affect learners' perception toward task difficulty and drive their cognitive demand while performing tasks. Tasks conditioned in TCF were sequenced with the SSARC principle organizing a set of three tasks in order of complexity. Learners' perception of task difficulty was assessed by a questionnaire, the amount of time needed to complete tasks, and a stimulated recall session. The results of the study indicated that tasks in the sequence were proved to be in the hierarchical order of complexity by two assessments - the questionnaire and the stimulated recall. Learners seemed to spend a comparatively long amount of time in doing the tasks. It could be concluded that sequencing task conditions in the Triadic Componential Framework (TCF) with the principle of the SSARC model could lead to a task sequence that consists of tasks with different levels of cognitive demand.

The result of the study could be beneficial in both academic and pedagogical aspects as it can serve as evidence proving that task conditions could affect the cognitive processes of learners. It could eventually be used to drive learners to process more information, pass through the longer distance of language production, and make more attempts to perform tasks. Moreover, instructors could implicate conditions in TCF when designing tasks in curriculum. It has been accepted that in order to contribute to language acquisition, pedagogic tasks should be sequenced in an order of slightly different levels of difficulty (Ellis, 2003; Long & Crook, 1992; Prabhu, 1987; Robinson,

2001a; Skehan, 1996). The task sequence presented in the current study could be an example of guiding teachers to conditions that could be used to form the sequence.

Lastly, the discussion is unfinished regarding how tasks with more cognitive demand affect learners' linguistic output as different theories predict different outcomes. The trade-off effect was predicted by Skehan (1996, 1998, 2002, 2003) who claimed that learners would be forced to focus on meaning rather than form when they are driven by more complex task conditions. Meanwhile, Robinson (2001a, 2001b, 2005, 2008) and Robinson and Gilabert (2007) predicted the greater accuracy and complexity of output. The current task sequence could be used in further studies to provide evidence that could be a part of solving this conflict as it was proved to have tasks that were in order of complexity.

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Appendix A:
Task difficulty assessing questionnaire (Robinson, 2001b).

Questionnaire

Name:_____ **Semester:**_____

Dear Participant: Read the statements below. Then, indicate your extent of agreement or disagreement by circling one of the numbers from one to nine.

1	I thought this task was easy/ I thought this task was hard: (1 not difficult, 9 very difficult)	1 2 3 4 5 6 7 8 9
2	I felt relaxed doing this task/ I felt frustrated doing this task: (1 no stress, 9 a lot of stress)	1 2 3 4 5 6 7 8 9
3	I didn't do well on this task/ I did well on this task: (1 not confident, 9 very confident)	1 2 3 4 5 6 7 8 9
4	This task was not interesting this task was interesting: (1 not interesting, 9 very interesting)	1 2 3 4 5 6 7 8 9
5	I don't want to do more tasks like this/ I want to do more tasks like this: (1 do not want to, 9 would like to)	1 2 3 4 5 6 7 8 9