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The Effect of Task Familiarity Ordering on Listening Task Complexity

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Abstract

In recent decades, many second language acquisition (SLA) researchers have identified the leading role of sequentially organizing cognitive task in TBLT. Presenting types of different task sequence has become increasingly crucial for syllabus designers. This investigation examines the theoretical basis of task sequencing, which claims that pedagogical tasks should be developed and ordered cognitively from easy to complex. The current study aims to compare the performance of English learners in sequenced and isolated familiar tasks. Sixty EFL learners, studying at the intermediate level in two private language institutes, participated in this research. They were randomly selected as one experimental and one control group, each comprising 30 subjects. Before starting the treatment, all the participants took a listening comprehension test as a pretest. The treatment took place over one semester, during which the subjects performed simple-complex familiar sequenced tasks while the control group received familiar randomized tasks. After treatment, the posttest of listening comprehension, which contained two complex task features, i.e., - Here-and-Now and - Planning time, was employed. The independent-samples t-test results showed that the experimental group who received simple-complex sequenced tasks outperformed the control group in listening to complex tasks. The findings of this study may have theoretical and practical implications for language teachers, language practitioners' education, and instructional materials developers.

***Keywords*:** complexity, familiarity, sequencing, listening comprehension, isolation

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INTRODUCTION

Within the last decades, TBLT has been documented to affect language learners' production and comprehension outside the classroom (Ellis, 2003, 2018; Van den Branden, 2016). There have been numerous task-based teaching studies that indicate considering human cognitive abilities for task designing creates appropriate input and output processing for developing a second language (Robinson, 2001, 2005, 2007, 2011; Skehan, 1996). Robinson's (2001) Cognition Hypothesis (CH) predicts that increasing task complexity will improve some language features, like better interaction, seeking more external assistance, and feedback awareness. More task complexity needs greater mental efforts, such as depth of processing, conscious attentional control, and greater memory resource allocation to input (Robinson, 2001). Mostly, these cognitive mechanisms paved the way for L2 learners to perform language interaction out of class more successfully (Robinson, 2005). As L2 learners engage in cognitively more complex tasks, they may have higher-level thinking (Robinson & Gilabert, 2007). Various studies were conducted to evaluate the effect of employing task complexity features on the overall performance of the students (Housen et al., 2019; Inoue, 2016; Jouibar et al., 2022; Lee, 2019; Rahimi & Zhang, 2019; Sanajou et al., 2017; Sánchez& Kalamakis, 2023; Shajeri & Izadpanah, 2016; Vercellotti, 2017).

The CH claims that tasks should be ordered from easy to complex to improve L2 learning. CH provides a rationale for ordering the pedagogical tasks from simple to complex to do various levels of L2 performance (Robinson, 2011). The model of pedagogic task sequencing for L2 materials has been one of the fundamental variables in TBLT syllabus design. The objective of Robinson's CH for TBLT teaching is concerned with how to develop and grade tasks to improve L2 learners' complexity, accuracy, and fluency in communication. Task sequencing has been studied in many studies (Abdi Tabari & Miller, 2021; Allaw & McDonough, 2019; Amini et al., 2022; Baralt, 2014; Baralt et al., 2014; Kim & Payant, 2014; Kim, 2020; Lambert

& Robinson, 2014; Levkina, 2014; Levkina & Gilabert, 2014; Ren et al., 2023; Robinson, 2007). More specifically, some studies examined Robinson's (2010) SSARC model (stabilize, simplify, automatize, reconstruct, and complexify) of task grading and ordering to predict L2 learners' task performance (Allaw, 2016; Malicka, 2018; Robinson, 2020).

The main focus of the present study is to try to unveil whether simple to complex sequencing of tasks along increasing (+) or decreasing (-) task complexity features such as -/+ Here-and-Now and - /+ Planning time may affect the development of listening task complexity. The ministry of education in Iran has paid little attention to ordering the tasks along task complexity features in developing English course books. Randomized sequencing of tasks in some textbooks, which have been taught in language learning institutes, created a lot of problems for L2 learning in Iran. Ignoring the presentation of materials in sequence of s-c by ELT instructors seems to be the other obstacle which hinders the progress of L2 learners. Most Iranian L2 learners encounter problems with understating of listening files, particularly when some characteristics of task complexity have been considered to develop them. To address these cited shortcomings and fill the gaps, the current investigation is designed to compare and evaluate the impact of familiar task sequence on listening task complexity.

LITERATURE REVIEW

Concerning the role of cognitive processing in language learning, two models of insight are competing to offer opposing views on how syllabus designers can plan pedagogical tasks: the limited attentional capacity model (Skehan & Foster, 2001) and the multiple attentional resources model (Robinson, 2011). The first model predicts that learners' attention decreases as the cognitive processing of the task increases. In this regard, Skehan (1998) believes that if an instructor enhances the mental processing of a specific task, L2 learners put more pressure on attentional resources. As a result, prioritizing one aspect of a task (fluency, accuracy, and complexity) will hinder L2 learners from

paying attention to the other features equally. It will not be able to carry out the task well (Skehan, 2014).

In contrast, the second model claims that directing learners' attention toward more task characteristics will lead them to more complex and accurate performance (Ellis et al., 2019). For example, a person who is skillful in typing can do more than one activity at a time. He or she can speak with someone and continuing to type a text without much problem (Magill & Anderson, 2010). Concerning the processing mechanism, Robinson (2005) proposed the triadic componential framework for his CH, which includes three variables: task complexity, task conditions, and task difficulty (Table 1).

Table 1: Robinson's (2005) Model of Cognition Hypothesis

Task complexity	**Task condition**	**Task difficulty**
a. Resource-directing, developmental dimensions	*a. Participation variables*	*a. affective variables*
±here and now ± few elements ± spatial reasoning ± causal reasoning ± intentional reasoning	± open solution ± one way flow ± convergent solution ± few participants ± few contributions needed ± perspective taking ± negotiation not needed	e.g., Motivation
b. Resource-dispersing, performative dimensions	*b. Participant variables*	*b. ability variables*
± planning time ± prior knowledge ± single task ± task structure ± few steps ± independency of steps	± same proficiency ± same gender ± familiar ± shared content knowledge ± equal status and role ± shared cultural knowledge	e.g., aptitude proficiency intelligence

In his view (2001, p. 28), "task complexity is the result of the attentional, memory, reasoning, and other information processing demands imposed by the structure of the task on the language learner." As mentioned above, two sets of task complexity and their subcategorizations (resource-directing and resource-depleting) influence task performance in measurable ways. The situational setting characteristics of tasks are related to task conditions. The third element concerns the participants' perceptions of task familiarity.

Robinson (2003, 2010), in his CH model, proposes the extent of familiarity as one of the features of the participants. L2 learners can benefit from content familiarity to reduce extra preparation to perform a listening task (Brindley, 1998; Bui & Huang, 2018; Ovilia, 2019). Moreover, decoding output, which plays a vital role in communication, involves both familiar knowledge of linguistic and nonlinguistic features (Al-Jarf, 2018; Chiang & Dunkel, 1992; Hasan et al., 2017; Nurpahmi, 2015). Prior familiarity with syntax and relevant knowledge of a language structure will assist learners in finding some remedies to deal with more complex comprehension texts (Hamouda, 2013; Hwaider, 2017; Mehrpour & Rahimi, 2010). Additionally, prior lexical knowledge and type of schemata are the most influential factors bringing about better learning changes in learners (Imhof, 1998; Mehrpour & Rahimi; 2010; Othman & Vanathas, 2017; Ovilia & Addinna, 2020). Sequencing tasks increases familiarity of specific grammatical structures or lexical items (Nunan, 2004).

Sequencing and grading complex tasks can have a remarkable impact on L2 learners' performance (Robinson, 2010, 2020). Thus, ordering tasks is regarded as one of the influential issues in task-based syllabus design (Robinson, 2007). Robinson (2007) developed the model of the Triadic Componential Framework (TCF), which he (2010) proposed as the SSARC Model. Later, he (2010) expanded the SSARC model (stabilize, simplify, automatize, reconstruct, and complexify) of pedagogic task sequencing, which led to further investigation in SLA (Malicka, 2018).

Some authors have investigated the basic theoretical claims of TCF and SSARC models about the central role of s-c ordering of tasks. Some of

these studies have been conducted to assess different sequencing orders by raising task complexity along resource-directing or/and resource-dispersing variables. Considering the effects of task sequencing orders on language learning and language teaching, different findings and results have been reported in prior studies. For example, Levkina and Gilabert (2014) tested fifty university students to find the impact of task ordering on task complexity performance along spatial and perspective-taking features. They were categorized randomly into three groups based on the types of task sequence: from simple to complex, from complex to simple, and randomized. The study indicated that s-c sequencing had a beneficial influence over c-s or randomized design in improving long-term retention of the target items. Thus, sequencing task complexity engages L2 learners in the depth of processing, which results in more durable learning (Ahmadi & Nazari, 2014). Additionally, sequencing the complexity of tasks from easy to difficult was a matter of intuition evidence (Baralt, Gilabert & Robinson, 2014). This means that, as the significant principle of ordering tasks from s-c had emerged, there was no true scheme to decide which task was simple or complex. The instructors, by their own understanding and without any conscious reasoning, decided to order the tasks.

In a study conducted by Malicka (2014) on 117 L2 learners, she found that different task sequencing yielded different effects on oral task performances. In her study, she employed three different kinds of sequencings (i.e., S-C, random sequencing, and individual task performance). The individual task performance was done by three subgroups. This means that, the subjects did one task of a particular complexity level which involved either simple task, complex task, or + complex task. Based on the results, the S-C sequencing group performed target-like production. However, delineating the ways of performing tasks by the participants and how they were presented required to be cited clearly. The study demonstrates exactly the specific order of task sequencing along specific task complexity variables. Oral and writing fluency are the outstanding pedagogical implications of her

study which can be manipulated by language instructors to obtain fruitful results.

Lambert and Robinson (2014) examined the impact of SSARC model steps on narrative task performance. They employed a pretest- posttest research design in their study. The participants were assigned to one experimental group and one control group. The experimental group performed the tasks in a simple-complex sequence, while the control group was exposed to randomized (without any sequence) tasks. A task complexity design along resource-directing and resource-dispersing characteristics was operationalized for both groups. The results of the study showed a significant improvement in task performance was brought about by the experimental group. Lambert and Robinson (2014) manipulated various complex features in their study that they did not demonstrate clearly which characteristics involved more cognitive load processing. Indeed, manipulating too many combinations of cognitive resources provided vague and blurred results.

In a similar vein, Baralt (2014) explored the effects of four different sequencing orders on production (written and speaking) along task complexity features. He followed Robinson's (2010) proposal to compare four types of orders: SSC, SCS, CSC, and CCS. The findings showed that the students who performed CSC and CCS orders could retell or write stories with more past subjunctive forms. While there are different orders of tasks, the study needed to focus and compare two types of task sequencing to achieve more detailed results on Robinson's model of task ordering. On the other hand, delineating which task complexity resources and which task sequencing orders were more effective to provoke language production reveals new insights in Baralt's research.

Along similar lines, Malicka (2018) sought to explore the effect of the SSARC model on fostering language learning. To this end, she divided eighty-seven L2 learners into two groups who performed oral tasks. The first group performed tasks ordered from simple to complex, and the second group was subdivided into three groups that carried out simple, complex, or + complex tasks (+ symbol stands for enhancing task complexity level and –

demonstrates the decreasing of task complexity variables in task). Although the results demonstrated that simple-complex task sequencing was effective, this investigation did not consider task sequencing based on the SSARC model, which proposed the order of resource-directing and resource-dispersing variables. However, the sequence of tasks made the participants engage fluently in speaking and listening due to familiar terms and expressions. In fact, they retrieved them from memory without much mental effort.

Allaw and McDonough (2019) examined the impact of ordering tasks from simple to complex versus complex to simple on the writing development of L2 learners. They tested written lexical complexity, accuracy, and fluency by conducting resource-directing and resource-dispersing variables. The findings noticeably confirmed that both s-c and c-s sequencing helped the students to improve their lexical, accuracy, and fluency. In contrast to c-s, s-c remarkably improved in relative clause accuracy and long-term achievement. The group which performed s-c sequence of tasks had higher scores on the use of the relative clauses than the c-s group in post-test. Therefore, if the tasks are sequenced in a logical order, L2 learners may create meaningful clauses in specific contexts (Bayat & Biria, 2013).

According to Un-udom and Patanasorn (2020), different perceptions have been driven due to conducting task sequence. The questionnaire and the stimulated recall were employed to assess the participants' ideas about task conditions and task difficulty. The findings demonstrated that different attitudes have been asserted by different levels of cognitive demand.

More recently, Abdi Tabari and Miller (2021) studied the effects of task sequencing on writing production along with +/- few elements (the number of items in a task) and +/- planning time (the amount of time that students spend to perform a task). To this end, 90 upper-intermediate L2 learners were randomly assigned into two groups: the first group underwent s-c sequencing, whereas the second group received randomized (+simple, less complex, and +complex) ordering of tasks. The results revealed that manipulating resource-directing elements increased the knowledge base of

L2 learners to meet the demands of the tasks while using resource-dispersing variables improved automatization and fluency in writing production. In other words, performing tasks from simple to complex order paved the way for learners to write more accurate clauses. Thus, under s-c order, the participants could improve their writing and raise accuracy production as compared to randomized performance of tasks.

Several empirical studies were manipulated to examine the effects of increasing task complexity on listening task performance. Zare-ee (2013) studied the role of conducting task conditions in predicting achievement in listening to task complexity by Iranian English learners. He found that cognitive complexity dimensions could help language teachers manage the aspects of aural decoding tasks to improve Iranian learners' listening comprehension ability. The major finding of this study was that aural performance varied according to the enhancing (+) or decreasing (-) levels of task complexity features. To put it another way, by complexification of tasks and by changing the familiarity of tasks, listening decoding might be greatly difficult. Additionally, the results revealed that the participants had different affective responses by performing less or more complex tasks. However, there was doubt about reporting learners' attitudes to the difficulty level of the task.

Ghahdarijani (2012) studied the effect of task complexity performance on students' listening comprehension across anxiety aspects by using a questionnaire. He assessed the learners' anxiety by manipulating three elements of task complexity: +/-planning time, +/-perspective, and -/+prior knowledge. The tasks required more mental processing (-) versus those that did not (+). He argued and proved that participants could do less cognitive demanding tasks (-) better than the tasks which conceptually and cognitively prompted them to use more mental effort during task performance. It means that, increasing task complexity features will not lead L2 learners to better cognitive processing.

The other study, which examined the effect of task complexity on listening comprehension across aptitude, was carried out by Attarzade and

Farahani (2014). The Oxford Language Aptitude Test was given to Iranian EFL learners. Another measuring instrument, which comprised two features of task complexity, i.e., +/-planning time and +/-prior knowledge, was used as a listening test. Performance of simple listening tasks was found to be a more effective condition than difficult condition. Additionally, the results didn't indicate any significant difference by performing various levels of aptitude under task complexity. Thus, listening performance to a large extent was due to the participants' familiarity with simple tasks.

PURPOSE OF THE STUDY

Manipulating task complexity investigation has informed different outcomes regarding ordering tasks. However, it lacks the precise criteria of task sequencing such as cognitive factors, interactive factors, and learner factors (Robinson,2007). Some prior studies have been conducted to investigate the effect of task sequencing on production (Allaw, 2016; Allaw & McDonough, 2019; Madarsara & Rahimi, 2015). However, the order of familiar listening tasks, to the knowledge of the present researchers, has not been examined yet. In this study, the researchers strived to fill the gaps and probed this under-investigated area by exploring the effect of ordering task familiarity on listening task complexity. This experimental study aimed to find the answer to the following research question:

RQ: Does task familiarity ordering have a significant impact on listening task complexity among Iranian EFL learners?

Method

Design of the Study

Due to random sampling, this study employed a true experimental design including pretest-posttest method (Figure 1). We aimed to examine if utilizing familiar task sequence treatment can affect the listening performance of male and female EFL learners studying at Bahar Guyesh and Safir institutes. This

study used four instruments: 1) a Placement Test, 2) a Pretest, 3) a Listening Task Booklet, 4) and a Posttest.

Participants

The participants of this study were randomly selected out of 116 learners. They ranged in age between 11 and 16. They were at intermediate level of proficiency in English for at least four years in Bahar Guyesh and Safir institutes. Their native language was either Persian or Azeri Turkish.

Table 2: The Participants' Demographic Information

Institute	N	Gender	Average Age	Native language	Textbooks
Bahar	18	Female	11-14	Azeri	American English
Guyesh	12	Male	11-14	Turkish	File 1 (second edition)
Safir	23	Female	11-15	Persian	Touchstone 1
	7	Male	11-16		(second edition)

Initially, to homogenize the participants, the researchers employed the Oxford Quick Placement Test (2004). The participants who scored over 50 and under 30 or those who did not complete the tests or missed the treatment sessions were excluded from the study. Additionally, eight participants were excluded since they did not follow up the treatment. After homogenizing the L2 learners, 60 L2 learners, including 41 females and 19 males, remained out of 116 (Table 2).

Instruments

The following instruments were utilized to collect the data in this current research:

Oxford Quick Placement Test

The researchers administered the second version of the Oxford Quick Placement Test (2004) to control the participants' homogeneity and ensure they were at the intermediate level. This test contained 60 multiple-choice items in two parts including, grammar, vocabulary. For any error, one point was subtracted, and sixty was the maximum score. The first section of the test comprises 40 items, and the second section includes 20 items. The time limit was 30 minutes. The participants who could score between 30 and 47 were labeled as intermediate EFL learners. The placement test results in this study showed a reliability index of KR-21 = .73.

Pretest

A total of twenty listening items were selected from *Tactics for listening* (Richards, 2011) to assess the topic familiarity of the participants. One score was determined for each correct item and the top score was 20. To decrease the level of task complexity, the pretest contained less cognitive aspects of task complexity i.e., +Here-and-Now (using visual support and present tense to Lessen cognitive effort), and +Planning time (There is no time pressure to replay or pause the aural files). To ensure the reliability of this test in the Iranian setting, it was piloted on 18 EFL learners. The Kuder-Richardson reliability of the test estimated in this study was .80, which indicates the higher reliability rate.

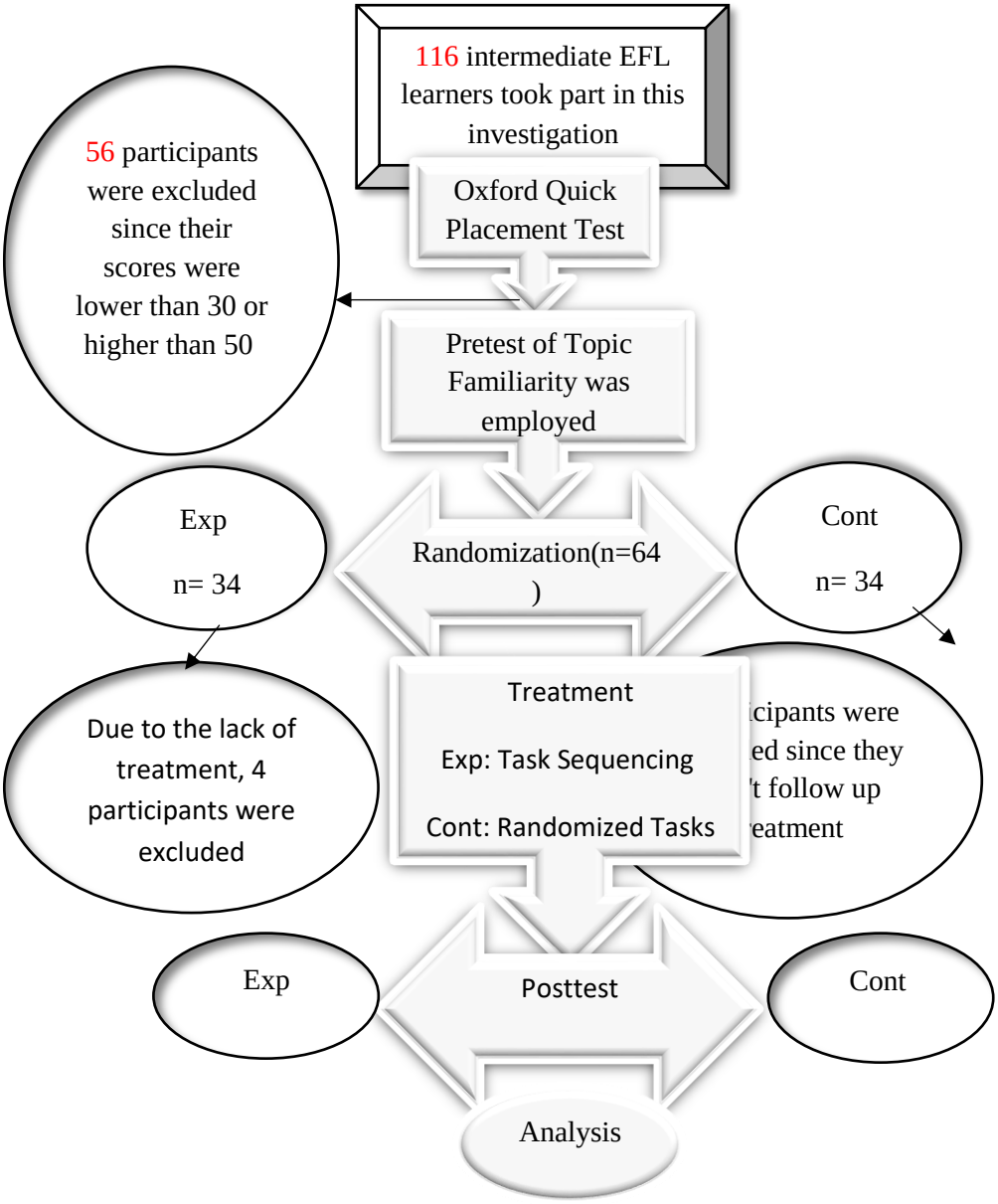

Figure 1: Flowchart of investigation procedures

Listening Task Booklet

The listening tasks were taken from English textbooks, which are taught in Iranian private language institutes. They were graded and sequenced in the order of simple to complex. The complex variables, which were used in the booklet, were +/-Here-and-Now, and +/-Planning time. The participants of the experimental group followed the listening tasks from cognitively simple to more complex during a semester. However, the control group received the randomized treatment of tasks i.e., complex-simple-complex-complex-simple.

Posttest of Listening

To test the participants' probable development in listening comprehension ability at the end of the treatment, a listening test was selected from the course book, namely, *Expanding Tactics for Listening* (Richards, 2011). To find out if the participants could perform a + complex listening comprehension task, the researchers selected this test under the title of "appearance and personality". It comprised 20 items, such as matching the phrases and words, answering the questions, and multiple choice items. It had 20 points, and for each wrong answer, one point was subtracted. It also covered –here-and-now and -planning time features.

Table 3: Features of the Tasks

Task number	**Duration of treatment**	**Complexity features**	**Topic**	**Adopted from**	**Activity focus**
1	15 minutes	+ here and now & +planning time	Personality and appearance	Interchange(intro)	Completing chart
2	18 minutes	+ here and now & +planning time	clothes	Interchange(intro)	Listening and check
3	20 minutes	+ here and now &	clothes	Interchange(intro)	Numbering pictures

		+planning time			
4	20 minutes	- here and now & +planning time	clothes	Interchange(intro)	Writing names
5	20 minutes	- here and now & +planning time	Personality & appearance	Interchange(intro)	Filling the gaps
6	25 minutes	- here and now & -planning time	Face and clothes	Touchstone (2)	Answering the questions
7	25 minutes	- here and now & -planning time	General look and accessories	Touchstone (2)	Completing the chart
8	25 minutes	- here and now & -planning time	Appearance	American English file (2)	Putting true and false
9	30 minutes	- here and now & -planning time	Description of activities	American English file (2)	Writing sentences
10	30 minutes	- here and now & -planning time	Personality and activity	American headway (3)	Answering questions

Procedure

First, the researchers administered the second version of the Oxford Quick Placement Test to homogenize the participants. Then, the participants were divided into the control and experimental groups. The simple pretest of listening was run to ensure the participants' familiarity with "appearance and personality". This test contained +Here-and-Now and +Planning time variables. Concerning the simple Here-and-Now feature, the tasks contained present tense, less lexical complexity, and visual clues. In addition, by taking into account the feature of + Planning time during the pretest, the participants

were allowed to carry their cellphones and headphones to perform the listening tasks. The feature of + Planning time increased the amount of time planning to carry out the tasks.

A total of four teachers, including one male and three females, were involved in instructing both groups to perform the tasks in each class. The teachers were unaware of the purpose of the study, and they did not know whether they were teaching for the treatment or control group, as they were randomly assigned to each group. To ensure that the instructors were qualified, they were approved by the research manager, an expert in TEFL. The teachers had between 2 and 8 years of teaching experience in the institutes.

The study followed similar treatment procedures for each group except for ordering the tasks. The participants in the experimental group practiced listening tasks from number one to number ten (Table 3), while the control group took part in randomized or isolated treatment (i.e., task number 4, 1, 10, 2, etc.). Isolated tasks mainly pertain to the complex and simple tasks which are presented randomly rather than in a sequence of s-c. Both groups underwent the same listening instructional procedures during the semester. Topic preparation or activating schema was the main listening skill support employed along with other teaching strategies in listening comprehension tasks. As Chang (2016) puts it, providing background knowledge might influence decoding speech since students don't spend much time finding out the familiar topic of the input. Thus, they pay attention to new information. Concerning this suggestion, the teachers followed listening task procedures by defining new words, speaking about the input topic, asking and answering personal experiences of the topics, listening to vodcasts and podcasts, shadowing, and completing the different post-listening activities. Listening to podcasts or vodcasts provides appropriate opportunities to practice different voices inside or outside of the classroom (Yeganeh & Izadpanah, 2021). The other type of activity which led the participants of both groups to have an active listening process during treatment was the idea of shadowing. Lambert (1992) defined it as, "a paced, auditory tracking task which involves the

immediate vocalization of auditorily presented stimuli " (p.266). The participants repeated the listening tasks by following somebody's speech.

After the treatment, which lasted for one semester, the researchers administered the listening posttest to compare the participants' performance. It included two features of task complexity that required more mental effort. For the complex –Here-and-Now condition, the participants answered the items without any visual support. In that sense, the participants needed less demanding cognitive resources, such as attention and memory, to deal with a large amount of incoming linguistic information. Regarding -Planning time condition, since the participants didn't have sufficient time for planning tasks, it resulted in more complex listening comprehension.

Data Analysis

At the outset, the researchers of this study used SPSS 22 software to analyze the data. To understand " the effect of ordering task familiarity on listening task complexity ", a series of independent samples t-tests were employed to compare the results of the placement test, pretest, and posttest for both the experimental group and control group.

RESULTS

Descriptive Statistics: Placement Test

Table 4 shows the descriptive statistics for the experimental and control group on the Oxford Quick Placement Test.

Table 4: Descriptive Statistics for the Placement Test

Groups	N	M	SD	SEM
Experimental	30	31.52	4.12	.75
Control	30	33.25	4.68	.85

Note: M= Mean. SD= Standard Deviation. SEM = Standard Error of Measurement

According to the results, the experimental (M = 31.52, SD = 4.12) and the control group (M = 33.25, SD = 4.68) were not significantly different

on the placement test, and hence, the groups were homogenous on this test. Before the treatment sessions, we ascertained that both groups were almost at the same level of language proficiency.

An independent-samples t-test was conducted to compare the level of English proficiency for both groups. Table 5 displays the means of the groups' placement test before the treatment via analyzing the independent samples *t*-test. There wasn't a significant difference in the scores for the experimental (M=1.73, SD=1.14) and control group (M = 1.73, SD = 1.14); conditions; t (58) =1.51, p = .135. These results suggest that there wasn't a statistically significant difference at the Placement Test stage.

Table 5: Results of the Independent Samples t-test for the Placement Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed			1.51	58	.135	1.73	1.14	-.55	4.01
Equal variances not assumed			1.51	57.08	.135	1.73	1.14	-.55	4.01

Descriptive Statistics: Pretest

To address the research question, we first assessed the normal distribution of the data using the Shapiro-Wilkes test. Based on the results, we determined whether to use a parametric or non-parametric test. As the data exhibited a normal distribution, we conducted an independent samples t-test to analyze it. Prior to this, we conducted a pretest to evaluate the familiarity of the groups with the topic of "appearance and personality". To achieve this, we utilized

descriptive and inferential measures to compare the pretest scores for listening comprehension. Table 6 displays the descriptive statistics for the learners' familiarity with the topic. Eventually, effect size was calculated using Cohen's d.

Table 6: Descriptive Statistics for the Pretest

Groups	N	M	SD	SEM
Experimental	30	10.21	2.06	.37
Control	30	9.34	1.79	.32

Note: M= Mean. SD= Standard Deviation. SEM = Standard Error of Measurement

The results showed that the task sequencing (experimental) group (M =10.21, SD = 2.06) and the randomized sequencing (control) group (M = 9.34, SD = 1.79) had almost close means of listening to the familiar test. The main results of the independent samples t-test are presented in Table 7.

Table 7: Results of the Independent Samples t-test for the Pretest

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed			1.74	58	.086	.87	.49	1.86	.13
Equal variances not assumed			1.74	56.85	.087	.87	.49	1.86	.12

Another independent t-test was run to reveal where the difference between the two groups lies, before receiving the treatment sessions. Concerning the performances of the groups on listening to familiar topic, as shown in Table 7, there is no significant difference between the performances of the experimental (M = .87, SD = .49) and control group (M = .87, SD = .49);

conditions; *t* (58) =1.74, p = .87. The performance of the experimental group and control group was somewhat the same, and we could ensure that both groups were not significantly heterogeneous in listening to the familiar tasks before treatment.

Descriptive Statistics: Posttest

The descriptive statistics for the posttest are presented in Table 8. The results of this investigation revealed that the experimental group (M = 18.36, SD = 1.66) had a higher mean than the control group (M = 15.37, SD = 2.79) in listening to the posttest.

Table 8: Descriptive Statistics for the Posttest

Groups	N	M	SD	SEM
Experimental	30	18.36	1.66	.30
Control	30	15.37	2.79	.51

Note: M= Mean. SD= Standard Deviation. SEM = Standard Error of Measurement

The results of the independent samples t-test are displayed in Table 9.

Table 9: Results of the Independent Samples t-test for the Posttest

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed			5.02	58	.000	2.99	.59	4.18	1.79
Equal variances not assumed			5.02	47.31	.000	2.99	.59	4.18	1.79

The other independent samples t-test was conducted to see if there was any significant difference between the experimental and the control group in

listening to complex tasks. Table 9 reports that there is a significant difference between the performances of the experimental (M = 2.99, SD = .59) and control group (M = 2.99, SD = .59); conditions; t (58) = 5.02, p = .000. The results showed that the participants of the experimental group who performed s-c listening tasks significantly outperformed the EFL learners of the control group who practiced the randomized sequence of listening tasks. Additionally, the Cohen effect size was 1.30 and this value was considered a large effect size and demonstrated that the study results have practical significant. Notably, our results recommend that when L2 learners follow the rational order of familiar listening tasks, they can tackle more familiar complex tasks.

As the research question sought to figure out if familiar task sequencing had any

Table 10: Results of the Mean Scores Before and After Treatment

Groups	Before Treatment Mean ± SD	After Treatment Mean ± SD	t	df	P-value
Experimental	10.21 ± 2.06	18.36 ± 1.66	109.72	29	0.000
Control	9.34 ± 1.79	15.37 ± 2.79	32.47	29	0.000

The scores of both groups before and after treatment were compared through employing a paired-sample t-test. The analysis of the data indicated that both groups after treatment had significant improvement ($p < 0.001$). However, the comparison of the participants' performance after treatment indicated that experimental group had a higher mean score in comparison to control group (Table 10).

DISCUSSION

The main objective of the current study was to examine the effect of task sequencing versus randomized order of tasks on task complexity performance. Given that previous studies sought to test the role of task sequencing in performing complex tasks (Abdi Tabari & Miller, 2021; Kim, 2020; Levkina, 2014; Thompson, 2014), and finding that task ordering

yielded fruitful gains in task complexity performance, this investigation attempted to test which design led to the higher achievement of EFL learners: task sequencing or isolated task ordering. Although both groups led to vocabulary richness and appropriate grammar, the results of the participants' performances on the posttest confirmed that simple to complex sequencing exhibited better support for listening to task complexity.

Regarding the Triadic Componential Framework model of task ordering (Robinson, 2010, 2015), the experimental group (simple-complex) improved significantly in the posttest. By practicing medium types of listening tasks, the experimental group could perform the tasks more independently from the 4th session. According to Robinson (2020), more complex task treatment promotes spontaneous performance because of providing further new transformation. The results of the current study are in line with Levkina and Gilabert (2014) who indicated that pedagogical task sequencing led to greater retention of linguistic elements. In fact, the findings of the present study demonstrated that s-c sequencing gradually led to higher vocabulary retention and learning, since EFL learners increased the chances of storing new words in long-term memory by deep processing of complex task performance. Because of the effective sequencing of tasks, the experimental group could balance and handle memory and attentional resources more properly. The quantitative analysis data of this study is also in line with Levkina (2014), who reports that greater cognitive processing occurs due to s-c sequences.

This study is also consistent with Ahmadi and Nazari (2014). They believed that those language learners who received complex task treatment could deal with deeper information processing. In addition, the results are in keeping with Malicka's (2014) investigation concerning the effect of task complexity and task sequencing in oral production. In her study, those EFL learners who were exposed to s-c sequencing prior to difficult tasks could play an influential role in consolidating background knowledge. Like her study, the posttest results demonstrate that complex conceptualization has triggered to expand vocabulary knowledge and alleviated mental efforts

imposed by both -Here-and-Now and -Planning time features of task complexity.

As demonstrated by the posttest results, the experimental group gained satisfactory listening performance along both *resource-directing* and *resource-dispersing* variables of task complexity. In fact, the *resource-directing* factor (-Here-and-Now) directed the participants' attention toward higher levels of accuracy through task performance complexity. This feature assisted the EFL learners in performing and practicing new tasks (Robinson, 2010, 2015). Meanwhile, our findings confirmed that by practicing -/+ Here-and-Now support task performance, the participants gradually managed to do the new complex tasks more accurately (Lambert & Robinson, 2014).

Concerning the *resource-dispersing* variable, this study confirmed that removing +Planning Time made the posttest complex since it dispersed the attention of EFL learners over linguistic characteristics, but it promoted effective management and quick access to preexisting knowledge (Gilabert, 2007). Adding nonlinguistic features along -Planning Time made the tasks more complex, as well. For example, listening to the tasks along with extra noises like baby crying, playing musical instruments, and traffic noises hindered the participants from directing their notice to lexis and grammar (Robinson, 2011). However, according to the results, the experimental group that followed s-c sequencing didn't suffer from these undesirable issues, and EFL learners could simultaneously listen to the prominent features of listening files and nonlinguistic features were included to increase task complexity. Likewise, this study's findings could find support for greater conceptualization and organization of ideas to deal with task performances (Fazilatfar et al., 2020).

Moreover, the posttest and the pretest analysis of the results indicated that the students who practiced isolated familiar tasks sequence could not perform the complex familiar tasks much more effectively. EFL learners could do the familiar task sequence better than those tasks which lack task order. According to the results, it can be concluded that ordering the rational familiar sequence is necessary to fulfill real-world tasks. The result of this

study is quite contradictory to the investigations conducted by Asfina (2014), and Gilakjani and Ahmadi (2011), on the stance of listening to familiar tasks. The participants of the study improved listening comprehension performance by using their prior knowledge. However, by repeating familiar tasks, the control group could also perform effective listening comprehension tasks in the classrooms. The treatment comprehension lessons made the participants in the control group have a chance to refresh their own fundamental vocabulary items. In fact, the schematic knowledge and familiarity with the topic empowered the control group participants to perform comprehension tasks effectively in the classes.

In contrast with the control group, the participants in the experimental group were able to figure out the posttest items fluently. Fluency in listening tasks involves processing aural files automatically to recognize the printed items in the tasks (Tsang, 2022). Analyzing the data in the placement test, pretest, and the posttest demonstrated that abundant exposure to the sequenced listening tasks and extensive listening of the specific topic helped the participants in the experimental group to reach a reasonable degree of comprehension. The results of the data analysis support the results of studies like those carried out by Chang and Millett (2014), Córdoba Zúñiga and Rangel Gutiérrez (2018), and Rost (2014), in which the participants could foster listening fluency through the gradual accomplishment of task sequencing.

CONCLUSION AND IMPLICATION

This investigation aimed to figure out whether simple-complex task ordering along increasing complex features could improve listening comprehension performance, as postulated by Robinson (2011). Two methodological designs of task sequencing, namely ordered and isolated sequencing of tasks, were employed based on the TCF model. Two features of task complexity, -/+ Here-and-Now and -/+Planning time, were also utilized to compare the results of two types of treatments. The results of the quantitative analysis revealed

that s-c listening task sequence affected EFL learners' improvement in their listening skills.

Some potential pedagogical implications have been provided in the present study. First, the study recommends that listening tasks, as outlined by the TCF, should be ordered along task complexity variables. Enhancing *resource-directing* variables, like +/- There-and-Then, made EFL learners utilize their cognitive resources, such as memory and attention, while trying to perform the tasks. Thereby, ordering tasks from less to more cognitive processing abilities, promotes situations for attention allocation to new linguistic elements (Robinson, 2011). On the other hand, increasing *resource-dispersing* task characteristics did not direct learners' notice to linguistic codes. For example, employing -Planning time dispersed their attention over linguistic codes (Ellis, 2005). Therefore, what teachers and task designers should know is that the gradual incorporation of these two resources not only improves what EFL learners know about interlanguage resources, but also promotes analysis, understanding, and mental processes of learning (Levkina, 2014; Robinson et al., 2013). Second, English teachers can also change, remove, or add task complexity characteristics to meet the students' needs and wants according to their goals. Thus, English teachers can change one task variable, like the provision of -/+Planning time or +/-Here-and-Now, to tailor task complexity features to accommodate learners with different levels of language proficiency (Allaw & McDonough, 2019). Third, educational settings, such as the ministry of education, should hold in-service teaching classes for English teachers to train them based on the SSARC and TCF model so that they can design their plans and teaching procedures on the basis of task sequencing and task complexity features. In addition, these models are practical rather than merely theoretical notions and previous studies have shown that they are applicable in various instructional contexts (Lambert & Robinson, 2014).

The current investigation suffered a few limitations and delimitations that they may restrict the generalization of results. First, as cited earlier, the subjects of this experimental study were 60 intermediate EFL learners from

five intact classes at two English institutes in Hamedan. Since they were selected only from intermediate English proficiency level, it can be considered a limitation of this study. Different proficiency levels from more institutes are required to assess the impact of task complexity sequence to increase the validity of the study. Thus, caution must be taken to generalize the findings. Second, we assume that holding one term treatment, basically because of working on the listening task sequence of the participants, may be considered the other limitation of the current study. Third, this study is a quantitative approach, and it is necessary to conduct a mixed methodology research via different tools, such as the task perception questionnaire and interview, to enhance the validity of the results. The study also suffered from some delimitations which threatened to generalize the findings. The participants of this investigation were selected only from Hamedan in Iran. So, caution should be exercised to generalize the results of the present research to other contexts and nationalities.

The present research manipulated two types of task sequence effects, including ordered and randomized sequence of tasks, to delve into the ways how they affect learners' cognitive processing and learning progression. To get more insights into Robinson's models (TCF and SSARC), different types of task sequence design along other task complexity features can be investigated in the future. Other variables, for example, level of proficiency, educational settings, and perceptions of language learners about task complexity, can be taken into consideration. They may help shed more light on the body of investigation regarding listening comprehension skill. In addition, future studies are recommended employing TCF and SSARC models in combination with other language skills to illuminate the efficacy of the task sequence design.

Disclosure statement

No potential conflict of interest was reported by the authors.

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References

Abdi Tabari, M., & Miller, M. (2021). Unraveling the effects of task sequencing on the syntactic complexity, accuracy, lexical complexity, and fluency of L2 written oroduction. *Canadian Journal of Applied Linguistics/Revue canadienne de linguistique appliquée*, *24*(2), 1-29. https://doi.org/10.1177/13621688221090922

Ahmadi, H., & Nazari, O. (2014). Grading and sequencing tasks in task-based syllabus: A critical look at criterion selection. *International Journal of Cognitive and Language Sciences*, *8*(1), 337-341. https://doi.org/10.5281/zenodo.1091072

Al-Jarf, R. (2018). Effect of background knowledge on auditory comprehension in interpreting courses. In Renata Jančaříková (ED.), *Interpretation of Meaning Across Discourses, 2nd Edition* (pp. 97-108). Czech Republic, Brno: Muni Press.
https://ssrn.com/abstract=3842560

Allaw, E. (2016). *The effect of the SSARC model of task sequencing on L2 written production* [Doctoral dissertation]. Concordia University.
https://spectrum.library.concordia.ca/982096/

Allaw, E., & McDonough, K. (2019). The effect of task sequencing on second language written lexical complexity, accuracy, and fluency. *System*, *85*, 102104.
https://doi.org/10.1016/j.system.2019.06.008

Amini, B., Bayat, A., & Mahmoodi, K. (2022). The impact of sequencing repeated familiar task on listening performance. *Issues in Language Teaching*, *10*(2), 325-350.
https://doi.org/10.22054/ilt.2022.61019.597

Asfina, R. (2014). *The effect of English movie in pre-teaching of transactional and interpersonal conversations toward students' listening achievement*. Unpublished thesis. Padang: Universitas Negeri Padang.

Attarzade, S., & Farahani, E. (2014). The effect of task complexity on Iranian EFL learners' listening comprehension across aptitude. *Procedia-Social and Behavioral Sciences*, *98*, 314-323. https://doi.org/10.1016/j.sbspro.2014.03.422

Baralt, M. (2014). Task complexity and task sequencing in traditional versus online language classes. In M. Baralt, R. Gilabert, & P. Robinson (Eds.), *Task sequencing and instructed second language learning* (pp. 95-122). London, UK: Bloomsbury.

Baralt, M., Gilabert, R., Robinson, P. (2014). An introduction to theory and research in task sequencing and instructed second language learning. In M. Baralt, R. Gilabert, & P. Robinson (Eds.*), Task sequencing and instructed second language learning* (pp. 1-37). London: Bloomsbury.

Bayat, A., & Biria, R. (2013). The role of sequencing pedagogical tasks and its influence on optimizing l2 learners‟ acquisition of English clauses. *International Research Journal of Applied and Basic Sciences, 5*(6), 696-704. http://www.irjabs.com/files_site/paperlist/r_1503_130922152732.pdf

Brindley, G. (1998). Assessing listening abilities. *Annual Review of Applied Linguistics*, *18*, 171-191. https:// doi:10.1017/S0267190500003536

Bui, G., & Huang, Z. (2018). L2 fluency as influenced by content familiarity and planning: Performance, measurement, and pedagogy. *Language Teaching Research*, *22*(1), 94-114. https://doi.org/10.1177/1362168816656650

Chang, A. C., & Millett, S. (2014). The effect of extensive listening on developing L2 listening fluency: Some hard evidence. *ELT journal*, *68*(1), 31-40. https://doi.org/10.1093/elt/cct052

Chang, A. C. S. (2016). Teaching L2 listening: In and outside the classroom. In W. A. Renandya & H. P. Widodo (Eds.), *English language teaching today* (pp. 111-125). Springer, Cham. https://doi.org/10.1007/978-3-319-38834-2_9

Chiang, C. S., & Dunkel, P. (1992). The effect of speech modification, prior knowledge, and listening proficiency on EFL lecture learning. *TESOL Quarterly*, *26*, 345-374. https://doi.org/10.2307/3587009

Córdoba Zúñiga, E., & Rangel Gutiérrez, E. (2018). Promoting listening fluency in pre-intermediate EFL learners through meaningful oral tasks. *Profile Issues in Teachers Professional Development*, *20*(2), 161-177. https://doi.org/10.15446/profile.v20n2.62938

Ellis, R. (2003). *Task-based language learning and teaching*. Oxford University Press.

Ellis, R. (Ed.). (2005). Planning and task performance in a second language (Vol. 11). John Benjamins Publishing.

Ellis, R. (2018). *Reflections on task-based language teaching*. Bristol, Blue Ridge Summit: Multilingual Matters.

Ellis, R., Skehan, P., Li, S., Shintani, N., & Lambert, C. (2019). *Task-based language teaching: Theory and practice* (Cambridge Applied Linguistics). Cambridge: Cambridge University Press.

Fazilatfar, A., Kasiri, F., Nowbakht, M. (2020). The comparative effects of planning time and task conditions on the complexity, accuracy and fluency of L2 writing by EFL learners. *Iranian Journal of Language Teaching Research*, *8*(1), 93-110. https://doi.org/10.30466/ijltr.2020.120809

Ghahdarijani, M. S. (2012). The impact of task complexity on Iranian EFL learners' listening comprehension across anxiety and proficiency levels. *Theory & Practice in Language Studies*, *2*(5). https://doi.org/10.4304/tpls.2.5.1057-1068

Gilabert, R. (2007). The simultaneous manipulation of task complexity along planning time and [+/-Here-and-Now]: Effects on L2 oral production. *Investigating tasks in formal language learning*, *20*, 44-68. https://www.researchgate.net/publication/237105568

Gilakjani, A. P., & Ahmadi, S. M. (2011). The effect of text familiarity on Iranian EFL learners' listening comprehension. *Journal of Language Teaching and Research*, *2*(4), 783. https://doi.org/10.4304/j ltr.2.4.783-789

Hamouda, A. (2013). An exploration of causes of Saudi students' reluctance to participate in the English language classroom. *International Journal of English Language Education*, *1*(1), 17-34. http://dx.doi.org/10.5296/ijele.v1i1.2652

Hasan, A., Gushendra, R., & Yonantha, F. (2017). The influence of prior knowledge on students' listening and reading comprehension. *IJEE (Indonesian Journal of English Education)*, *4*(1), 1-15. https://doi.org/10.15408/ijee.v4i1.4744.

Housen, A., De Clercq, B., Kuiken, F., & Vedder, I. (2019). Multiple approaches to complexity in second language research. *Second language research*, *35*(1), 3-21. https://doi.org/10.1177/0267658318809765

Hwaider, S. (2017). Problems of teaching the listening skill to Yemeni EFL learners. *International Journal of Scientific and Research Publications*, *7*(6), 140-148. http://www.ijsrp.org/research-paper-0617.php?rp=P666473

Imhof, M. (1998), "What makes a good listener? Listening behavior in instructional settings", *International Journal of Listening,12*, 81-105. https://doi.org/10.1080/10904018.1998.10499020

Inoue, C. (2016). A comparative study of the variables used to measure syntactic complexity and accuracy in task-based research. *The Language Learning Journal*, *44*(4), 487-505. https://doi.org/10.1080/09571736.2015.1130079

Jouibar, B., Hadian, B., & Vaez Dalili, M. (2022). The effect of code-switching on EFL learners' speaking accuracy, fluency, and complexity. *Journal of Language Horizons*, 6(2). http://doi.org/10.22051/lghor.2021.34089.1407

Kim, Y., & Payant, C. (2014). A pedagogical proposal for task sequencing: An exploration of task repetition and task complexity on learning opportunities. In M. Baralt, R. Gilabert, & P. Robinson (Eds.), *Task sequencing and instructed second language learning* (pp. 151-1771). London: Bloomsbury.

Kim, N. (2020). The effects of different task sequences on novice L2 learners' oral performance in the classroom. *Language Teaching Research.* https://doi.org/10.1177/1362168820937548

Lambert S (1992) Shadowing. *Meta,* 37(2), 263-73. https://doi.org/10.7202/003378ar

Lambert, C., & Robinson, P. (2014). Learning to perform narrative tasks: A semester-long classroom study of L2 task sequencing effects. In M. Baralt, R. Gilabert, & P. Robinson (Eds.), *Task sequencing and instructed second language learning* (pp. 207-230). London: Bloomsbury.

Lee, J. (2019). Task complexity, cognitive load, and L1 speech. *Applied Linguistics, 40*(3), 506-539. https://doi.org/10.1093/applin/amx054

Levkina, M. (2014). *The role of task sequencing in L2 development as mediated by working memory capacity.* (Unpublished doctoral dissertation). Universitat de Barcelona
http://hdl.handle.net/2445/54846

Levkina, M., & Gilabert, R. (2014). Task sequencing in the L2 development of spatial expressions. In M. Baralt, R. Gilabert, & P. Robinson (Eds.), *Task sequencing and instructed second language learning* (pp. 37-70). London: Bloomsbury.

Madarsara, M. A., & Rahimy, R. (2015). Examining the effect of task complexity and sequence on speaking ability of Iranian EFL learners. *International Journal of Applied Linguistics and English Literature*, *4*(1), 247-254.
https://doi.org/10.7575/aiac.ijalel.v.4n.1p.247

Magill, R., & Anderson, D. I. (2010). *Motor learning and control*. McGraw-Hill Publishing.

Malicka, A. (2014). The role of task complexity and task sequencing in L2 monologic oral production. In M. Baralt, R. Gilabert, & P. Robinson (Eds.), *Task sequencing and instructed second language learning* (pp.71-93). London: Bloomsbury.

Malicka, A. (2018). The role of task sequencing in fluency, accuracy, and complexity: Investigating the SSARC model of pedagogic task sequencing. *Language Teaching Research*, *24*(5), 642-665.
https://doi.org/10.1177%2F1362168818813668

Mehrpour, S. & Rahimi, M. (2010). The impact of general and specific vocabulary knowledge on reading and listening comprehension: A Case of Iranian EFL learners. *System: An International Journal of Educational Technology and Applied Linguistics, 38*(2), 292-300.
https://doi.org/10.1016/j.system.2010.01.004

Nunan, D. (2004). *Task-based language teaching*. Cambridge, UK: Cambridge University Press.

Nurpahmi, S. (2015). Improving listening skill by activating students' prior knowledge. *ETERNAL (English, Teaching, Learning and Research Journal, I*(1), 28-38. https://doi.org/10.24252/Eternal.V11.2015.A3

Ong, J., & Zhang, L. J. (2010). Effects of task complexity on the fluency and lexical complexity in EFL students' argumentative writing. *Journal of Second Language Writing*, *19*(4), 218-233. https://doi.org/10.1016/j.jslw.2010.10.003

Othman, J., & Vanathas, C. (2017). Topic familiarity and its influence on listening comprehension. *The English Teacher*, *8,* 19-32. https://www.researchgate.net/publication/252313961

Ovilia, R. (2019). The relationship of topic familiarity and listening comprehension. *Advances in Social Science, Education and Humanities Research*, *276*, 182-186. https://doi.org/10.2991/icoelt-18.2019.26

Ovilia, R., & Addinna, A. (2020). Topic familiarity and genre familiarity: Which one contributes more to listening comprehension? *Lingua Didaktika: Jurnal Bahasa dan Pembelajaran Bahasa*, *14*(2), 132-143. http://ejournal.unp.ac.id/index.php/linguadidaktika/article/view/108328

Rahimi, M., & Zhang, L. J. (2019). Writing task complexity, students' motivational beliefs, anxiety and their writing production in English as a second language. *Reading and Writing, 32*(3), 761-786. https://doi.org/10.1007/s11145-018-9887-9

Ren, W., Wu, Y., & Peng, Y. (2023). Effects of task complexity, task sequence, and interlocutor familiarity on Chinese EFL learners' self-repair in synchronous online interaction. *Language Teaching Research,* 0(0). https://doi.org/10.1177/13621688231176066

Richards, J.C. (2011). *Tactics for listening* (Third edition). Oxford University Press.

Robinson, P. (2001). Task complexity, task difficulty, and task production: Exploring interactions in a componential framework. *Applied Linguistics, 22*(1), 27-57. https://doi.org/10.1093/applin/22.1.27

Robinson, P. (2003). The Cognition Hypothesis, task design and adult task-based language learning. *Second Language Studies, 21*(2), 45-107.

https://www.researchgate.net/publication/228554259

Robinson, P. (2005). Cognitive complexity and task sequencing: Studies in a componential framework for second language task design. *International Review of Applied Linguistics in Language Teaching (IRAL)*, *43*(1), 45-107 https://doi.org/10.1515/iral.2005.43.1.1

Robinson, P. (2007). Criteria for classifying and sequencing pedagogic tasks. In M. P. Garcia Mayo (Ed.), *Investigating tasks in formal language learning* (pp. 7-27). Clevedon, UK: Multilingual Matters http://dx.doi.org/10.21832/9781853599286-004

Robinson, P. (2010). Situating and distributing cognition across task demands: The SSARC model of pedagogic task sequencing. In M. Putz & L. Sicola (Eds.), *Cognitive processing in second language acquisition: Inside the learner's mind* (pp. 243-268). Amsterdam: Benjamins. https://doi.org/10.1075/celcr.13.17rob

Robinson, P. (2011). *Second language task complexity: Researching the cognition hypothesis of language learning and performance*. Amsterdam: John Benjamins Publishing. https://doi.org/10.1075/tblt.2

Robinson, P., & Gilabert, R. (2007). Task complexity, the cognition hypothesis, and second language learning and performance. *International Review of Applied Linguistics*, *45*(3), 161–176. https://doi.org/10.1515/IRAL.2007.007

Robinson, P., Mackey, A., Gass, S. M., & Schmidt, R. (2013). Attention and awareness in second language acquisition. In *The Routledge handbook of second language acquisition* (pp. 247-267). Routledge.

Robinson, P. (2015). The Cognition Hypothesis, second language task demands, and the SSARC model of pedagogic task sequencing. In M. Bygate (Ed.), *Domains and directions in the development of TBLT: A decade of plenaries from the international conference* (pp. 87-122). John Benjamins.

Robinson, P. (2021). The cognition hypothesis, the triadic componential framework and the SSARC model: An instructional design theory of pedagogic task sequencing. In M. Ahmadian & M. Long (Eds.), *The Cambridge handbook of task-based language teaching* (Cambridge Handbooks in Language and Linguistics, pp. 205-225). Cambridge: Cambridge University Press. doi:10.1017/9781108868327.013

Rost, M. (2014). Developing listening fluency in Asian EFL settings. In *Exploring EFL fluency in Asia* (pp. 281-296). London, UK: Palgrave Macmillan.

Sanajou, N., Zohali, L., & Zabihi, F. (2017). Do task complexity demands influence the learners' perception of task difficulty? *International Journal of Applied Linguistics and English Literature, 6*(6), 71-77. https://doi.org/10.7575/aiac.ijalel.v.6n.6p.71

Sánchez, L., & Kalamakis, S. Z. (2023). The interplay of task complexity (±Here-and-Now) and proficiency in shaping written narratives in Spanish as a foreign language. *System, 112*, 102949.https://doi.org/10.1016/j.system.2022.102949

Shajeri, E., & Izadpanah, S. (2016). The impact of task complexity along single task dimension on Iranian EFL learners' writing production. *Theory and Practice in Language Studies*, *6*(5), 935. https://doi.org/10.17507/tpls.0605.04

Skehan, P. (1996). A framework for the implementation of task-based instruction. *Applied Linguistics*, *17*(1), 38-62. https://doi.org/10.1093/applin/17.1.38

Skehan, P. (1998). *A cognitive approach to language learning*. Oxford: Oxford University Press.

Skehan, P. (2014). Limited attentional capacity, second language performance, and task-based pedagogy. *Processing perspectives on task performance*, *211*, 211-260. http://digital.casalini.it/9789027270412

Skehan, P., & Foster, P. (2001). Cognition and tasks. In P. Robinson (Ed.), *Cognition and second language learning* (pp. 183–205). Cambridge, UK: Cambridge University Press.

Thompson, C. (2014). Guided planning, task complexity and second language oral development. In M. Baralt, R. Gilabert, & P. Robinson (Ed.), *Task sequencing and instructed second language learning* (pp.123-148). London: Bloomsbury.

Tsang, A. (2022). Effects of narrow listening on ESL learners' pronunciation and fluency: An 'MP3 flood' programme turning mundane homework into an engaging hobby. *Language Teaching Research, 26*(3), 434-454. https://doi.org/10.1177/1362168819894487

Un-udom, S., & Patanasorn, C. (2020). Effects of task sequencing in the cognition hypothesis on EFL learner perception of task difficulty. *Journal of Studies in the English Language*, *15*(2), 1-26.

Van den Branden, K. (2016). Task-based language teaching. In *The Routledge handbook of English language teaching* (pp. 238-251). Routledge.

Vercellotti, M. L. (2017). The development of complexity, accuracy, and fluency in second language performance: A longitudinal study. *Applied Linguistics, 38*(1), 90-111. https://doi.org/10.1093/applin/amv002

Yeganeh, S., & Izadpanah, S. (2021). The effect of podcasts and vodcasts among motivated Iranian learners of English: different listening poficiency levels. *Journal of Language Horizons*, *5*(1), 51-75. https://doi: 10.22051/lghor.2020.31823.1321

Zare-ee, A. (2013). The effects of task complexity on English language learners' listening comprehension. *Issues in Language Teaching*, *1*(2), 225-250. https://ilt.atu.ac.ir/article_1341.html