2012, Scienceline Publications
International Journal of Applied Linguistic Studies
Int. J. Appl. Ling. Stud., Vol.1, No.1: 22-27 (2012)
ISSN 2322-5122

The Role of Task Complexity on EFL Learners' Oral Production in English Language Institutions

Mehdi Azizi, Fatemeh Asoudeh*, Ali Sorayaie Azar

Member of Young Researchers Club, IAU Maragheh Branch, Faculty of IAU, Maragheh Branch, Iran

*E-mail: mehdi_azizi1946@yahoo.com

Received: 25 Jun 2012; Accepted: 04 Sep 2012; Published: 15 Sep 2012

ABSTRACT

This study attempts to examine the effect of simple and complex tasks on Iranian L2 learners' oral production in English language institutes in EFL context by measuring three aspects of learner production: accuracy, fluency, and complexity. The findings suggest that the cognitive complexity of a particular task influences the nature of learner oral production. Studies in task-based language learning and assessment claim that the cognitive complexity of a specific task influences the learners' task performance. The effect of task type the complexity of tasks on L2 learners' performance in second language, in terms of fluency, accuracy, and complexity has recently attracted the attention of many researchers. This study is specifically concerned with the design features of oral task which contributes to their different degrees of accuracy and fluency. In this paper we noticed that learners cannot give full attention to the three aspects of language production simultaneously and a focus on one aspect is at the expense of the others. Therefore, some tasks may lead learners to prioritize fluency, others to prioritize complexity or accuracy of production.

Key words: Simple Task, Complex Task, Cognitive Complexity, Accuracy and Fluency

ORIGINAL ARTICLE
PII: S232251221200005-1

INTRODUCTION

Studies in task-based language learning and assessment claim that the cognitive complexity of a specific task influences the learners' task performance. Skehan (1998) describes task complexity as consisting of a number of cognitive factors, i.e., vocabulary load and reasoning demands, etc., which can manipulated during task design to obtain the desired elicitation of learner language. Actually, he proposes a trade-off relationship operating between the three aspects of speaker production: accuracy, fluency, and complexity in a particular task. That is, the learner cannot give full attention to the three aspects of language production simultaneously and a focus on one aspect is at the expense of the others. Therefore, according to him, some tasks may lead learners to prioritize fluency, others to prioritize complexity or accuracy of production. Experimental research has been carried out to investigate the possible impact of task complexity on learners' language production based on Skehan's framework of task complexity (1998). Different results have been achieved due to different subjects and different task design. The study conducted by Robinson (2001) found that complex monologic tasks elicited less fluent, but more accurate and complex production than the simple tasks. This result supports his argument that the increase in task complexity will push learners' oral production and facilitate language development by channeling their attention towards more complex discourse to meet the linguistic and functional demands imbedded in a particular task.

When L2 learners speak, the speed of their production, the complexity of their utterances, and the accuracy of their speech is influenced by a number of factors, such as the anxiety learners may feel as they speak, their proficiency, or the degree of cognitive complexity of the task that learners are trying to perform. Researchers so far found that the case is different from simple task to complex task performance. This study is specifically concerned with the design features of oral task which contributes to their different degrees of accuracy and fluency. As far as possible, in Cognition Hypothesis (Robinson 2001a, 2001b, 2005a) the cognitive complexity is isolated from other factors.

In this study I am going to investigate the impact of task complexity on the oral production of individual learners in EFL learners' oral production in English language institutions by measuring the three aspects of learner

To cite this paper: Azizi M, Asoudeh F, Sorayaie Azar A. 2012. The role of task complexity on EFL learners' oral production in English language institutions. *Int. J. Appl. Ling. Stud.*, 1 (1): 22-27. www.ijals.science-line.com

production: accuracy, fluency, and complexity. The findings suggest that the cognitive complexity of a particular task influences the nature of learner oral production (Deng, 2005).

Statement of the Problem

In recent years there has been a considerable research interest in task, both as a construct and as a research instrument (Kuiken and Vedder, 2007). In task-based research four major approaches can be distinguished (Robinson 2007a): (i)a psychological, interactional approach, influenced strongly by the work of Long (1985); (ii) a sociocultural approach, represented by the work of researchers like (Swain, 1998); (iii) a cognitive, information-theoretical approach (Skehan, 1998, 2001; Robinson, 2001a, 2001b, 2007a). Research on task design attempts to find variables in task design that will lead to recognize second language acquisition processes such a negotiation noticing (Bygate et al., 2001; Ellis, 2003). But the problem regarding task design is that whether learners' oral production will get better in terms of accuracy and fluency by the increase of the degree of task complexity or simpler task will lead to fluent and accurate oral productions.

Review of the Literature

Dissatisfaction with structural syllabus and shortcomings of CLT led to the emergence of task-based language teaching as the best way of creating condition for L2 (Second Language) development. According to (Long, 1990; Long and crooks, 1992; Skehan, 1996; Willis, 2001; Ellis, 2003, 2005), TBLT (Task-based Language Teaching) provides a favorable condition L2 development through the engagement of the learners in performing interactionally authentic language use by performing task as the unit of analysis. According to (Long, 1985; Nunan, 1989; Skehan, 1996) activities in which meaning is primary are called TASK. To Prabhu (1987) task involves the same process of thought such as selecting, reasoning, classifying, sequencing information.

Here some distinctions should be made between task and exercise. In both task and exercise the overall purpose is learning a language but the difference lies in the way of achieving. In task the focus is on meaning, in exercise the focus is on forms. Task is goal oriented, exercise is manipulation of language. As Widdowson says what distinguishes task from exercise is the kind of meaning, where task is concerned with pragmatic meaning, exercise with semantic meaning. In task participants function as language users in the communicative process while in exercise participants are language learners. Tasks are authentic and has clear or "a specified objective" (Crooks, 1989) but exercise is pedagogic and has language outcome. Thus the extent to which a learner acts as language user or language learner and attend to message or code underlies the difference between TASK and EXERCISE.

Tasks based on the intention of the task designers: *Task-as-Work plan*

Tasks based on the learners' actual performance: *Task-as-Process*

Instructions or "Rubrics" (Bygate, 2001) are essential parts of a task because by creating context, specify theirs outcome and what participants need to reach that outcome, what Long (1985) calls "mechanism for structuring and sequencing interaction" as they do task. Robinson (2001) distinguishes between resource-directing tasks, those involve +/- reasoning demand, and resource- depleting task, those which may or may not be accompanied by a secondary task in describing task difficulty. Based on task, OUTCOME refers to what the learner arrive at when they have completed the task, but AIM refers to the pedagogic purpose of task. So a task;

1. is a work plan (makes plan for learners activity)
2. involves cognitive process
3. can be used in all the for skills
4. is goal oriented (contextualized outcome)
5. is meaning based
6. is authentic

Pedagogic Task

Types of task:

- Unfocused task: these tasks choose linguistic features randomly and do not focus on specific form, in unfocused tasks the content is the topics, real life or academic.
- Focused tasks: they induce learners to process some particular linguistic features. These tasks are designed in such a way that their performing is due to learners' use of particular linguistic feature. Focused task also called *grammatical task* (Loschky and Bely-Vermon 1993).

In focused task sometimes language itself is the content of task. Ellis (2003) also calls such a task "consciousness raising task" because it requires learners to talk about the data together. Focused tasks have two aims:

1. To stimulate communicative language use similar to unfocused task
2. To use the particular predetermined target feature

Each task is comprised of two elements:

1. Input data and 2. Instructional questions that invites learners to operate on the output in some way. According to Nunan (1989) task has three components:

1. Input
2. Activities (corresponding to Wright's instructional question)
3. Goal (the vague general intention behind any given task)

Now task is at the heart of SLA because the main goal was to examine how learners acquired an L2 naturalistically without formal instruction. Learners vary in both their fluency and accuracy to the type of activity they are engaged. According to Krashen language acquisition is input-driven. They acquire L2 incidentally through contextually imbedded input. Long has similar ideas about input but claims the best input for language acquisition arises when learners negotiate meaning in communicative exchanges. Also he suggested that negotiation contribute to acquisition through other ways; 1. Through negative feedback (recast); 2. Other kinds of input:

a. Unmodified
b. Pre-modified
c. Interactionally modified

Real world task

Variety of task variables:

1. One way or two way (Long, 1989; Doughty & Pica, 1986)
2. Shared or split input (Newton & Kennedy; 1996)
3. Closed or open outcome (Crookes & Gass 1993)

Three levels of speech emergence in SLA:

1. Conceptualization: when the purpose and semantic meaning is determined
2. Formulation: when the speaker maps grammatical and phonological features
3. Orientation: when the phonetic plan produced

Place of task in language teaching: it (task) is considered as a unit of teaching which whole course revolves around it. Traditionally oriented methods were task supported language teaching and modern methods can be seen task-based language teaching.

Task based language teaching (TBLT) constitutes to Strong version of CLT. That is tasks provide the basis for an entire language curriculum. One of the attractions of TBLT is that it lured the traditional distinction between syllabus (what to teach) and methodology (how to teach). It means task based curriculum involves an integrated set of processes involving among other things, the specification of both what and how. Perhaps it is one of the most humanistic approaches toward language teaching.

Resent research into task-based language learning and assessment claims that the cognitive complexity of a specific task influences the learners' task performance. Robinson (2001) defines task complexity as "the result of the attentional, memory, reasoning and other information processing demands imposed by the structure of the task on the language learner". Skehan (1998) describes task complexity as consisting of a number of cognitive factors, i.e. vocabulary load and reasoning demands, etc., which can be manipulated during task design to obtain the desired elicitation of learner language. (Skehan, 1998, 2001, 2003; Skehan & Foster, 1997; Skehan & Foster, 1997) understand task complexity as the amount of attention the task demands from the learners. Actually, he proposes a trade-off relationship operating between the three aspects of speaker production: accuracy, fluency and complexity in a particular task. That is, the learner can not give full attention to the three aspects of language production simultaneously and a focus on one aspect is at the expense of the others. Therefore, according to him, some tasks may lead learners to prioritize fluency, others to prioritize complexity or accuracy of production. Experimental research has been carried out to investigate the possible impact of task complexity on learners' language production based on Skehan's framework of task complexity (1998). Different results have been achieved due to different subjects and different task design. The study conducted by Robinson (2001a) found that complex monologic task elicited less fluent, more accurate and complex production than the simple tasks. This result supports his argument that the increase in task complexity will push learners' oral production and facilitate language development by channeling their attention toward more complex discourse to meet the linguistic and functional demands imbedded in a particular task.

We can increase task complexity along two types of dimensions:

Resource-dispersing: by manipulating these types of task features intentional and memory resources are dispersed and performance is negatively affected. Interaction may be enhanced.

Resource-directing: these kinds of features impose cognitive demands that can be met by specific aspects of the L2. They therefore draw learners' attention and memory resources to the way certain concepts are syntaticized and grammaticized. Interaction should be enhanced.

Skehan's Model of Task complexity (1998)

1. Code complexity
- Linguistic complexity and variety
- Vocabulary load and variety
- Redundancy and density

2. Cognitive complexity

I) *cognitive familiarity*
- Familiarity of topic and its predictability
- Familiarity of discourse genre
- Familiarity of task

Ii) *cognitive processing*
- Information processing
- Amount of computation
- Clarity and sufficiency of information given
- Information type

3. Communicative stress
- Time limits pressure
- Speed of presentation
- Number of participants

Questions and Hypothesis

RQ: What is The Role of Task Complexity on EFL Learners' Oral Production in English Language Institutions?

H0: There is no significant difference between the performance of L2 learners in terms of accuracy and fluency doing simple and complex tasks.

H1: There is a significant difference between the performance of L2 learners in terms of accuracy and fluency doing simple and complex tasks.

METHODOLOGY

In this research learners were gathered in a class at different times for each task. Then, the researcher gave them the task and described what they were to do to accomplish the task (either simple or complex). This happened after establishing a rapport between learners and researcher through gaining their personal data as needed in class to get along. In this study three monologic tasks were chosen to assess oral production of the subjects in study. Each student was asked to finish the three tasks separately in ten minutes. Before the experiment, each student was allocated five minutes planning time.

Skehan (1998) identifies three sets of task factors contributing to the complexity of tasks: *code complexity*, *cognitive complexity* and *communicative stress* to reflect the language required, the thinking required, and the performance conditions respectively involved in a specific task. The complexities of the three tasks are specified by using Skehan's framework of cognitive complexity as illustrated in Table 1. Each dimension of cognitive demand is indicated by a plus or a minus, which represents presence or absence of it as shown in Table 1. The task, which contains more pluses, is assumed to be more cognitively demanding than the one that contains less. Based on Table 1, we conclude that Task 1 is the least complex task whereas Task 3 is the most complex task with Task 2 in the middle.

Table 1 - Cognitive demands of the three tasks

Task	Code Complexity	Cognitive Complexity		Communicative stress
	Vocabulary load	Unfamiliarity of topics	Reasoning demand	Time limit
Task 1	-	–	-	+
Task 2	+	-	+	+
Task 3	++	+	++	+

Sampling

Subjects in this study were 42 upper-intermediate learners. Fifteen were chosen from Maraviya Language Institute in Maragheh and 27 were chosen from Farhagsarayeh Tehran Language Department, all including 21 males and 21 females and their age ranges from 17 to 25 (mean= 21). All learners have passed the previous term with average of 87. In this study the group performed on both simple and complex tasks. Also, our subjects were given Cambridge Standard Placement Test and the obtained scores ranged between 68 and 87.

Table 2 - Students' CSPT Scores														
Student No.	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14
CSPT	77	81	59	79	75	65	73	77	80	69	72	83	72	75
Student No.	S15	S16	S17	S18	S19	S20	S21	S22	S23	S24	S25	S26	S27	S28
CSPT	73	76	82	70	78	84	83	79	72	76	77	84	87	72
Student No.	S29	S30	S31	S32	S33	S34	S35	S36	S37	S38	S39	S40	S41	S42
CSPT	86	77	72	85	83	80	78	84	76	84	79	71	81	75

Instruments

In this study learners' oral proficiency was assessed by using measures of accuracy, fluency, and complexity. Accuracy was measured by the number of error-free clauses divided by the number of clauses. Fluency result was assessed by a measure of the number of words per second. Syntactic complexity was the result of the number of clauses divided by the number of AS units. Lexical complexity was measured by the type token ratio. The counting of clauses and AS units was based on the speech unit proposed by Foster et al (2000).

Data collection and analysis

As an important aim of this study was to assess each individual learner's oral production on the three different tasks, the three aspects of learner language were examined separately for each task. Participants' performance in terms of accuracy and fluency were recorded and measured. A matched t-test was employed as the statistical means of analysis. The probability in this test is considered at 0.5. As can be seen in table 3, task 1 has the highest accuracy and fluency mean scores but the mean score of syntactic complexity is lower than task 2 in table 4. And it was noticed that four of the students in task 1 obtained higher accuracy and fluency scores which you might think that simple task will elicit more accurate and more fluent oral productions but the other two students recorded the highest accuracy and fluency results which this indicates that these two students are at a higher level regarding to their proficiency test taken at first. By examining the data closely you will see.

Table 3 - Results for task 1				
Student Number		**Accuracy**	**Fluency**	**Syntactic Complexity**
21 male	Range of scores	0.53 – 0.84	0.69 – 1.45	1.23 – 1.65
21 female	Mean Score	0.74	0.79	1.52

Table 4 - Results for task 2				
Student Number		**Accuracy**	**Fluency**	**Syntactic Complexity**
21 male	Range of scores	0.51 - 0.88	0.68 – 1.09	1.41 – 2.32
21 female	Mean Score	0.68	0.74	1.57

Table 5 - Results for task 3				
Subjects		**Accuracy**	**Fluency**	**Syntactic Complexity**
21 male	Range of scores	0.26 – 0.71	0.66 – 0.98	1.34 – 1.71
21 female	Mean Score	0.65	0.71	1.30

CONCLUSIONS

Actually this was a small-scale pilot study before we embark on our research project. According to this study there is evidence that increasing task complexity changes the nature of oral production of the learners. The cognitive complexity of a task cannot make an exact prediction of each individual learner's performance on a specific task. In order to make a successful elicitation of learner language, task selection should also take into account the learners' linguistic, communicative and cognitive competence besides recognition of the cognitive complexity of a task. The learning task must be based on the teacher's knowledge of the skills that are emerging from the student's repertoire but are not yet mature, or in Vygotsky's terms, abilities that are "ripening" as opposed to "ripe" (1978). The implementation of tasks should provide opportunities for the learner to refine their knowledge and capabilities and at the same time, ensure high levels of interest and participation.

REFERENCES

Bygate, M. (2001). Effects of task repetition on the structure and control of oral language. In M. Bygate, P. Skehan & M. Swain (eds.), *Researching pedagogic tasks: Second language learning, teaching and testing* (pp.23-48). Harlow, England: Longman

Clark, J. (1997). School as task-based apprenticeship in the learning and use of knowledge and language. In V. Berry, B. Adamson, & W. Littlewood (Eds.), *Applying Linguistics: Insights into language in education*. Hong Kong: The University of Hong Kong

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

Foster, P., & Skehan, P. (1999). The influence of source of planning and focus of planning on task-based performance. *Language teaching research*, 3(3), 215-47

Gilabert, R. (2005). *Task complexity and l2 narrative oral production*. Unpublished Ph.D. dissertation, Barcelona, The University of Barcelona, Spain.

Gilabert, R. (2007). Effects of manipulating task complexity on self-repairs during L2 oral production. *International Review of Applied Linguistics in Language Teaching (IRAL)*, 45/3,215-240.

Kuiken, F., and Vedder, I. (2007). Task complexity and measures of linguistic performance in L2 writing. *International Review of Applied Linguistics in Language Teaching (IRAL)*, 45/3,261-284.

Lomg, M. H. & Crookes, G. (1992). Three approaches to task-based syllabus design. *TESOL Quarterly*, 26(1), 27-56.

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

Revesz, A. (2009). Task complexity, focus on form, and second language development. SSLA, 31, 437-470

Robinson, P. (1995a). Task complexity and second language narrative discourse. *Language Learning*, 45, 99-140.

Robinson, P. (2000). Task complexity and reasoning demands: effects on dyadic NNS-NNS interaction, fluency, accuracy, complexity and incorporation of input. Unpublished data, Aoyama Gakuin University, Tokyo.

Robinson, P. (2001a). Task complexity, task difficulty and task production: exploring Interactions n a componential framework. *Applied Linguistics*, 22 (1), 27-57

Robinson, P. (2001b). Task complexity, cognitive resources, and syllabus design: a triadic frame work for examining task influences on SLA. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 287-318). Cambridge: Cambridge University Press.

Robinson, P. (2003b). Attention and memory. In C. Doughty & M. H. Long (Eds.), *Handbook of second language acquisition*. Oxford: Blackwell.

Robinson, P. (2005a). Cognitive complexity and task sequencing: studies in a componential framework for second language task design. IRAL 43, 1-32.

Robinson, P. (2007a). Criteria for grading and sequencing pedagogic tasks. In *investigating tasks in formal language learning*, Maria Del Pilar Garcia Mayo (Ed.), 2-27. Clevedon: Multilingual Matters.

Skehan, ap. (2003). Task-based instruction. *Language Teaching*, 36, 1-14.

Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In J. Lantolf (Ed.), *sociocultural theory and second language learning* (pp. 97-114). Oxford: Oxford University Press.

Widdowson, H. G. (2003). *Defining issues in english language teaching*. Oxford: Oxford University Press.

Yuan F., & Ellis, R. (2003). The effects of pre-task planning and on-line planning on fluency, complexity, and accuracy in L2 monologic oral production. *Applied Linguistics*, 24 b(1), 1-27.

To cite this paper: Azizi M, Asoudeh F, Sorayaie Azar A. 2012. The role of task complexity on EFL learners' oral production in English language institutions. *Int. J. Appl. Ling. Stud.*, 1 (1): 22-27. www.ijals.science-line.com