The relationship between task repetition and language proficiency

Ahmad Mojavezi
(Department of English, Sistan and Baluchestan Science and Research Branch, Islamic Azad University, Zahedan, Iran)
a.mojavezi@gmail.com

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Abstract
Task repetition is now considered as an important task-based implementation variable which can affect complexity, accuracy, and fluency of L2 speech. However, in order to move towards theorizing the role of task repetition in second language acquisition, it is necessary that individual variables be taken into account. The present study aimed to investigate the way task repetition correlates with language proficiency and the differential effects that task repetition might have on the complexity, accuracy, and fluency of L2 learners with different levels of proficiency. Fifty language learners of different levels of proficiency, selected from two different language centers, participated in this study. They were asked to perform an oral narrative task twice with a one-week interval. Results revealed that, compared to the participants with lower L2 proficiency, participants with higher levels of L2 proficiency produced more complex, accurate, and fluent speech on the second encounter with the same task.

Keywords: accuracy, complexity, fluency, language proficiency, task repetition

Introduction
Enormous growth of interest in task-based language learning and teaching has been observed in recent years. There are several reasons for this interest. First, a ‘task’ is a construct of equal importance to both second language acquisition researchers and language teachers (Ellis, 2003, 2008). Second, task-based pedagogy is capable of a wide range of interpretations; that is, any single task, Ellis (2003) states, has the potential to be performed in a number of ways, depending on how the participants orient to it. This perceived flexibility of task-based tradition can deflect some of the criticisms leveled against it. One of these criticisms is based on the claim that performing tasks and language use does not necessarily lead to fluent and accurate production or language acquisition (Reinders, 2009).

From the vantage point of information processing theories, this is in part due to the fact that language learners’ attentional or processing capacity is restricted, and hence, they cannot process ‘schematic’ and ‘systemic’ knowledge simultaneously (see Carroll, 2008; Ellis, 1994, 2003, 2005; Randall, 2007; Skehan, 1998, 2007; Skehan & Foster 1999, 2001). This being so, language learners tend to bypass language form in favor of meaning drawing on their wide repertoire of communicative strategies to which they have access (Skehan, 1998a).

Researchers have proposed several implementation and task-based variables
one of which is Task Repetition. However, there is not enough evidence as to the relationship between task repetition and individual difference variables. This study aimed to compare the oral discourse produced on two encounters of the same task and the way in which task repetition correlates with language proficiency affecting L2 oral production in terms of accuracy, complexity and fluency.

**Background**

**Task repetition**

Task repetition is a very important concept in language teaching (Larsen-Freeman, 2012), especially, its new conceptualization has drawn so much attention. This new conceptualization is influenced by the view that our attentional and processing capacity during communication activities is inherently both limited and selective (Anderson, 1995; Schmidt, 2011). As a result, L2 learners cannot focus on both meaning and form simultaneously (Van Patten, 1990). Because tasks are essentially meaning-centered, when it comes to prioritizing either form or meaning, it is likely that task performers choose meaning. However, task repetition has the potential to free up task participants’ limited attentional resources and to help them devote much of their cognitive resources to the formal and systemic aspects of language (Ahmadian & Tavakoli, 2011; Ellis, 2005). According to Bygate and Samuda (2005, p. 45), task repetition entails two phases: a first performance of a task, in which task performers organize the cognitive content, select the useful lexico-grammar, process it online, and produce “an experientially derived multi-level schema to support subsequent linguistic work”; and a second performance, during which the task participant can build upon the previous.

Several studies have investigated the effects of task repetition on L2 performance and in this section some of the most relevant studies will be reviewed.

**Bygate’s studies**

Martin Bygate is perhaps the first scholar to study task repetition in light of its new conceptualization. In his first pioneering study (1996), he asked a language learner to perform a task twice with a three-day time interval and without being told on the first occasion that the task would be repeated three days later. She was asked to watch a Tom & Jerry video cartoon and then to retell it. Bygate reported that this form of repetition resulted in some striking improvement in both fluency and accuracy (also see Bygate, 1999). Accuracy, too, had some improvements which were in terms of vocabulary, idiomaticity, grammatical markers and structure.

Bygate (2001) drew on his first investigation and sought to compare the performances of 48 learners on a narrative and an interview. In that study, participants were asked to perform one version of each task while the two occasions of performance were 10 weeks apart. Bygate reported that over the 10 week interval between the two performances, one group practiced narrative tasks and the other group practiced the interview tasks. Overall, he attempted to address three things: (a) the second performance of the same tasks that they had performed 10 weeks earlier; (b) performance of a new version of the type of task that participants had practiced over the 10 weeks and the one they had not practiced; and (c) participants’ overall performance across the two task types. It was found that task type had no meaningful effect on learners’
performances. However, the findings revealed that task repetition had a significant effect on fluency and complexity. The findings of this study were similar to and consistent with Bygate’s (1996) results regarding the impacts of task repetition.

Bygate used his previous dataset in Bygate and Samuda (2005). In this study the authors attempted to test whether or not performing a communicative task for the second time may assist learners to combine what they already know into what they do. Bygate and Samuda (2005, p. 45) maintain that task repetition is a kind of planning and they argue that repetition has “the potential to lead to integration of knowledge and performance” and it could be viewed as “facilitating changes particularly in the conceptualization and formulation phases of the production process” (Bygate & Samuda, 2005, p.45). In addition to confirming Bygate’s (2001) findings, the results revealed that the effects of task repetition “extends well beyond the domains of fluency, accuracy, and complexity and into aspects of language use which involve qualitative issues such as […] in what ways speakers bring their language knowledge into action to generate an effective piece of talk” (Bygate & Samuda, 2005, 66).

Lynch and McLean’s studies
Another interesting series of studies on task repetition has been carried out by Lynch and McLean (2000, 2001) in an ESP context. They designed a special and interesting task called ‘postal carousel’. In this task students were required to read an academic article and prepare a poster presentation based on it. Each student (poster presenter) had six visitors, which means that each of them repeated the same task of answering to the same question posed by the visitors six times. Lynch and McLean found that this recycling had positive impacts on both accuracy and fluency in language production. Another interesting observation was that while highly proficient students used the recycling opportunity to improve clarity of their expressions, low proficient students made use of these opportunities to improve their accuracy and pronunciation.

Ahmadian’s studies
Ahmadian and Tavakoli (2011) investigated the effects of simultaneous use of task repetition and careful online planning (operationalized as the provision of ample time for task performance) on the CAF of EFL learners. They asked intermediate EFL learners to repeat an oral narrative task with an interval of one week. Results of their study revealed that task repetition positively impacts complexity and fluency. Moreover, it was found that task repetition had the potential to compensate for the dysfluency which resulted from engaging in careful online planning. Overall, the findings of their research confirmed Bygate and Samuda’s (2005) claim that task repetition could complement both strategic and careful online planning.

In another study, Ahmadian (2011) examined the effects of massed task repetition on the CAF triad over a six-month period and sought to see if these effects transfer to a new task. The subjects included 30 intermediate EFL learners from two intact classes who were divided into two groups. Participants in the experimental group were asked to do a dialogic narrative task on occasions 1 to 11 and an interview task on occasion 12, each occasion was two weeks apart.
However, participants in the control group were only required to perform the oral narrative task at time 1 and engage in the interview task at time 12. The results revealed that massed repetitions of the same task assisted subjects in the experimental group to outperform those in the control group in terms of complexity and fluency, but not accuracy, to the effect that the benefits of massed repetitions of the same task transfers to performance of a new task. This finding is important in that it demonstrates that task repetition could assist language learning.

**Language proficiency**

*Language proficiency* (LP) could be defined as “a person’s overall competence and ability to perform in L2 [second language]” (Thomas, 1994, p. 330, footnote 1). Most of the investigative attempts related to this construct pertain to its operationalization (Hulstijn, 2011). Theoretically, there are grounds to hypothesize that the way second language learners make use of task repetition opportunity is mediated by their differential LP. This hypothesis is based on two interrelated assumptions: (a) on the second encounter with the same task, language learners are assumed to monitor and plan their speech and for doing so they would need to fall back on their explicit knowledge (Ellis, 2005); and (b) the grammatical knowledge which could be represented as explicit knowledge constitute is an important component of language proficiency (or communicative language ability) (Bachman & Palmer, 1996).

It is now well established that factors external to the classroom, such as L2 learners’ age of first exposure to the target language, their length of stay in an environment where that language is spoken, and their percentage of weekly use of the target language, play a significant role in determining their L2 proficiency (see Tremblay, 2011). Hence, even in an instructed environment, L2 learners show considerable variability in their proficiency due to these factors (Tremblay, 2011). Because proficiency directly influences L2 learners’ performance on experiments, it seems imperative that this variable be characterized as precisely and accurately as possible in experimental research. Surprisingly, most of the studies on the effects of task-based implementation variables have simply been controlled for the effects of L2 proficiency and therefore no related studies exist to be reviewed. In this study, this variable will play a pivotal role.

**Research question**

In light of the above-mentioned theoretical and empirical backgrounds the following research question was formulated:

- Is there any relationship between language proficiency and the effects of task repetition on complexity, accuracy, and fluency of L2 speech production?

**Method**

To conduct the present study, a correlational design was applied in the following manner: The study was carried out in three sessions. In the first session, a cloze test was given to the participants to do. In the second and third sessions the participants performed the oral narrative task.

**Participants**

Fifty Iranian EFL learners took part in this investigation. There were 19 males and 31 females and their average age was 19
ranging from 17 to 21 years old. They all signed the informed consent forms. They were asked several questions and it became clear that they had studied English for at least 8 months. None of them had had any opportunity to use English language for communicative purposes outside the classroom. Since in this study language proficiency was an important variable they were selected from among different levels of proficiency and totally at random using systematic random sampling.

**Task**

In line with the previous task repetition studies (Ahmadian & Tavakoli, 2011; Bygate, 1996, 2001), in the present study, learners did an oral narrative task twice with a one-week interval. The video was silent and monologic. This action is good to make sure that L2 oral performance is being investigated “as an individual attribute” (De Jong, Groenhout, Schoonen & Hulstijn, 2013) rather than the product of a process of co-constructing a message which is typical of the dialogic mode of discourse (De Jong, et al., 2013). The video selected for this study was One-Man Band (2005), the story of which was found to be ‘organized’ and ‘structured’ in a series of studies on task structure and L2 oral performance. The video tells the interesting tale of a peasant girl who encounters two competing street performers who would prefer the coin find its way into their tip jars. As the two one-man bands’ rivalry crescendos, the two overly eager musicians vie to win the little girl’s attention. In none of the occasions of task performance, participants were allowed to either take notes or do preparations before narrating the story of the video. Moreover, they were not told that they were going to repeat the same task two weeks later.

**Language proficiency: Cloze test**

In the first session of data collection, a cloze test was administered to the participants. The use of cloze tests as a measure of proficiency is not new. The cloze procedure was first introduced by Taylor (1957) and has been the object of much testing research since the 1970s (e.g., Oller, 1972, 1973). Some researchers have argued that cloze tests assess low-level lexical and grammatical competence (e.g., Alderson, 1979), whereas others have proposed that cloze tests can also measure higher level discourse competence (Oller, 1973). Although no consensus has been achieved as to what aspects of linguistic competence cloze tests measure, their scores have been found to correlate highly with standardized proficiency scores (see Tremblay, 2011).

The validity, reliability, and discriminability of cloze tests are ultimately a function of the extent to which these tests are tailored for the targeted population of L2 learners. As Messick (1989) suggested, validity is not a property of a test but rather of the inferences made on the basis of the test. In fact, in order that “such inferences be accurate, the cloze test must be neither too easy nor too difficult for the targeted L2 learners; otherwise, the test may not reveal much about these learners’ proficiency other than whether it meets a particular level” (Tremblay, 2011, p. 345).

To sum up, as Tremblay (2011, p. 346) rightly points out: “more than just a useful tool by testing standards, cloze tests are also a practical tool for research purposes: Unlike standardized proficiency tests—which at any rate are not always available to researchers—they can take a relatively short amount of time to complete (e.g.,
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15–35 min, depending on the difficulty level of the test). Their flexible format (e.g., choice of text, length of text, word-deletion ratio, scoring method) makes it possible to target a particular range of proficiency levels, and they are easy to create and score if clear scoring criteria are established. These advantages are certainly well known to some researchers, as shown by a number of surveyed studies that have already employed cloze tests (or their counterpart, C-tests; Raatz & Klein-Bradley, 1981) as a “proficiency assessment method.”

In the present study, a 300-word cloze test was designed and the words were deleted from the text using the purposive method so that a balanced proportion of content and function words could be elicited from L2 learners. The test had an open-ended format because it was assumed that this format was more likely to provide a picture of the production skills than the multiple-choice format did. The test was then piloted with 4 native speakers of English. The test was revised when all 4 native speakers completed it. The final version of the test, provided in Appendix, had 40 words deleted, of which about 20 were content words (i.e. open-class: nouns adjectives, main verbs, adverbs, etc.) and about 20 were function words (i.e. closed-class: determiners, pronouns, auxiliaries, etc.). Despite the occasional difficulty involved in determining what is and is not an acceptable answer, scoring cloze tests on the basis of acceptable answers has more face validity, in that it is rarely the case that only one word is allowed in any given lexical, morphosyntactic, and discourse context (Tremblay, 2011). Two native speakers of English were asked to check the acceptable responses and mark those which were not acceptable in English. The cloze test scores could range between 0 and 40.

In the second and the third sessions of data collection the participants were required to perform the oral narrative task and their narrations were audio-recorded for further analysis and coding. The transcribed narrations were analyzed in terms of the CAF measures described below.

**Complexity, accuracy, and fluency**

According to Ellis and Barkhuizen (2005), one way to make studies on the same issue more comparable and, ultimately, to help reach generalizations is to use the same measures and assessment tools. In this study, attempts were made to use the same measures used in other task repetition studies. Following Ahmadian (2011), the following measures were used:

**Complexity:**

- **Syntactic complexity (amount of subordination):** the ratio of clauses to AS-units in the participants’ production. The rationale behind choosing AS-unit is that this unit is essentially a syntactic one and syntactic units are genuine units of planning (Foster, Tonkyn, & Wigglesworth., 2000) which might make them good units for analyzing spoken language in this study.

AS-unit is defined as “… a single speaker’s utterance consisting of an independent clause or sub-clausal unit, together with any subordinate clause(s) associated with it” (Foster et al., 2000, p. 365).

- **Syntactic variety:** the total number of different grammatical verb forms used in participants performances. Tense
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(e.g. simple present, simple past, past continuous, etc.) and modality (e.g. should, must, etc.) were taken as grammatical verb forms used for the analysis.

- **Overall complexity:** the mean length of AS-units in the participants’ oral performances as measured by calculating the mean number of words per AS-unit.

**Accuracy:**
- **Error-free clauses:** the percentage of the clauses which were not erroneous. All syntactic, morphological and lexical errors were taken into consideration.
- **Correct verb forms:** the percentage of all verbs which were used correctly in terms of tense, aspect, modality, and subject-verb agreement.

**Fluency:**
- **Rate A (number of syllables produced per minute of speech):** the number of syllables within each narrative, divided by the total articulation time and multiplied by 60.
- **Rate B (number of meaningful syllables per minute of speech):** rate A’s procedure was followed again, but all syllables, words, phrases that were repeated, reformulated, or replaced excluded.

Given the nature of the data, Pearson Correlation Coefficient was used to test the null hypotheses.

**Results**
This study aimed to investigate the way task repetition correlated with language proficiency to affect L2 oral production in terms of accuracy, complexity and fluency. In this section, the results of the study will be reported and each finding will be interpreted with regards to the relevant theoretical and empirical frameworks. The question that entertained this research study was whether or not language proficiency correlates with the effects of task repetition on the CAF triad. The three variables, i.e., the CAF triad, were treated separately.

Tables 1 and 2 clearly indicate that on the first encounter with the narrative task the relationships are not statistically significant. This is an important finding in that, as the results show, there are positive relationships between LP and all three dimensions of L2 proficiency (the CAF triad), but these relationships are not statistically significant.

**Table 1: Descriptive statistics for the CAF triad measures on the first encounter with the oral narrative task**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloze test</td>
<td>50</td>
<td>21.00</td>
<td>30.00</td>
<td>26.071</td>
<td>2.016</td>
</tr>
<tr>
<td>Syntactic complexity</td>
<td>50</td>
<td>.69</td>
<td>.85</td>
<td>.761</td>
<td>.0433</td>
</tr>
<tr>
<td>Error free clauses</td>
<td>50</td>
<td>47.00</td>
<td>55.00</td>
<td>49.867</td>
<td>1.310</td>
</tr>
<tr>
<td>Correct verb forms</td>
<td>50</td>
<td>60.00</td>
<td>69.70</td>
<td>65.869</td>
<td>2.407</td>
</tr>
<tr>
<td>Rate A</td>
<td>50</td>
<td>25.00</td>
<td>35.00</td>
<td>32.733</td>
<td>1.537</td>
</tr>
<tr>
<td>Rate B</td>
<td>50</td>
<td>21.20</td>
<td>29.50</td>
<td>26.029</td>
<td>1.502</td>
</tr>
<tr>
<td>Syntactic variety</td>
<td>50</td>
<td>4.00</td>
<td>7.00</td>
<td>4.619</td>
<td>.763</td>
</tr>
</tbody>
</table>
The relationship between task repetition and language

The first part of the research question concerns complexity. A comparison between the first and second encounter of the task performance in Tables 2 and 4 reveals that the results for the second encounter are statistically significant (p < .04 for syntactic complexity and p < .003 for syntactic variety). This means that participants with higher levels of proficiency have been more adept in using the task repetition opportunity to produce more complex language. Taking into account Cohen’s criterion for interpreting effect sizes, the former correlation (r = .41) is moderate and the latter is large (r = .55). This is in line with the argument put forth by many researchers regarding the important role of language proficiency in all teaching and learning techniques (see Tremblay, 2011).

The second and the third part of the research question concerns accuracy and fluency. Here, again, a brief look at Tables 3 and 4 reveals that on the second encounter the participants with higher language proficiency have been able to produce more accurate (p < .001; p < .001) and fluent (p < .005; p < .001) language and this is the case for all measures which have been utilized to assess accuracy and fluency. All effect size magnitudes for accuracy and fluency are large. A theoretical account for this finding would be that our attentional resources are limited and selective (Schmidt, 2001) and therefore the participants with higher LP might be more able to allocate their attentional resources to the production of fluent and accurate language.

Table 2: Pearson Correlation Coefficient for the CAF triad measures on the first encounter with the oral narrative task  
(Note: LP = language proficiency)

<table>
<thead>
<tr>
<th>LP</th>
<th>Syn. Com.</th>
<th>Error free clauses</th>
<th>Correct verbs</th>
<th>Rate A</th>
<th>Rate B</th>
<th>Syn. variety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sig</td>
<td>.479</td>
<td>.179</td>
<td>.244</td>
<td>.783</td>
<td>.554</td>
<td>.876</td>
</tr>
</tbody>
</table>

| LP   | R         | .217               | .268          | .384   | .242   | .416         | .335         |

Table 3: Descriptive statistics for the CAF triad measures on the second encounter with the oral narrative task

<table>
<thead>
<tr>
<th>Syntax complexity</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>SD</th>
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</thead>
<tbody>
<tr>
<td>Error free clauses</td>
<td>50</td>
<td>.68</td>
<td>.82</td>
<td>.761</td>
<td>.043</td>
</tr>
<tr>
<td>Correct verb forms</td>
<td>50</td>
<td>46.00</td>
<td>55.00</td>
<td>49.770</td>
<td>1.579</td>
</tr>
<tr>
<td>Rate A</td>
<td>50</td>
<td>27.50</td>
<td>34.50</td>
<td>32.584</td>
<td>1.136</td>
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<tr>
<td>Rate B</td>
<td>50</td>
<td>22.00</td>
<td>30.00</td>
<td>26.209</td>
<td>1.430</td>
</tr>
</tbody>
</table>

Table 4: Pearson Correlation Coefficient for the CAF triad measures on the second encounter with the oral narrative task; (Note: LP=language proficiency)

<table>
<thead>
<tr>
<th>LP</th>
<th>Syn. Com.</th>
<th>Error free clauses</th>
<th>Correct verbs</th>
<th>Rate A</th>
<th>Rate B</th>
<th>Syn. variety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sig</td>
<td>.04</td>
<td>.001</td>
<td>.001</td>
<td>.001</td>
<td>.005</td>
<td>.003</td>
</tr>
</tbody>
</table>

Conclusions

The aim of this study was to see if LP correlates with the effects of task repetition on CAF. The findings indicated that participants with higher English language proficiency are more capable of using this task-based opportunity to produce more complex, fluent, and accurate language. These findings have some implications for L2 pedagogy. Anecdotal evidence has it that in the
Iranian EFL context, explicit teaching of grammar is of prime importance to language learners. Task-based methodology, however, by its very nature, puts premium on meaning. Given the fact that language learners’ attentional and processing capacity is limited, they might be induced to prioritize meaning over form. Therefore, the explicit instruction of grammar is in a way marginalized and the use of strategic competence, contextual support, and formulaic chunks might be encouraged. Despite all this, methodology, Widdowson (1990) argues, always finds some room for maneuver. TBLT is no exception in this particular respect. Task repetition is an implementation variable which has proved to be useful for enhancing the CAF of language learners. Given the correlation nature of this study, it is important to point out that the results need to be interpreted with due caution. In fact, correlation is not equal to causation and therefore, in addition to language proficiency, one needs to think of other individual variables (such as willingness to communicate, anxiety, etc.) when using task repetition in the classroom.

References


Appendix

The cloze test

Is talking on a cell phone dangerous to your health? It is difficult to know for sure. Some research suggests that heavy users of mobile phones are at a greater risk of developing brain tumors. However, many other studies suggest there are no links between cancer and cell phone use. The main problem with the current research is that mobile phones have only been popular since the 1990s. As a result, it is impossible to study the long term exposure of cell phone use. This concerns many health professionals who point out that many cancers take at least 10 years to develop. Another concern about these studies is that many have been funded by those who benefit financially from the cell phone industry.

Over three billion people use cell phones on a daily basis, and many talk for more than an hour a day. Cell phone antennas are similar to microwave ovens. While both rely on electromagnetic radiation, the radio waves in cell phones are lower in radio frequency (RF). Microwave ovens have enough RF to cook food and are therefore known to be dangerous to human tissues. However, the concern is that the lower frequency radio waves that cell phones rely on may also be dangerous. It seems logical that holding a
heat source near your brain for a long period of time is a potential health hazard. Some researchers believe that other types of wireless technology may also be dangerous to human health, including laptops, cordless phones, and gaming consoles. Organizations that are concerned about the effects of Electromagnetic Radiation suggest replacing all cordless devices with wired ones. They say that many cordless phones emit dangerous levels of EMR even when they are not in use. They even suggest keeping electronic out of bedrooms, or six feet from your pillow.