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Effect of Task Complexity Manipulation in Writing on EFL Learners' Task Motivation

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Abstract

English as a Foreign Language (EFL) learners may not appreciate writing and even perform poorly in writing tasks partly due to what feelings they harbor toward such tasks. This study explored the relative effects of three degrees of writing task complexity based on resource directing dimensions of complexity on EFL learners' task motivation. Participants were 64 intermediate EFL learners at a language school in Baneh, Kurdistan, Iran, and were randomly assigned to one of the three groups: low complexity group, medium complexity group, and high complexity group. After completing the tasks, they filled in a task motivation questionnaire. The results showed that perceived relevance as a dimension of task motivation was higher in medium complexity group. With respect to emotional state as another dimension of task motivation, medium complexity task motivated participants more than low and high complexity tasks, because the participants showed a positive emotional state after doing it. Based on the findings and regarding intermediate EFL learners, it is recommended that writing tasks with a medium degree of complexity should be incorporated into task-based syllabuses by EFL teachers because of learners' task motivation toward these tasks.

Keywords: EFL Writing, Motivation, Task Complexity, Task-Based Language Teaching, Task Motivation

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1. Introduction

When Task-Based Language Teaching (TBLT) was introduced in the 1980s, language teachers willingly accepted its worthwhile theory and practice. Since then, language teachers and researchers have been mostly

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preoccupied with designing and implementing tasks that represent real language use (Ellis, 2003). An example is what Long (1985) and Prabhu (1987) advocated as an approach to language education in which students should be given functional tasks which have the result of focusing primarily on meaning negotiation and using language for real-life and nonlinguistic purposes. The large number of publications devoted to task-based language learning, teaching, and testing shows that the research into task-based learning in second language acquisition and foreign language learning is vital (Bygate, Skehan, & Swain, 2001; Ellis, 2003; Long & Crookes, 1992; Skehan, 2003).

One of the major approaches in TBLT is cognitive, information-theoretic approach in which the central focus is on cognitive processes, information processing stages, and attentional resources exploited by learners while completing tasks (Kuiken, & Vedder, 2007). One aspect of this approach is the role of task complexity in various forms of linguistic production in terms of accuracy, fluency, and complexity. Broadly, tasks have been paid close attention in various areas such as task complexity and have received increased attention in the study of motivation to learn a second or a foreign language. As Dörnyei (2002) noted, a logical step in the study of motivation for learning a language is considering tasks as the basic level of analysis.

A relatively new area of research related to both TBLT and motivation is task motivation, which is simply learners' motivation toward the tasks they do in classrooms. Research has shown that task motivation is the result of a complex and dynamic interplay of task-related factors and motivational variables (Poupore, 2013). The present study is aimed at finding any significant difference in intermediate EFL learners' tasks motivation or its dimensions in writing tasks with different degrees of complexity. Before proceeding to mention the aims of the current investigation in more detail, it

is first necessary to provide an explanation of the effect of task complexity on language production, and the role of task motivation in language learning. The previous empirical studies on task motivation which are scarce are also reviewed.

1.1 Cognitive Task Complexity

The notion of (cognitive) task complexity was first proposed by Robinson (2001) as "the result of attentional, memory, and other information-processing demands imposed by the structure of the task on the language learner" (p. 29). A famous well-established framework in which task complexity is usually defined is Robinson's (2001, 2005, 2007a) Cognition Hypothesis (CH).

In CH, attentional capacity is considered to be flexible. It postulates that if correct conditions are met, an increase in task complexity will lead learners to produce a more complex and accurate language. In order for linguistic output to be more accurate and complex, increasing complexity of tasks needs to be through Robinson's (2001, 2005) resource-directing dimensions (as the conditions to be met). The term resource refers to cognitive resources utilized by students while doing a task. When used to make the tasks complex, a resource-directing dimension causes cognitive and conceptual demands for learners to complete the tasks. Some examples of these dimensions are: +/- here and now (e.g., describing something happening now and in the present context is + here and now), +/- few elements (distinguishing few elements or things is + few elements), and +/- reasoning demands. On the contrary, when utilized to make the tasks more complex, Robinson's resource-dispersing dimensions of task complexity will not cause learners' attention to be directed toward the language required to meet the demands of the task. Some examples are +/- planning, +/- single task, and +/- prior knowledge.

Both resource-directing and resource-dispersing dimensions either in isolation or in tandem have been employed in studies related to task complexity (for resource-directing dimensions see Frear & Bitchener, 2015; Lee, 2019; Rahimi & Zhang, 2019; for resource-dispersing dimensions see Abrams & Byrd, 2016; and for both dimensions together see Fukuta & Yamashita, 2015; Ong & Zhang, 2010).

1.2 Task Motivation in Language Learning

As pointed out by Boekaerts (1987), there have been two perspectives on the study of motivation: motivation as a trait, and motivation as a state. In a similar vein, Dörnyei (2002) classified the approaches to L2 motivation studies into two categories. The first one is a traditional macro perspective in which L2 motivation is investigated by focusing on learners' overall disposition toward learning the L2, but the second one is a micro perspective, which is more situated in that the way learners' motivation is reflected in real classroom events and processes is explored. The latter has often been referred to as the situation-specific approach (Dörnyei, 1996; Julkunen, 2001) and its culmination is task motivation because a task-based framework is almost the only way whereby motivation is investigated in a situated approach (Dörnyei, 2002). Task motivation is also considered the conglomerate of trait and state motivations in that task motivation is dependent partly on trait motivation and partly on the way students perceive the task (i.e., state motivation) (Seegers & Boekaerts, 1993). Although the trait/state approach is a way to conceptualize task motivation, Dörnyei (2002) criticized it on the grounds that it is a relatively static conception and in return he proposed a process-oriented approach that looks at the dynamic processes that are at work when students are doing tasks. Trait/state approach and Dörnyei's approach to task motivation are somehow different; however, what matters is that motivation

is a temporarily limiting factor (Robinson, 2001). Accordingly, task motivation as one of its subcategories has such a nature.

1.3 Empirical Studies on Task Motivation

Task motivation has been investigated in relation to some other variables such as oral or written tasks, argumentative tasks, proficiency level etc. Regarding written tasks being the scope of the study, Yanguas (2007) explored any possible relationship between task motivation and syntactic complexity in learners' L2 writing. The results showed that task motivation was significantly correlated with syntactic complexity. The results also provided that both quantity and quality of learners' written production were demonstrated to be significantly correlated with task motivation.

Poupore (2013) found that task motivation is not dependent on a single affective variable. In other words, what task motivation is dependent on is a dynamic and complex interconnection of task-related factors and motivational variables. While in some of the tasks used in his study, effort and task relevance influenced task motivation, in some other tasks, it was learners' emotional state that played a crucial role. The results further showed that cognitive complexity of the tasks was an important parameter contributing to a change in task motivation. Another task-related factor shown to exert an influence on task motivation is the content of the tasks. In another study by Poupore (2014), adult learners' task motivation was examined by taking content-related conditions into consideration. The findings indicated that tasks with the contents relevant to real-life situations such as personal growth, human relationships, and life challenges were perceived as more interesting than those associated with topics such as international affairs and politics that are considered remote and abstract.

Finally, task complexity as another task-related factor has been the focus of a study by Masrom et al. (2015). They investigated any possible

correlation between task motivation and syntactic and lexical complexity of participants' production in asynchronous CMC writing tasks with four degrees of complexity. The results of their study demonstrated significant positive relationship between task motivation and lexical complexity in complex tasks.

Motivation and cognition alongside writing have been approached in a few theories, the most important of which are discussed below to elucidate the aim of this study.

1.4 Writing, Motivation, and Cognition

Robinson (2001) sees motivation as a temporarily limiting factor, as he argues that learners with greater motivation will have their attentional resources temporarily expanded to meet the demands of a task. This denotes the role of motivation and cognition in task performance. The subcategory of motivation was changed into task motivation in the revised TCF by Robinson (2007b) and Robinson and Gilabert (2007) signifying the importance of task motivation in TBLT.

Theoretically, the present study is based on Hayes-Flower model (Hayes & Flower, 1980), revised model of Hayes (1996), and the second revised model of Hayes (2012). The early model of writing is the Hayes-Flower model, which is comprehensive and deals with all aspects of writing process. One component of the model is task environment defined as everything outside the writer's skin. According to this definition, task complexity can be considered a subcategory of this component. They also included motivating cues as one aspect of the subcategory of task assignment indicating the role of motivation in writing process. The model was revised by Hayes in 1996 and this time he created two main components of the task environment and the individual. In the individual component, there is a direct relationship between the motivation/affect and cognition. Once again, Hayes (2012)

revised his model in which he attached great significance to motivation arguing that it is at work in many aspects of writing. This time, similar to the 1996 model in which motivation/affect has a direct relationship with cognition, he asserts that a combination of motivation and cognitive processes is required to account adequately for how people write.

The study carried out by Poupore (2013) yielded results that task motivation is not dependent on a single variable and that it is the results of several its-related affective variables and task-related factors such as cognitive complexity. In other words, cognitive demands utilized in some of the tasks contributed to developmental changes in task motivation. His findings rightly suggested that any models of task motivation should underscore and incorporate task complexity.

Generally, applying a fruitful task-based lesson is largely dependent upon taking into account the capacity of the tasks to engage and motivate students (Dörnyei, 2019). Building on our professional experience, what attaches importance to task motivation is that students, including even those who have positive motivational orientation toward the course, do not seem to be in favor of all the writing tasks provided by their teachers or their course books which leads to poor performance; in other words, not a specific writing task engages all the students in the same way, most likely because they do not have either any or enough task motivation resulting from task-related factors etc. One of the task-related factors is task complexity. To the best of our knowledge, no study to date has explored the *effect* of task complexity on task motivation or its dimensions. This study is, thus, an attempt to investigate the effect of task complexity manipulation in writing on EFL learners' task motivation. To this end, the following research question was formulated: What are the effects of varying degrees of cognitive complexity in three letter writing tasks on EFL learners' task motivation or its sub-

variables?

2. Method

2.1 Participants

Sixty-four EFL learners (32 males and 32 females) within the age range of 16 to 19 took part in this study on a voluntary basis. They were studying EFL through the course book *Viewpoint 1* at a language school in Baneh, a city in Kurdistan province in the northwest of Iran. All of the participants had Sorani-Kurdish as their native, Persian as their second, and English as their foreign language. The initial number of participants was 88 EFL learners 64 of whom were selected and identified as intermediate level learners based on an administered placement test results explained below. They were randomly divided into three groups, namely low complexity group, medium complexity group, and high complexity group.

2.2 Placement Test

Although the participants' course book covers B2 in Common European Framework Reference (CEFR) scale (i.e., upper intermediate), and their in-house placement and achievements in final exams showed that they were upper intermediate learners, in order to homogenize them and to further ascertain that their proficiency level was intermediate, they were given the placement test (as a proficiency test) of the course book series *English Unlimited* published by Cambridge University Press. This test is based on CEFR can-do statements consisting of two modules of oral and written whose written module was used in this study. The written placement test consists of 120 multiple-choice items. Moreover, the test has a Teachers' Guide part for scoring guideline and rubrics, which was drawn upon in the study.

2.3 Tasks

The tasks used in the present study were adopted from Frear and Bitchener's

(2015) letter writing tasks. The cognitive complexity of the three tasks was manipulated through +/- few elements and +/- reasoning demands as two resource-directing dimensions of complexity to make three task conditions. These dimensions were utilized because research in second language acquisition has shown that they, in comparison to resource-dispersing dimensions, are more likely associated with L2 development (Robinson, 2001, 2005). Task 1 (low complexity) was the least complex in which only a partial cognitive duress was needed to complete. Task 2 (medium complexity) and task 3 (high complexity) were made more complex so that the participants devoted more cognition and attention toward the task performance. All the three tasks required the participants to write a letter of about 200 to 250 words to a friend who wanted to come to the participants' city and receive some information about the city (in Task 1) or a restaurant (in Task 2 and 3).

Task 1 was a hand-out made up of a short introduction on what to do, two statements concerning the situation, and instructions on how to perform the writing. The situation provided that a close English-speaking friend called Peter was coming to participants' city and wants to know about it. The instructions section was easy to understand and follow and nothing regarding the reasons why the city might be deserved to be visited was provided (-reasoning demands). This section required the participants to write a letter to Peter of about 200 to 250 words and tell him some information (+few elements) about the city such as parks, restaurants, and the sights each of which is considered an element.

Task 2 was medium complexity task since reasoning demands and number of elements made it more complex. This task consisted of four sections: (1) introduction; (2) situation; (3) instructions; and (4) supplementary information, lists A and B. The introduction was exactly the

same as the one in the previous task. The situation had three statements involving a close English-speaking friend named John who was coming to the participants' city and liked to try some restaurants in the city, but he had time to go to only one restaurant and therefore required his friend (participants) to recommend one of the restaurants. The instructions required the participants to write John a letter of between 200 to 250 words and say which restaurant they have chosen, and why (+reasoning demands) by taking into account their own personal preferences, John's requirements in list A, and two restaurants information in list B (i.e., the number of elements was more in comparison to Task 1). List B contained information about the restaurants including the prices, opening time, staff, parking, drinks and so forth. Following the participants' cultural context, the drink was changed because in the main source (Frear & Bitchener, 2015), it was about beer and wine which are not offered in the restaurants in Iran.

Finally, Task 3 (high complexity) consisted of the same sections as Task 2; however, it was more complex in that there were more reasoning demands and the number of elements was also more. The number of elements was more compared to Task 2 as participants were required to consider two more friends' requirements and the information regarding one more restaurant, plus the letter receiver's personal preferences. To put it simply, based on the instructions of the task, participants were required to write John a letter in approximately 200 to 250 words telling him which restaurant they have chosen to go and why (+reasoning demands) based on many elements (-few elements) being three restaurants (List D), John and two more friends' requirements (Lists A, B, & C), and participants' own preferences. Obviously, because the number of elements was more, the reasons (+reasoning demands) were also more in comparison to Task 2.

2.4 Task Motivation Questionnaire

To measure participants' task motivation, a post-task questionnaire adopted from Boekaerts (2002) was used after a written copyright permission from the author was received. It consisted of 25 items capturing different aspects of task motivation. The questionnaire items were four-point numerical scales consisting of ten items to register students' emotional state upon task completion, four items to measure their invested effort in the task, two items to gauge result assessment that is the extent to which participants think their performance on the task was successful (Poupore, 2016), one item to measure perceived relevance (i.e., whether or not the task is considered useful by the learners), and eight items to tap into causal attributions (causal beliefs) made by the students after task performance. The questionnaire and the tasks were piloted to 11 students and internal consistency reliability, Cronbach's alpha coefficient scores for the multi-item scales showed .85 for total task motivation, .83 for emotional state upon task completion, .67 for invested effort, .79 for result assessment, and .71 for causal attributions.

2.5 Procedure

The participants of this study were first invited to take part in the research. Then, they were given the placement test in order to assess their proficiency level. The results showed that out of the initial 88 participants in the institutes, 64 were at the level of intermediate (B1-B2 in CEFR scale). In order to prevent practice effects, all the participants were randomly assigned to each of the three groups for the three tasks. In other words, each participant did only one task. Twenty participants were assigned to low complexity group (10 females and 10 males), 22 to medium complexity group (8 females & 14 males), and also 22 to high complexity group (14 females & 8 males). After this stage, the date for data gathering was set in a meeting.

The groups were put in three separate classes in the school. Each participant was given the task hand-out to complete. To ensure understanding the tasks, each participant was given 5 minutes to check the instructions and ask any questions. Building on the experience gained from the piloting, the time limit to do the tasks was set to be 60 minutes, without any planning time, which is a resource-dispersing dimension (Robinson & Gilabert, 2007). This was owing to the fact that, in this study, the cognitive burden of the tasks was manipulated using only resource-directing dimensions of complexity. No smart phones or dictionaries were allowed to be used for all the three groups during the task performance. Immediately after task completions, the participants were given the post-task questionnaires to fill in.

2.6 Data Analysis

Before running statistical analyses, the gathered data through the questionnaires were checked for normality of distribution to help decide what statistical test is appropriate to conduct. The results of a normality test, an examination of skewness and kurtosis measures and standard errors, and a visual inspection of their histograms, Q-Q plots and box plots revealed that the data were not normally distributed. Version 24 of Statistical Package for Social Sciences (SPSS) was used to run all the statistical analyses in this study. The results of normality test using SPSS are shown in Table 1.

Table 1
Normality Test Results

	Kolmogorov-Smirnov		
	Statistic	df	Sig.
Emotional state	.155	64	.001
Invested effort	.122	64	.019
Result assessment	.266	64	.000
Causal attributions	.139	64	.004
Perceived relevance	.246	64	.000
Total task motivation	.120	64	.022

Kolmogorov-Smirnov test was used because the sample size was larger than 50 cases. The results showed that the data were not normally distributed because p-value was lower than .05 for all the sub-variables. Hence, analyzing the data using one-way ANOVA as a parametric test was not possible. Therefore, its non-parametric alternative which is Kruskal Wallis H test was used to find any different levels of task motivation or its dimensions in the three writing task groups. Because an assumption underlying Kruskal Wallis H is that the data must have homogeneity of variance (equality of variance) ($p > .05$), the nonparametric Levene's test (Nordstokke & Zumbo, 2010; Nordstokke et al., 2011) was utilized to check for homogeneity of variance in the sample. The p-value for emotional state, invested effort, result assessment, causal attributions, perceived relevance, and total task motivation was .404, .487, .649, .868, .821, and .085, respectively indicating the homogeneity of variance in the sample. Kruskal Wallis H test was conducted, then a series of post hoc Mann Whitney U tests for pairwise comparisons were run to find the exact location of differences between the groups. The resulted values of statistical analyses and the effect sizes (r) (Field, 2005) for post hoc analyses are provided below.

3. Results

This study aims at finding any possible effect of task complexity on task motivation in three letter writing task with three degrees of complexity along resource directing dimensions. Table 2 shows the descriptive statistics for the three groups. The scores of each sub-variable of task motivation and total task motivation were based on the average for each group. Since the data was not normally distributed, median is provided instead of mean and standard deviation. Considerable variation in terms of median, minimum score (min), and maximum score (max) is evident within the groups as the table shows.

Table 2
Descriptive Statistics of Task Motivation and Its Sub-Variables

Task motivation variables	low complexity group				medium complexity group				high complexity group			
	N	Median	Min	Max	N	Median	Min	Max	N	Median	Min	Max
Emotional state	20	2.95	1.10	4.00	22	3.50	1.60	3.90	22	3.30	2.40	4.00
Invested effort	20	2.75	2.00	3.75	22	3.00	2.25	3.75	22	2.75	2.00	3.50
Result assessment	20	3.00	1.50	4.00	22	2.00	1.50	4.00	22	3.00	1.50	4.00
Causal attribution	20	2.68	1.63	3.50	22	2.62	2.13	3.25	22	2.62	2.13	3.38
Perceived relevance	20	3.00	1.00	4.00	22	4.00	2.00	4.00	22	3.00	2.00	4.00
Total task motivation	20	2.82	1.76	3.52	22	3.10	2.00	3.52	22	2.98	2.40	3.44

According to Table 2, participants in low complexity group reported that their task was of high relevance (median=3.00). The extent to which they attributed their success or failure on task performance to different internal sources was the lowest (median=2.68). Similarly, causal attributions made after task performance were of low value for participants in medium complexity group (median=2.62), and the task was shown to be of high relevance (median=4.00). In high complexity group, positive emotions was reported to be high (median=3.30) compared to the scores of other sub-variables. To see whether the differences in results between the groups are statistically significant, the Kruskal Wallis H test was done the results of which are shown in Table 3. The significant results are in bold in the table ($p < .05$).

Table 3
Kruskal Wallis H Test Results

	Emotions	Invested Effort	Result Assessment	Causal Attributions	Perceived Relevance	Total Task Motivation
Chi-Square	8.600	2.030	.413	.441	6.091	4.376
df	2	2	2	2	2	2
Asymp. Sig.	**.014**	.362	.814	.802	**.048**	.112

The results revealed that there is a statistically significant difference between the groups in their emotional state after task completion (χ^2 (2) = 8.600, p = .014) indicating that the three degrees of task complexity in the three writing tasks have caused different levels of emotional state as a sub-variable of task motivation. Three Mann Whitney U tests as post hoc analyses were run to find where the difference in emotional state exactly is between the groups. A significant difference (U = 108.000, z = -2.834, p = .005, r = .43) was found between low complexity group (mean rank=23.20) and medium complexity group (mean rank=39.91) in their emotional state. The r value which is .43 is considered a large effect size (Field, 2005). However, no significant difference was found between low complexity group and high complexity group (U = 146.000, z = -1.869, p = .062) as well as between medium complexity group and high complexity group (U = 191.000, z = -1.203, p = .229).

Regarding invested effort as another sub-variable of task motivation, no statistically significant difference was found between the three group (χ^2 (2) = 2.030, p = .362) which shows that low, medium, and high complexity tasks have not made the participants put varying degrees of effort into completing the tasks. Similarly, result assessment by the participants was not statistically different across the three groups (χ^2 (2) = .413, p = .814). Causal attributions (causal beliefs) being the extent to which learners attribute success or failure in the tasks to the sources mentioned in the items concerning this sub-variable was not significantly different (χ^2 (2) = .441, p = .802) between the groups which indicates that the three task conditions having varying degrees of complexity did not make any statistically significant difference between the groups in their causal beliefs.

A statistically significant difference in perceived relevance was revealed

across the groups (χ^2 (2) = 6.091, p = .048). A series of post hoc tests using Mann Whitney U showed that perceived relevance was significantly different (U = 149.000, z = -1.981, p = .048, r = .31) between low complexity group (mean rank=29.35) and medium complexity group (mean rank = 39.68) which means that the degree of usefulness (perceived relevance) was more in medium complexity group than in low complexity group, that is to say, the participants in medium complexity group reported more usefulness than the participants in low complexity group. However, the degree of perceived relevance was not statistically different between low complexity group and high complexity group (U = 212.000, z = -.224, p = .823). Another significant difference in perceived relevance was found (U = 155.000, z = -2.249, p = .025, r = .34) between medium complexity group (mean rank =39.68) and high complexity group (mean rank = 28.18) which shows that the two conditions of writing being low and medium complexity tasks were considered different by participants in terms of perceived relevance. Finally, no statistically significant difference was found between the groups in their total task motivation (χ^2 (2) = 4.376, p = .112).

4. Discussion

It was proved that the task with medium degree of complexity motivated the learners in terms of perceived relevance and emotional state more than the other two tasks. For emotional state, medium complexity group had higher and more positive emotional state after task completion than low complexity group, and no significant difference was found between low complexity group and high complexity group or medium complexity group and high complexity group. A significant difference in perceived relevance was between medium complexity group and low complexity group the result of which showed that the participants of medium complexity group considered their task, which was medium complexity, more relevant (useful) than the

participants of low complexity group did. Moreover, the task medium complexity group did was considered more useful by the participants than the task high complexity group did. No significant difference was found between low complexity group and high complexity group in their opinions on relevance. And no significant difference was found in invested effort, result assessment, causal attributions, or total task motivation between the three groups.

The significant difference in emotional state between low complexity group and medium complexity group is probably because low complexity task was considered too easy to perform. Although there was minimum cognitive duress in this task based on resource-directing dimensions, and that the participants could write anything possible about the city, they did not show high and positive emotional state upon task completion, and considered the task to be negative in nature. Today, a relatively large number of EFL learners are willing to get an acceptable score in IELTS exam in which any task is much more difficult than low complexity task in this study, thus such an easy task failed to make the participants show a high emotional state.

Building on the fact that medium complexity group had a higher emotional state compared to low complexity group, and that the participants were at intermediate level of proficiency, a conclusion can be drawn that intermediate EFL learners prefer to do *relatively* difficult and complex tasks not too easy ones. This is not in line with Poupore's (2013) study in which certain task conditions utilized in one of the tasks made it *difficult to complete* and caused a low level of participants' emotional state. However, task complexity based on a recognized model or framework such as resource-directing or -dispersing dimensions was not employed in his study, accordingly the degree of difficulty or complexity of the tasks are not clear.

The findings regarding emotional state of medium complexity group

participants partially support Hayes-Flower model (Hayes & Flower, 1980) and Hayes's later models (1996, 2012) since these models, particularly the one in 1996, underscore the role of motivation and cognition in writing process.

The level of perceived relevance which was revealed to be significantly different among the three groups is noteworthy because once again it was higher in medium complexity group. A plausible reason may lie in the way the students perceived the task. Poupore (2014) found that tasks with real-life situation contents such as human relationships, personal growth, and life challenges were perceived as more interesting than those having abstract and remote contents like international affairs and politics. According to the features of a real-world task (Ellis, 2003), letter writing, which has the same rules of emailing in terms of the different parts like salutation, body, and complimentary close, is categorized as a real-world task. The three tasks in this study were all identical in terms of task-type which was letter writing, while they were different in their degrees of cognitive complexity which is the reason why the level of perceived relevance in low complexity group and high complexity group participants was low in comparison to participants in medium complexity group. In other words, perceived relevance has been affected by task complexity manipulation. Medium complexity group students' recognition that the task is relevant to their needs in real-life situations has affected their motivational orientation toward the task, and because people like to invest their maximum time and energy on internet-based activities to keep in touch with friends and relatives especially in the context of Iran (Ghassemzadeh et al., 2008), medium complexity group students found medium complexity task useful and relevant.

Another problem that the high complexity group participants experienced could be the time limit. All the participants were required to complete the

tasks in an hour. Given this, it seems that it was demanding for them to focus on all dimensions of the restaurants, and friends' requirements while doing the task which was the most complex. This finding is supported by Kroll's study (1990) as she found that time is an influential factor based on the results of the two groups of learners one of whom produced their essays at home and the other produced theirs in class during a 60-minute time limit. She found that the learners who did their writing at home outperformed those who did it in the 60-minute time limit.

In sum, the results of the study revealed that EFL learners at proficiency level of intermediate are motivated by writing tasks manipulated along resource-directing dimensions of complexity that are not too complex or the least complex to complete.

5. Conclusion

This study was an attempt to investigate the effect of task complexity manipulation in writing on EFL learners' task motivation. In low complexity group and medium complexity group, the fact that low and high complexity tasks failed to affect the students in terms of emotional state and perceived relevance implies that it is better for foreign and second language teachers not to ignore the role task motivation plays in language classrooms as a part of their task-based syllabuses. Some EFL teachers try to precisely follow guidelines and instructions in teacher's books. There are a variety of tasks in the teacher's books; however, as a matter of fact, some students may show no or little motivation toward these tasks, perhaps because the degree of complexity of the tasks is either far beyond or below their current task-specific motivational orientation. The findings regarding medium complexity group will also be of use for EFL teachers regarding intermediate level of language proficiency and task complexity. All participants of the study were at the level of intermediate proficiency. The type of the tasks used in the

study was the same for all participants except for cognitive complexity of the tasks, which was manipulated along resource-directing dimensions of complexity. The significant effect of medium complexity task on the students' perceived relevance and emotional state has the implication that EFL teachers should incorporate tasks with a medium degree of complexity in their task-based syllabuses for intermediate learners. It will be fruitful to give the students who have no or little motivation toward the task at hand a choice in the degree of complexity. To this end, teachers can design all the tasks with two degrees of low and medium complexity.

When exploring the effect of task complexity manipulation in writing on intermediate level students' task motivation, we faced some limitations. One limitation was the type of the tasks used. In addition, to manipulate the complexity of the tasks, only resource-directing dimensions of complexity were used, indicating that future studies could incorporate different task types with their complexity manipulated along resource-dispersing or both dimensions of complexity. The task the students did was not part of their syllabus which may have affected their task motivation. This is considered another limitation which should be addressed in future studies. Task motivation is still in its early days in language teaching field and the findings of the current study do not at all indicate that task complexity is the single effective factor in learners' motivational orientation toward language learning tasks. More studies are needed in order to find out any possible relationship between task motivation and other activities widely practiced in language classrooms. It is suggested that future studies also investigate longitudinally the effect of task complexity on maintaining students' general motivational orientation or task motivation. Also, future investigations should address the relationship between task motivation and task complexity across different proficiency levels; since in the study, only students at intermediate level were the subjects. Another research area motivated by the findings of high

complexity group regarding the time is the effect of time pressure or length of time on task motivation.

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