The Effect of Task Complexity on the Accuracy of the FL Oral Output of Advanced Iraqi Learners

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Abstract

This study explores the effect of task complexity on the FL oral output of a group of advanced Iraqi EFL learners in a task-based language teaching\learning framework. Its aim is to investigate the accuracy of the FL oral output of these learners with the increasing of task complexity (manipulated by topic familiarity) by employing two oral monologic tasks in the form of picture descriptions. One of the tasks is familiar and the other is unfamiliar in topic. A number of measures of accuracy (the number of clauses, the number of errors, the percentage of errors, the number of AS-units, the number of words, the number of error-free clauses, and the percentage of words to the As-units) are used for this purpose. The data is collected electronically due to quarantine following the spread of corona pandemic. The study follows a quantitative research method. Paired-samples t-tests are conducted to detect any significant differences in the participants' output between the two tasks. The findings show that increasing task complexity has positively affected all measures of accuracy. These findings are useful in exploring the extent to which FL performance can be affected by increasing task complexity.
Keywords: task complexity, topic familiarity, accuracy, FL oral output.

تأثير تعقيد المهام على دقة النتاج الشفوي لمتعلمي اللغة الانكليزية العراقيين المتقدمين بوصفها لغة أجنبية

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الملخص

تبحث هذه الدراسة في معرفة تأثير تعقيد المهام على النتاج الشفوي وبالتحديد دقته لمتعلمي اللغة الانجليزية على المستوى الجامعي حيث استخدمت الدراسة مهمتين مختلفتين: المهمة الأولى ذات موضوع مألوف للمتعلمين المذكورين والثانية ذات موضوع غير مألوف لهم.ومن اجل معرفة دقة النتاج تم عرض مجموعة من الصور لكل موضوع بواسطة Zoom meetings والطلب من كل متعلم في العينة وصف الصور باللغة الانجليزية. وقد تم الاعتماد على عدد من المقاييس للبيانات التي تم تجميعها الكترونيا بسبب الحظر الوبائي وتحليل النتائج إحصائيا بواسطة t-test للتوصل إلى أن تعقيد المهام متمثلا بعدم ألإلمام بالموضوع قد سبب فروقا معنوية بين المهمتين حيث أن المهمة الأكثر صعوبة كانت أكثر دقة في الأداء وفقا لعدد الجمل وعدد الوحدات وعدد الأخطاء ونسبتها وعدد الجمل التي تخلو من الأخطاء وعدد الكلمات ونسبتها إلى وحدات تحليل الكلام. وهذه النتائج تكشف مدى تأثر النتاج الشفوي بتعقيد المهام.

الكلمات المفتاحية: تعقيد المهام، الإلمام بالموضوع، دقة النتاج الشفوي في اللغة الأجنبية.

1-Introduction

In their attempts to arrive at successful second or foreign language teaching and learning, researchers (such as Skehan, 1998; Bygate, 2001; Robinson, 2001a, 2001b, 2007; Long, 2015) have started to look for a wide use of task features and task conditions. Their major challenge has turned into the cognitive strand within the domain of task-based language teaching (henceforth TBLT) particularly how FL (foreign language) performance can be measured. Unending research has showed that complexity, accuracy, and fluency (henceforth CAF) are three dimensions that not only measure FL output or performance, but also development and proficiency. These dimensions are considered as "the primary epiphenomena of the psycholinguistic processes and mechanisms underlying the acquisition, representation and processing of L2 systems" (Housen, Kuiken, and Vedder, 2012: 2). In the last few years, most of the research on CAF (Skehan and Foster, 2001; Gilabert, 2004; Tavakoli and Skehan, 2005; Housen et al., 2012; Levkina and Gilabert, 2012, and many others) has been oriented towards the predictions of two competing hypotheses, Skehan's (1998) Limited Attentional Capacities (henceforth LAC) Hypothesis and Robinson's (2001a, 2001b, 2007) Cognition Hypothesis (henceforth CH), that underline the correlation between cognitive task complexity and FL performance. Within this agenda, Robinson presents a taxonomy of the Triadic Componential Framework (henceforth TCF) that covers a number of task complexity factors that contribute to influence CAF dimensions in a task-based framework. Inspired by the significance of CAF as measures of FL performance, the current study endeavours to measure the accuracy of the FL oral output of a group of advanced Iraqi learners. Two levels of cognitive task complexity, namely ±[1]topic familiarity (prior knowledge as termed in TCF) are selected. Topic familiarity refers to the "*the extent to which differentiated organized background knowledge is available*" on a given topic (Skehan, 1998: 100).

Within ELT, topic familiarity is employed by different terminologies. Abdul Imam and Abid (2011:67) stress that as alternatives for topic familiarity *"other labels used are prior knowledge, background knowledge, and content familiarity...."* In terms of the TCF, ± prior knowledge is studied through the degree learners are familiar with the topic, content, or type of a task. Bui (2014:66) states that topic familiarity "*derives from prior knowledge about a certain domain area.*" Since 'prior knowledge' can be used interchangeably with 'familiarity', this research paper uses " familiarity" instead of "prior knowledge".

The studies reviewed in this paper show that the effect of task complexity on FL performance as measured by accuracy is utterly rare. Therefore, to fill this gap and gain a considerable insight into the effect of task complexity on FL performance, a new context of testing task complexity is set to examine the influence of task complexity mediated by topic familiarity on the accuracy of advanced Iraqi learners' FL output. This study attempts to answer the following questions:

1- What are the effects of manipulating the cognitive task complexity along the resource-dispersing factor (+familiarity) on the oral output of Iraqi EFL learners as measured by accuracy?

2- What are the effects of manipulating the cognitive task complexity along the
     resource-dispersing factor (-familiarity) on the oral output of Iraqi EFL
     learners as measured by accuracy?

2. Literature Review

The past four decades or so have witnessed an increasing interest in Task-Based Language Teaching (TBLT) which represents an approach to language teaching and learning. It regards tasks as the axis upon which instruction revolves. Various definitions are given to the term *task* in applied linguistics in general and in TBLT in particular, despite the fact that this diversity does not distort the term's general traits. Sometimes a *task* is defined as "*a piece of work*" (Long, 1985: 89; Crooks, 1986: 3), as "*an activity*" (Crooks, 1986: 3; Willis, 1996: 23; Skehan,

1998: 95; Bygate, 2001: 11), a "*real-world activity*" (Long, 2015: 6) or according to its general everyday non-technical meaning as "*a piece of work undertaken for oneself or for others, freely or for some reward*" (Long, 1985:89). Long looks upon a task as anything people do in their daily life anytime and everywhere. Many years later, he (2015:6) modifies his definition of what *task* means stating that: "*Tasks are the real-world activities people think of when planning, conducting, or recalling their day*." He demonstrates people's activities as "*brushing their teeth, preparing breakfast, reading a newspaper, taking a child to school, responding to e-mail messages, making a sales call,...*"

There is a common understanding that *task* is an activity or goal that is carried out using language. In view of that, *task*, in the current study is looked upon as an activity that a learner carries out to achieve a goal set out by the researchers with emphasis on language use. It can be described as an exercise given to a learner to draw out a language outcome with the aid of a stimulus. The stimulus employed in this study is the pictures.

The focal point of TBLT is meaning; yet it does not overlook form. Consequently, it is distinguished from structural approaches that promote consistent teaching and deliberate learning (Ellis, Skehan, Li, Shintani, and Lambert, 2020: 1). It employs pedagogical tasks as central units with FL syllabus (Long and Crooks, 1992: 30; Long, 2015:6). Thus, TBLT came out into sight to complement the communicative outlook and create a shift from traditional approaches of the mid twentieth century whose key concerns are behaviorism, discrete learning, the teacher-centered approach, and focus-on-form as the central form for language instruction (Samuda and Bygate, 2008:51). These approaches are recognized as being inadequate for most language teachers, researchers and educational intellectuals. Willis (1996:1), among others, supposes that TBLT is a reasonable growth of Communicative Language Teaching (CLT) as it echoes the principles of the CLT approach with a controlled focus on form. Such principles retain that activities based on communication are crucial for language learning, entail meaningful use of language, and enhance the learning process (Richards and Rodgers,

2001:223). Therefore, the emphasis began to shift to use and function utilizing tasks as practical media for applying these standards (Richards and Rodgers, 2001: 223).

3. The Cognitive Approach to Task-Based Language Teaching

Even though various approaches to TBLT have been developed over the course of the last few years, none of them has considered the cognitive dimension of *task* as a prominent feature of its design (Skehan and Foster, 2001:188-189). Approaches as such do not base their claims on effective theorizing framework, neither do they take attention nor task complexity and dimensions of performance into consideration (Skehan, 1998: 128). Promoters of information-theoretic approaches have often attempted to verify their promotion by appealing to recent theories in the fields of linguistics, psychology, and cognition. One of the most widespread information-theoretic approaches to TBLT upon which the theoretical ground of the current thesis is based is the cognitive approach (Skehan, 1998, 2014). This approach, inspired by cognitive psychology and psycholinguistics, places more emphasis on the mental processes of FL learners chiefly attention as the fundamental exposition to learning (Schmidt, 2001:3) giving particular attention to the recent research into the mechanics of language processing (Skehan, 1998).

Significantly, the cognitive approach to TBLT has been generally referred to as *task complexity*. For more than two decades, the notion of task complexity, i.e., the cognitive demands of a task, has received considerable attention in the domains of TBLT and FLL (foreign language learning). It has been defined as "*the result of the attentional, memory, reasoning, and other information-processing demands imposed by the structure of the task on the language learner*" (Robinson, 2001b: 28). Mainly, two hypotheses have inspired most research on CAF in the last few years: Skehan's hypothesis (1998) and Robinson's (2001a).

3.1 Skehan's Limitted Attentional Capacities Hypothesis

Skehan's hypothesis assumes that resources of attention and memory capacity are limited and these limits confine some aspects of performance (Skehan, 2014:131). It lays emphasis on the belief that increasing the complexity of tasks "*consume more attentional resources…with the result that less attention is available for focus on form*" (Skehan, 1998:97). Accordingly, FL learners cannot focus on form and meaning simultaneously but disperse their attention to either one. When a task demands more attention to its content, less attention will be directed to its form. In order that attention is allocated to language form to endorse TBLT, Skehan suggests designing tasks from less to more demanding to advance well-balanced language production and development especially in the areas of CAF.

3.2 Robinson's Cognition Hypothesis

On the contrary, Robinson's hypothesis maintains that attention is not limited, but can expand according to task demands (Robinson, 2001a:35). Opposite to the LAC claim, the CH hypothesis principally presupposes that there are multiple attention resources of human cognitive capacity. The fundamental pedagogic argument of the CH is that FL tasks should be sequenced for learners according to increases in the cognitive complexity (Robinson, 2007:193).

To examine and operationalize the pedagogic implications of the CH, Robinson designed a taxonomic framework, the TCF, which involves a number of dimensions of task complexity that are expected to shape FL output. In this framework, Robinson distinguishes between the cognitive demands of tasks according to variations in: (a) Task Complexity, i.e., cognitive complexity of the task; (b) Task Difficulty, i.e., learners factors such as attitude, motivation, and anxiety; and (c) Task Condition, i.e., the condition under which a task has to be performed. Within the first group, i.e. task complexity, Robinson distinguishes between the resource-directing factors and the resource-depleting ones. The former direct the learners' attention to either form or meaning, while the latter disperse attention.

Table (1): A Triad of Task Complexity, Condition and Difficulty Factors (Robinson, 2001a: 294)

Task complexity	Task conditions	Task difficulty

(cognitive factors)
 	
a) resource-directing
e.g., +/- few elements
    +/- here-and-now
    -/+ no reasoning demands
 	
b) resource-depleting
e.g., +/- planning
    +/- single task
  +/- prior knowledge
	(interactive factors)
	
	a) participation variables
	   e.g., one-way/two-way
	         convergent/divergent
	         open/closed
	
	b) participant variables
	   e.g., gender
	         familiarity
	         power/solidarity
		(learner factors)
		
		a) affective variables
		   e.g., motivation
		         anxiety
		         confidence
		
		b) ability variables
		   e.g., aptitude
		         proficiency
		         intelligence

4. Related Studies

One of the important studies on task complexity is Robinson's (2001b). Through a two-level (simple vs. complex) dialogic route map, Robinson has examined the performance (CAF dimensions) of 22 Japanese EFL Learners by dividing them into information givers and information receivers of directions. The findings show that the complex task has enriched lexical variety for the information givers and encourages cooperation by the information receivers. Robinson has found that the complex task results in a higher lexical variety but a lower fluency as the CH predicted, but no effects on accuracy and syntactic complexity. The same results are obtained by Levkina and Gilabert (2012) using advice-giving tasks about holiday destinations: the complex task (no pre-task planning time and many elements) has increased lexical complexity and decreases fluency.

Rahimpour and Hazar (2007) have conducted a study to investigate the effect of topic familiarity on the complexity, accuracy and fluency of FL oral output. Twenty-two learners of English participate in the study. Each participant is provided with a familiar and an unfamiliar task ('family life' and 'success' respectively). Rahimpour and Hazar have implemented the

measures used by Skehan and Foster (1999) for measuring the complexity, accuracy and fluency. The researchers have found that topic familiarity has a positive impact on the accuracy and fluency of the participants' oral performance, but a negative impact on complexity.

Bui (2014) has examined the interaction between task-internal and task-external readiness through the effects of topic familiarity, strategic planning as task-internal readiness, and proficiency levels as task-external readiness. Eighty university students participate in the study. They are divided into two groups: a pre-task planning group and non-planning group. Both groups are asked to give presentations on the processes of infection by a virus in a human body, and the infection by a virus in a computer. The analysis contains measurement of fluency by counting the length of every performance. It is found that the participants produce longer sentence when presented with more familiar tasks. Planning time has less effect on the length of sentences, though some significant effects are found with total pruned words which indicates that participants decrease repair aspects (hesitation, interjections,..etc), as opposed to breakdown fluency (e.g., speech rate and pausing) following strategic planning. This finding asserts that the increase in the number of words is more related to task familiarity than to planning time. More specifically, Bui (2014) has found that topic familiarity exhibits a clear effect on breakdown fluency as evidenced by rapid speech and longer constructions preceding any pause or repair. He, further, observes that topic familiarity results in increasing the speech rate, but has no end product on the mean length of run. In addition, topic familiarity reduces repetitions, but has not influenced repair measures such as false starts and reformulations. The analysis of accuracy measurement reveals that task familiarity contributes in making high average of error-free units and less errors per 100 words. Highly proficient participants exhibit more accurate, more error-free units and less errors per 100 words. As far as complexity is concerned, Bui maintains that topic familiarity does not affect any measures of complexity. On the other hand, planning has some significant

effects on clauses per AS unit and words per AS unit. High proficient participants use longer AS units than less proficient participants.

5. Methodology

The following sections explain the methodology followed in this study which includes information about the participants, the data collection, the procedures, measures of accuracy, and the analysis of results. It, also, presents a section on the discussion of the results.

5.1 Participants

Fifty advanced Iraqi learners of English are selected for the present study on a voluntary basis. The participants are fourth-year students at the Dept of English/ College of Arts/ University of Basrah for the academic year 2020- 2021, morning and evening studies. They are homogenous regarding their age, nationality, their L1, and FL background as manifested by a bill of information distributed to them (see appendix 1). Their ages range between 20-35. All of them are native speakers of Arabic learning English for more than 10 years. All of them live in the center of Basra and its outskirts. None of them have any speech or hearing defects. They are recruited online due to the quarantine conditions.

5.2 Data Collection

The process of data collection includes a bill of information, a familiarity questionnaire, and finally a test of cognitive task complexity. The questions in the bill of information elicit biodata such as participants' names, gender, e-mail addresses, mobile numbers, places of residence, and nationality. The FL language background questions refer to the participants' FL history. To obtain objectivity in choosing the most familiar/unfamiliar topics

for investigation, the present researchers have designed a questionnaire of topic familiarity in which a number of topics are randomly selected and the participants are required to rate the topics according to their degree of familiarity to them (see Appendix 2).

The last part of data collection includes the cognitive task complexity test which is also carried out online on Zoom meeting. This test consists of two oral tasks that are divided into two groups. Each task consists of six pictures on a particular topic (see Appendix 3). The first task is on *coronavirus pandemic* which is supposed to be the totally familiar topic according to the familiarity questionnaire, whereas the unfamiliar topic is *the Kremlin* as the participants have already rated it.

5.3 Procedures

The objective of this study is employed by two different tasks of cognitive complexity which are attained along with manipulating two levels, simple and complex. The simple task is the familiar topic (+familiar), *coronavirus pandemic* and the complex task (-familiar) is *the Kremlin*. Degree of familiarity/unfamiliarity is determined by a questionnaire distributed to the participants in order to rate their familiar to unfamiliar tasks among ten other topics. The group of participants who are advanced Iraqi learners of English are asked to perform these two tasks orally and individually in English by describing a number of pictures on Zoom meetings. The data are recorded, transcribed, coded and analyzed by CLAN software and, also, manually. Paired-samples t-tests are used to detect any statistically significant differences between the two tasks.

The basic unit of analyzing speech in this study is the AS-unit because it is approved by many researchers within TBLT (Foster, Tonkyn, and Wigglesworth, 2000; Gilabert, 2004; Malicka, 2014; Awad, 2017) as the most suitable measure for spoken language. Foster et al. (2000: 365) define it as "*a single speaker's utterance consisting of an independent clause, or sub-clausal unit, together with any subordinate clause(s) associated with either*." They have explained that an independent clause has at least one finite verb,

and a sub-clausal unit contains "*either one or more phrases which can be elaborated to a full clause by means of recovery of ellipted elements from the context of the discourse or situation*" (p.366). The quantitative data collected in this study are statistically analyzed using paired samples t-tests.

6. Accuracy as a Measure of FL Output

In this study, only one dimension of CAF, accuracy, is selected. The other two measures, complexity and fluency, are beyond the scope of the present study. Accuracy, or '*correctness*' as Housen et al. (2012: 4) call it, is the extent to which learners produce language that is native-like or error free (Bui and Skehan, 2018:2). Put otherwise, accuracy is the degree learners deviate from the native norm. Any deviation from the native norm is called *errors* (Housen et al., 2012: 4). The so-called accurate language indicates somehow full management over the internalized language system. While the objective of measuring accuracy is to gauge the production of FL learners that is native-like, a fact that must be admitted is that the majority of FL learners do not generate native -like constructions no matter how proficient they might be (Towell, 2012: 56). Accuracy, as a dimension of FL output, is less controversial and is more clear-cut than complexity and fluency. It is mainly related to FL knowledge representation.

There seems to be a compromise regarding the measurement of accuracy in the literature reviewed; hence, this study selects the standard measure of accuracy which is counting the percentages of the error free clauses by to the total number of clauses (Robinson, 2001b:41; Gilabert, 2004:215). In line with Lennon (1991:182), an error in the current thesis means "*a linguistic form or combination of forms, which in the same context and under similar conditions of production would, in all likelihood, not be produced by the speakers' native speaker counterparts.*" Another measure is the MLC (mean length of clause) which is calculated by the number of words divided by the number of clauses (Skehan, 2014: 17). Calculating the MLC is done by CLAN software. Regarding the type of errors, the researcher classified errors into morphosyntactic (MSE), lexical (LE), and other errors (OTH) that

include mispronunciation and vague use of structure or meaning. The researcher identified and coded the types of errors in the transcripts. An example of such coding is the following:

(P2)   it's MSE [*] destroy MSE [*] everything
(P16)   &-um this picture talk MSE [*] about &-eh teaching online
(P28)   &-eh this [*] the president of &-eh (0.74) of Russia
(P34)   is the global MSE [*] its MSE [*] mean MSE [*]
         this virus (1.08) is spreeding [: spreading] OTH [*]

(P26) maybe gloves (1.5) to [/] to take care LE [*] &-eh (0.92) myself
       (2.78) from MSE [*] this virus (0.82) | 11 because it's &-eh very [3]

To further exemplify the transcription and coding of the data, the following is an extract from one (P2) of the samples:

Task 1(+familiar)

1 this is &-eh a painting picture EF| 2 it's mask mask |3 and &-eh there is &-eh &-eh a covid 19 EF| 4 it is refer MSE [*] to the &-eh &-eh virus &-eh coronavirus :: which is MSE [*] come to us from Chinas MSE [*]| 5 &-eh it's &-eh virus that destroy MSE [*] everything :: we live LE [*]| 6 so it's make MSE [*] a student sit in the home in their MSE [*] home and stay online|7 and everything is locked down EF|
8 yeah | 9 it's &-eh also a mask EF :: that &-eh &-eh &-eh that earth MSE [*] is wearing it|10 so its MSE [*] its refer LE [*]:: that &-eh covid what OTH [*] &-eh lock down everything|11 its MSE [*] destroy MSE [*] everything|12 all all all the world it's &+de &-eh suffering from it |13 it's not to it's not in one country just OTH [*]|14 it's all the world in all the world |
 15 there is a hand &-eh+… EF :: wearing gloves EF |16 and &-eh &-eh he put MSE [*] alcohol and clean MSE [*]|13 so it's also the doctor say MSE [*]:: if you want to avoid the virus EF :: you you should &-eh &-eh you should &-eh siterlization MSE [*] everything |14 yeah|15 so there is someone EF :: who put MSE [*] alcohol and clean MSE [*]|

Task 2(-familiar)

1 it's a place EF |2 &-eh there is a huge building EF |3 some of MSE [*] building MSE [*] green in the top of it in the roof of it and white|
13 &-eh now I there is snow |14 it's snowing EF| and also I I said it's similar to Arab design MSE [*]| 15 there is a dome EF |16 yeah|17 and &-em &-eh it MSE [*] also colourful and in the +… |
18 this is the president of &+Ru &-eh Russia EF | Putin EF :: I think his name EF|19 yeah|20 it's &-eh I heard it MSE [*] a harsh man |21 &-eh he got &-eh he

say MSE [*] speech |22 &-eh &-eh it MSE [*] is the president of &-eh Russia EF |23 I think EF:: Putin EF|24 so &-eh he is the president EF |25 I think EF:: he say MSE [*] speech?|

7. Analysis of Results: The Effect of +Familiarity and -Familiarity on Accuracy

The t-test reveals that all measures of accuracy demonstrate significant differences between the two tasks. For instance, the number of error-free clauses has a higher mean value (7.79) in the complex task –familiar (cf. 7.12 for the +familiar). Further examination of table (3) reveals that the same thing is true for the other measures of accuracy in that the complex task overrates the simple task under the influence of task complexity. The participants have produced more number of words (88.90) and more AS-units (12.89) on the complex task (-familiar).

Table (2): Paired-Sample T-Test of the Effect of Topic Familiarity and Unfamiliarity on Accuracy

Dimension	Sub-dimension	Task complexity	N	Mean	Std Deviation	P-value
Accuracy	Number of clauses	+familiar	99	14.69	7.037	0.00
		-familiar		17.13	9.494	
	Error free clauses	+familiar	100	7.12	5.048	0.00
		-familiar		7.79	6.936	
	% error free clauses	+familiar	100	35.4577	26.28735	0.00
		-familiar		39.9024	21.88087	
	Number of words	+familiar	١٠٠	70.1100	44.388	0.00
		-familiar		88.9000	53.639	
	Number of AS-units	+familiar	٩٩	11.13	5.279	0.00
		-familiar		12.89	6.716	
	Ratio of number of words to AS-units	+familiar	١٠٠	5.92413	2.125010	0.00
		-familiar		6.63267	1.831711	

Figure (1): Means of Accuracy Along +Familiarity and –Familiarity

The variation in the mean values of accuracy on the simple task (*coronavirus pandemic*) +familiarity and the complex task (*the Kremlin*) -familiarity is shown in figure (1). The complex task overvalues the simple task in all sub-measures of accuracy.

8. Discussion

To answer the research questions raised in this study concerning the effect of task complexity manipulated through topic familiarity on the accuracy of the FL oral output of advanced Iraqi learners, it seems that topic familiarity has completely shaped all sub-measures (the number of clauses, the number of errors, the percentage of errors, the number of AS-units, the number of words, the number of error-free clauses, and the percentage of words to the As-units). It is important to mention here that some measures are "*counter intuitive*" (Crespo, 2011:20) which implies that high values in some measures reflect negative results. For instance, the more erroneous clauses the less accurate the performance will be. Table (2) shows that all measures of accuracy increase on the complex task (-familiar).

To perform a complex task as *the Kremlin* which is totally unfamiliar to most participants, they have used longer MLC represented by the number of words and number of words to AS-units. One of the predictions of the CH is that increasing task complexity positively influence accuracy; that learners will produce more error free clauses and longer clauses. Significant differences have been detected between the two tasks concerning the error free sub-measure. Moreover, the participants have used more number of words in responding to the complex task in an attempt to elaborate as much as possible on the task. More numbers of clauses and longer As-units are triggered on the complex task. Rahimpour and Hazar (2007) as well as Bui (2014) have identified similar results of accuracy measures which completely support the CH that task complexity leads to more accuracy. According to Levelt (1989) and Kormos (2006), performing a complex task directs the learners' attention to form rather than meaning. Thus, the Formulator is more active than the Conceptualizer since the participants have not exhausted more efforts to conceptualize ideas.

9. Conclusions

This study has employed two oral tasks in order to elicit spontaneous talk in EFL by advanced Iraqi learners. The quantitative data collected in the study are statistically analysed by means of t-tests to measure the participants' output with increasing task complexity on two levels, simple (+familiar) and complex (-familiar). The conclusion that can be drawn is that accuracy is slightly affected by introducing an unfamiliar topic. Performing the complex task, *the Kremlin*, has triggered more number of clauses, more words and AS-units. The error-free clauses are found fairly exact on both tasks. In line with the claims of the CH, the difference between the two tasks in terms of accuracy is significant on the complex task (-familiar). Overall, the participants' output has been more accurate on *the Kremlin* task as shown by the six measures of accuracy. In performing the complex task, *the Kremlin*, the participants' attention is directed to form rather than meaning. That is why they have used more clauses, more words and more AS-units.

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Appendix 1

Bill of Information

Personal information, language background and open questions

1- Name

2-Age

3- Sex
Mark only one oval.
Female
Male
4- Mobile number
5- e-mail
6- Nationality
7- Country of birth
8-Permanent residence
9- Profession (if any)
10- Native language
11- Foreign language(s)

اللغة الاجنبية (او اللغات الاجنبية)

12-Parents' native language
   a. mother's native language   b.father's native language
13- Other languages spoken at home
14- At what age did you start learning English?
15. How long have you been studying English?
16- . How did you learn English up to this moment? (mark all that apply)
Mark only one oval.
- Mainly through formal classroom instruction
- Mainly through interacting with people
- A mixture of both
- Other:_____

17- Do you use English frequently? In which contexts? (mark all that apply)
Mark only one oval.
- At home
- At college
- With friends
- On social media
- In all the above contexts

18- . Have you been to an English speaking country? If yes, where and for how long (duration in months/years)

هل سبق لك زيارة اي بلد ناطق باللغة الانجليزية؟ ادا اجبت ب (yes) الرجاء كتابة اسم البلد ومدة بقائك فيه بالشهر والسنة

- Yes
- No

19- Have you taken extra courses in English ?
- Yes
- No

20-Have you studied English with a private tutor? .
- Yes
- No
- Maybe

21- In which language (your native or foreign language) do you feel you usually do better *

22- Do you have any speech and/or hearing defect *

هل تعاني من عيوب في النطق و (او) الاستماع؟

.
- Yes
- No

Appendix 2
The Questionnaire of Topic Familiarity

Dear participants,

You are kindly requested to participate in a questionnaire related to a Ph.D. thesis entitled: "The Effect of Topic Familiarity on the Complexity, Accuracy and Fluency of the FL Oral Output as Performed by Advanced EFL Iraqi Learners. " Your answers will be strictly confidential, and will be used only for academic research purposes . Please tick the appropriate rating-according to your background knowledge- opposite each topic by choosing one of the following scale items: **totally familiar, familiar, unfamiliar, and totally unfamiliar**.

Topics	Scales of Rating			
	Totally familiar	*familiar*	*unfamiliar*	*Totally unfamiliar*
1. Vitamins				
2. E- learning				
3. Healthy Diet				
4. Harry Potter				
5. The University Campus				
6. Corona Pandemic (Covid 19)				
7. The Hilton Hotel				
8. Nelson Mandela				
9. Swine Flue				
10. The Kremlin				

Appendix 3
The Task Complexity Test
Task 1 Coronavirus Pandemic

Pictures No.1	Pictures No.2
Pictures No.3	Pictures No.4
Pictures No.5	Pictures No.6
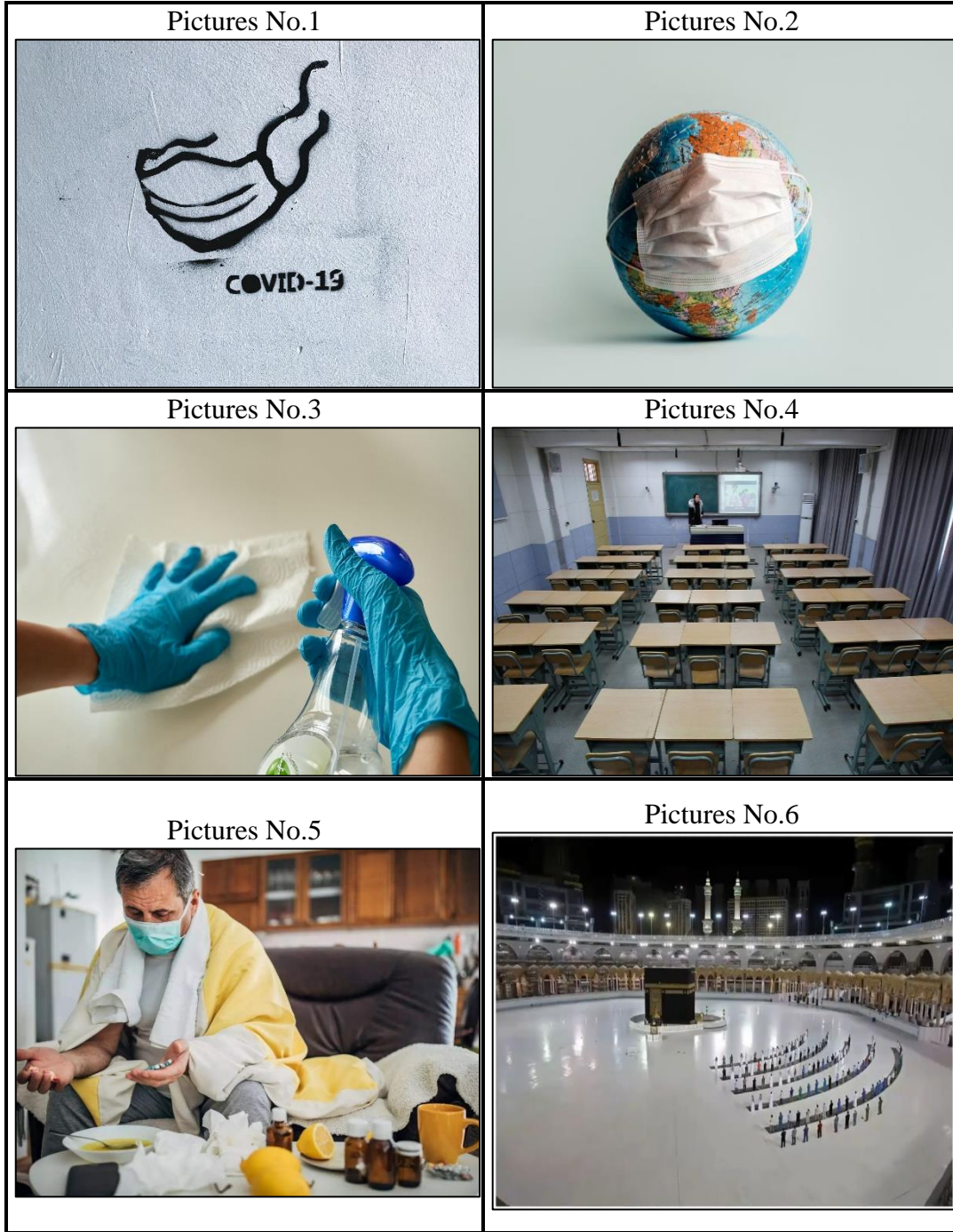
Task 2 The Kremlin

Pictures No.1	Pictures No.2
Pictures No.3	Pictures No.4
Pictures No.5	Pictures No.6