

## **Language Skill-Task Corollary: The Effect of Decision-Making vs. Jigsaw Tasks on Developing EFL Learners' Listening and Speaking Abilities**

**Gholam-Reza Abbasian <sup>\*1</sup>, Farzaneh Chenabi <sup>2</sup>**

1. *Imam Ali University, and Department of English, South Tehran Branch, Islamic Azad University, Tehran, Iran*

2. *Department of English, South Tehran Branch, Islamic Azad University, Tehran, Iran*

\*Corresponding author: Gh\_abbasian@azad.ac.ir

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### **Abstract**

Task-based language Teaching (TBLT) has occupied the pertinent literature for some long years. However, the role of specific task type in developing specific skill type seems to be amongst the intact issues in the literature. To shed more light on this issue, the present study was conducted to compare the effect of jigsaw and decision-making tasks on improving listening and speaking abilities of EFL learners. To this end, 75 female Iranian EFL learners, assumed homogenous based on their performance on the Nelson Test, were employed as the participants. Their listening and speaking abilities were also measured both before and after the treatment based on the listening and speaking subtests of the PET. Then, they were assigned to two groups of experimental A and B. The experimental group A received decision-making-based listening and speaking instruction for 12 sessions of 45 minutes, and the experimental group B received jigsaw-based listening and speaking instruction. In order to analyze the data, descriptive statistics and multiple inferential statistical analyses were conducted. The results revealed that those participants who experienced jigsaw listening and speaking tasks outperformed those who received decision-making-based instruction. The findings, then, bear certain theoretical implications for stakeholders.

**Keywords:** task types, decision-making task, jigsaw task, listening and speaking skills

## Introduction

Listening is the most frequently used form of language and plays significant role in daily communication and educational process (Thanajaro, 2000). As Nunan (1997) believes, "listening is the basic skill in language learning. Learners will never learn to communicate effectively in the absence of an effective instruction, which assigns a pre-requisite role for listening" (p.47).

The developments of listening skill and language learning via the medium of listening are interlinked processes (Kemp, 2009). Listening is regarded as an active, complicated skill which needs careful study. Brown (2001) states that students always do more listening than speaking in the classroom. The significance of listening skill asserts that it is commonly larger than the speaking and this is one of the significant reasons that recent researches have demonstrated the critical role of language input, providing support for the primacy of listening comprehension in instructional methods.

In the same vein, speaking is similarly of crucial importance since it is the manifestation of language use. Based on speaking ability, we usually make judgment on language proficiency since, as Folse (2006) holds, "for most people the ability to speak a language is synonymous with knowing that language since speech is the most basic needs of human communication, nevertheless, speaking in a second or foreign language has been viewed as the most demanding of the four skills" (p. 1).

Of all the four skills, speaking appears as the most significant skill since people who know a language are considered as speakers of that language and many foreign language learners basically interested in learning to speak (Ur, 1996). However, "the ability to speak a second language well is a very complex task if we understand the nature of what appears to be" (Richards & Renandya, 2002, p. 201). "If listening is a Cinderella skill in L2 learning, then speaking is the overbearing elder sister. The ability to function in another language is generally characterized in terms of being able to speak that language" (Nunan, 1999, p. 225). Regarding the importance of speaking skill, Nunan (1996) stated that a successful oral communication should involve developing:

- The ability to articulate phonological features of the language comprehensibly;
- Mastery of stress, rhythm, intonation patterns; an acceptable degree of fluency;

- Transactional and interpersonal skills;
- Skills in taking short and long speaking turns;- Skills in management of the interaction;
- Skills in negotiating meaning;
- Conversational listening skills (successful conversations require good listeners as well as good speakers);
- Skills in knowing about and negotiating purposes for conversations; and
- Using appropriate conversational formulae and fillers. (p.47)

Developments in language teaching methodologies have entailed approaching language skill development differently. For example, Task-based Language Teaching (TBLT), as a recent innovation, seeks to supply learners with a natural context for language use. “As learners work to complete a task, they have abundant opportunity to interact. Such interaction is thought to facilitate language acquisition as learners have to work to understand each other and to express their own meaning” (Larsen-Freeman 2000, p.144). However, TBLT is not a fixed mechanism; rather, it is implemented through variety of tasks such as reciprocal, non-reciprocal, target tasks, and pedagogic tasks. TBLT, according to Richards and Rodgers (2001), refers to an approach utilizing tasks as the core unit of planning and instruction. It may be regarded as a logical growth of Communicative Language Teaching (CLT) since it explains some of the following principles of CLT movement from the 1980s: a) Activities that involve real communication are necessary for language learning; b) Activities in which language is used for performing meaningful tasks promote learning; c) Language that is meaningful to the learner supports the learning process (Larsen-Freeman, 2000, p.67)

TBLT is primarily associated with variety of tasks. Task has been defined differently. Probably one of the operational definitions is suggested by Nunan (1989, p.10, as cited in Boston, 2009) as: a piece of classroom work which involves learners in comprehending, manipulating, producing, or interacting in the target language while their attention is principally focused on meaning rather than form.

TBLT has been characterized by many scholars, but the way it is characterized by Nunan (2004) found much more comprehensive for the purpose of this study. Nunan (2004) describes TBLT as follows:

- Scaffolding: Lessons and materials should support frameworks within which the learning happens. At the beginning of the learning process, learners should not be expected to produce language that has not been introduced either explicitly or implicitly.
- Task dependency: Within a lesson, one task should grow out of and build upon ones that have gone before.
- Recycling: Language maximizes opportunities for learning.
- Active learning: Learners learn best by actively using the language they are learning.
- Integration: learners should be taught in ways that make clear the relationships between linguistic form, communicative function, and semantic meaning.
- Reproduction to creation: learners should be encouraged to move from reproductive to creative language use.
- Reflection: Learners should be given opportunities to reflect on what they have learned and how well they are doing.

In the same vein, Swan (2005, as cited in Buyukkarci, 2009, p. 315), enumerate main features of TBLT in the following way:

- Revolving the instruction around natural or naturalistic language use
- Focus on learner-centeredness
- Necessity of involvement to augment accuracy in order to foster the acquisition form through drawing students' attention along with meaning.
- Resort to Communicative tasks as a tool
- Utilizing formal pre-post task language to contribute to acquisition

For many years, SLA researchers have been interested in the role tasks can play in gaining better listening comprehension abilities (Schober & Clark 1989, Kumaravadivelu, 1991). Ellis (2001) classifies listening tasks into interactive and non-interactive tasks. Non- interactive tasks correspond to what is generally understood as listening tasks. That is, learners listen to text without any opportunities to interact. Interactive tasks are tasks that require a two-way

flow of information between a speaker and a listener. "While the primary focus in the task environment is on acts of appropriate communication and task completion, it is, nevertheless, possible (and in this case, desirable) for 'peripheral attention' to be paid to language form" (Ellis, 2003, p. 5).

TBLT presents opportunities to employ effective and meaningful activities and, thus, promotes communicative language use in the language classroom. (Noor Malihan, 2010). As important tools in language teaching, tasks are described by many researchers as activities that will be completed while using the target language communicatively by focusing on meaning to reach an intended outcome (Bygate, Skehan & Swain, 2001; Canale, 1983; Lee, 2000; Nunan, 1989a; Prabhu, 1987; Richards & Rodgers, 2001; Skehan, 1996). In particular, speaking classrooms are well suited for task-based instruction, given that the approach favors real language use in communicative situations.

Speaking tasks are helpful to fulfill the conditions to practice the target language communicatively. Through designing communicative tasks in speaking classes, fluency can be achieved, and accuracy can be promoted through these pedagogic tasks (Brumfit, 1984). In designing speaking tasks, an essential point is to estimate the difficulty level of the tasks. Some complexity is seen as necessary to vary the language used in order to have challenging communication (Skehan, 1996).

TBLT is implemented by various types. Willis (1996, as cited in Ellis, 2003) suggests six types of tasks including: Listing, Ordering and sorting, Comparing, Problem-solving, Sharing personal experiences, and Creative tasks. Richards and Rogers (2001, p.234) came up with broader categorization of tasks including: Jigsaw tasks, Information-gap, Problem-solving tasks, Decision-making tasks, and Opinion exchange tasks. There are other types of tasks in the literature such as Open vs. Closed Tasks, Convergent vs. Divergent Tasks, One Way vs. Two Way Tasks, Reciprocal vs. Non-Reciprocal Tasks, Required vs. Optional Information Exchange Tasks, Unfocused vs. Focused Tasks, to name a few.

According to Ellis (2003) task is a pivot around which learning materials unfold. But each and every task has its potential pedagogical purposes aiming to obviate learner's specific needs. Willis and Willis (2007, p. 108) offer a task typology of performing tasks as below:

A. Ordering and Sorting:

1. Sequencing items, actions, or events in a logical or chronological order.
2. Ranking items according to personal values or specified criterion.
3. Categorizing items in given groups or grouping them under given headings.
4. Classifying items in different ways where the categories themselves are not given.

B. Comparing:

1. Matching to identify specific points and relate them to each other.
2. Finding similarities and things in common.
3. Finding differences.

Each of these categories has been incorporated and somehow empirically investigated; however, two most common types (i.e., Jigsaw and Decision-making ones), of course, in relation to various skill types, seem to be amongst the least studied areas in the field of TBLT. In other words, skill-task corollary is amongst the intact areas of research.

There are different pedagogical tasks one of which is Jigsaw Task, which involves “learners combining different pieces of information to form a whole (e.g., three individuals or groups may have three different parts of a story and have to piece the story together)” (Richards & Rogers, 2001, p. 234). According to Johnson and Johnson (1993), jigsaw makes it possible for students to develop a high level of responsibility, cooperative learning skill and a depth of knowledge not possible if they learn all of the material on their own. They put forward five principles for jigsaw strategy:

1. Positive interdependence
2. Face-to-face interaction
3. Individual and group accountability
4. Interpersonal skills, and
5. Group processing

Another pedagogical task is Decision-making task referring to a task whereby “students are given a problem for which there are a number of possible outcomes and they must choose one through negotiation and discussion” (Richards & Rogers, 2001, p. 234). Among various task types, decision-making tasks appear to best improve strategic competence. Decision-making is the task in which we select from among options to reach a decision.

In this task type, interlocutors equally know all relevant facts, yet, they do not necessarily have to reach one common solution (Pica, Holliday, Lewis, & Morgenthaler, 1989).

Four categories of decision-making task are considered based on Burnett's framework (1993): immediate agreement, elaboration, considering alternatives, and voicing explicit disagreement. Immediate agreement occurs as an outcome of a shared understanding among the learners. In this category, learners do not participate in discussion but merely accept the opinion stated by another learner. There could be elaborations but they come after that an agreement has been reached. Burnett expresses that immediate agreements are significant in decision-making, however, they "... are only detrimental if they are the predominant kind of decision-making...." (p. 153).

The existence of the relative gap in the literature to associate skill acquisition with task type on one hand, and the status of listening skill and oral communication skills among Iranian EFL learners on the other, built the rationale behind this study. More specifically, due to the commonality of jigsaw and decision-making tasks and their possible contributions to and roles in improving listening and speaking abilities, this study aimed to explore their distinctive effectiveness in relation to the target skills. To address this problem and purpose, the following three research questions were raised each of which was investigated in the light of three specific null hypotheses:

**Q1.** Does decision-making task have any significantly distinctive effects on improving speaking skill and listening skill of Iranian intermediate EFL learners?

**Q2.** Does jigsaw task have any significantly distinctive effects on improving speaking skill and listening skill of Iranian intermediate EFL learners?

**Q3.** Is there any statistically significant difference between the effect of decision-making and jigsaw tasks on improving speaking and listening abilities of Iranian intermediate EFL learners?

## Method

### Participants

This Quasi-experimental study was conducted through taking the advantages of 75 adult female EFL learners, aged 20-30, taking language

courses at a private EFL institute in Tehran. To select a homogeneous sample of participants, the Nelson test (McCarthy, McCarten, and Sandiford, 2006) was employed. The selection of the participants was based on the results of Cambridge General Mark Schemes: those whose level of proficiency proved to be intermediate were included in the study. Accordingly, the number of the participants reduced to 60, who were assigned to two equal experimental groups.

### **Instrumentation**

Two standard and two researcher-made instruments were employed for the purpose of this study including:

The Nelson Proficiency Test: the 1976 version of Nelson as a proficiency test with 50 items to select homogenous participants

Listening and Speaking Tests: the listening and speaking sub-tests of two different versions of the Preliminary English Test (PET), each composed of four sections, as the pretest and posttest

Diagnostic test (pre-test): an additional researcher-made diagnostic test based on the syllabus which included listening and speaking skills, used prior to the treatment

Achievement test (post-test): similar to the syllabus-based Diagnostic test, a researcher-made achievement test, used after the treatment

It is worth noting that the instruments underwent a piloting process through which their reliability and validity were checked.

### **Procedure**

#### **Instrument validation**

All the instruments were checked in terms of content validity prior to the actual experiment. As to the reliability, a pilot study was conducted, and their inter-rater reliability index for the Speaking Test was found to be  $.82 < .05$ . KR-21 reliability indices for the NELSON and listening comprehension tests were .84 and .85, respectively.

#### **Construct validity**

In addition to the content validity of all instruments which was consulted with a panel of experts, all instruments underwent rotated factor analysis through which three factors (as Table 1 shows ) accounting for 68.26 ( the relevant table is not shown given the space limitations) were extracted.



Table 1  
*Rotated Components Matrix*

	Component		
	1	2	3
Posttest of Listening	.893		
Posttest of Speaking	.879		
Achievement Test of Speaking	.872		
Achievement Test of Listening	.798		
Diagnostic Test of Speaking		.786	
Pretest of Listening		.709	
NELSON		.707	
Pretest of Speaking			.804
Diagnostic Test of Listening			.661

### *Sampling*

Having selected the homogenous sample based on the Nelson test, the researchers administered the listening and speaking sub-tests of the PET to make sure if they were eligible to take part in this study and if there was any difference in their language proficiency level, especially in speaking and listening skills as the target variables in this study. They, then, were randomly assigned to two equal experimental groups: group A and group B.

### *Experimental Group A (Decision-Making Task Class)*

The experimental group A received instruction based on decision-making listening and speaking tasks for twelve 40-minute sessions along with their assigned textbook "Touchstone". Three decision-making tasks were presented each session, which would ask the participants to come to a decision about a particular solution on listening and speaking tasks. They were first given basic information and some input on the researcher-made tasks. The teacher put them into groups of 3-5. They listened to the same information twice and were expected to come to a single choice. After listening, they negotiated with each other to achieve the goal and justify their choices. Although each of them might work individually to come up with a final choice, negotiation was required to agree on the same items and support the argument. Therefore, they were actually involved in the decision-making situation and used their logic and evaluative reasoning to come up with the decision. When an interlocutor

presented her decision, negotiation occurred in a way that the other interlocutors could understand and evaluate the reasons. As to the speaking part, they were asked to create a list of pros and cons on the target topic supposed to help them to highlight and clarify different decisions in dealing with the task posed during the speaking practice.

***Experimental Group B (Jigsaw Task Class)***

The experimental group B received jigsaw-based instruction analogous to that of the Group A. However, the participants received different parts of information to exchange. In order to help the participants analyze an issue critically and present an informed opinion, the teacher introduced the strategy and the topic to be studied and the researcher-teacher provided some input based on the developed task. The class was divided into two “expert” groups for a jigsaw listening task. One group listened to the first part and another group to the next part. They were given opportunity to listen to audio twice. Afterwards, they wrote down important facts about their topics. After they became an “expert” on their own topic, the teacher asked the students to pair with someone from the other group to share and negotiate their information and answer the multiple-choice questions collaboratively. In the speaking phase, each group tried to present a well-organized report and in order to increase the chances of accuracy of each report, the participants doing the task did not immediately report it. However, the instruction was rendered in an integrative form in that listening and speaking were not separated in the process of the treatment and the learners were involved to focus on the same topic. They met first with their group members, gathered the information and rehearsed their presentations. During the speaking process, the teacher checked the comprehension of the group members by asking questions and rephrasing information until it was clear that the group members understand the points.

***Post-Test Administration***

Finally, the achievement tests were administered and the obtained scores were gathered to test the null hypotheses.

## Results

In order to address the research questions, the following statistical analyses were done.

### Testing Normality Assumptions

To decide on the appropriate statistical analysis (i.e., parametric or non-parametric), the data were checked and assured in term of the assumptions of normality (though the statistical tables are not included here). Statistically, the ratios of skewness and kurtosis over their respective standard errors are within the ranges of  $\pm 1.96$ , another indication of the normality.

### NELSON Test Scores

An Independent t-test was run to compare the mean scores of the decision-making and jigsaw groups on the NELSON test in order to prove that they enjoyed the same level of general language proficiency prior to the main study.

Descriptively, the decision making ( $M = 29.20$ ,  $SD = 2.96$ ) and jigsaw ( $M = 29.83$ ,  $SD = 2.15$ ) groups showed almost the same means on the NELSON test. And inferentially speaking, as Table 2 shows, the assumption of homogeneity of variances was met (Levene's  $F = 3.62$ ,  $P > .05$ ). That is why the first row of the Table, i.e., "Equal variances not assumed", was reported.

Table 2  
*Independent t-test NELSON by Groups*

	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	
Equal variances assumed	3.627	.062	.947	58	.347	.6333	.6686	-.7051	1.9718
Equal variances not assumed			.947	52.911	.348	.6333	.6686	-.7079	1.9745

The results of the independent t-test indicate that there was not any significant difference between the decision making and jigsaw groups' mean scores on the NELSON test before the treatment,  $t(58) = .947$ ,  $P > .05$ ,  $R = .12$ , which represents a weak effect size. Thus, it can be concluded that they enjoyed the same level of general language proficiency prior to the administration of the treatment.

### Pretest of Speaking

Also, an Independent t-test was run to compare the mean scores of the decision-making and jigsaw groups on the pretest of speaking in order to prove that they enjoyed the same level of speaking ability prior to the main study. Based on descriptive statistics, the decision-making ( $M = 24.36$ ,  $SD = 1.49$ ) and jigsaw ( $M = 24.40$ ,  $SD = 1.35$ ) groups showed almost the same means on the pretest of speaking. Moreover, the assumption of homogeneity of variances was met (Levene's  $F = .156$ ,  $P > .05$ ). Thus, the first row of Table 3 was reported.

Table 3  
*Independent t-test Pretest of Speaking by Groups*

	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	.156	.694	.092	58	.927	.0333	.3623	-.6918	.7585
Equal variances not assumed			.092	57.733	.927	.0333	.3623	-.6919	.7585

The results of the independent t-test (Table 3) indicate that there was not any significant difference between the decision-making and jigsaw groups' mean scores on the pretest of speaking,  $t(58) = .092$ ,  $P > .05$ ,  $R = .012$ , which represents a weak effect size. Thus, it can be concluded that they enjoyed the same level of speaking ability prior to the administration of the treatment.

### Pretest of Listening

Similarly, another Independent t-test was run to compare the mean scores of the decision-making and jigsaw groups on the pretest of listening in order to

prove that they enjoyed the same level of listening ability prior to the main study. As shown in descriptive statistics, the decision making ( $M = 24.06$ ,  $SD = 1.55$ ) and jigsaw ( $M = 24.73$ ,  $SD = 1.48$ ) groups showed almost the same means on the pretest of listening. In line with the descriptive statistics, the inferential statistics presented in Table 4 show that the assumption of homogeneity of variances was met (Levene's  $F = .179$ ,  $P > .05$ ). That is why the first row of Table 4 was reported.

Table 4  
*Independent t-test Pretest of Listening by Groups*

	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	
Equal variances assumed	.179	.674	1.700	58	.094	.6667	.3921	-.1181	1.4515
Equal variances not assumed			1.700	57.883	.094	.6667	.3921	-.1182	1.4515

The results of the independent t-test (Table 4) indicate that there was not any significant difference between the decision-making and jigsaw groups' mean scores on the pretest of listening,  $t(58) = 1.70$ ,  $P > .05$ ,  $R = .21$ , which represents a weak effect size. Thus, it can be concluded that they enjoyed the same level of listening ability prior to the administration of the treatment.

### Investigation of the Research Questions

#### *Research Question One*

In a bid to address the first research question, a paired-samples t-test was run to compare the mean scores of the decision-making group on the posttests of listening and speaking in order to probe the first research question. Table 5 represents the related descriptive statistics.

Table 5  
*Descriptive Statistics; Posttests of Listening and Speaking Decision Making Group*

	Mean	N	Std. Deviation	Std. Error Mean
Posttest of Speaking	30.167	30	1.7436	.3183
Posttest of Listening	29.933	30	1.8925	.3455

As displayed in Table 5, the decision making group showed a slightly higher mean on posttest of speaking ( $M = 30.16$ ,  $SD = 1.74$ ) than the posttest of listening ( $M = 29.93$ ,  $SD = 1.89$ ). A Pair-Samples t-test, as shown in Table 6, was run to test the respective hypothesis.

Table 6  
*Paired-Samples t-test; Posttests of Listening and Speaking Decision-Making Group*

Paired Differences						
Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference		t	df
			Lower	Upper		
.2333	1.8880	.3447	-.4716	.9383	.677	29
						Sig. (2-tailed)
						.504

The results of the paired-samples t-test (Table 6) indicate that there was not any significant difference between the mean scores of the decision-making group on the posttests of speaking and listening,  $t(29) = .677$ ,  $P > .05$ ,  $R = .12$ , which represents a weak effect size. Thus, the first null-hypothesis stating that decision-making task does not have any significantly distinctive effects on improving speaking skill from listening skill of Iranian EFL learners was **not rejected**.

#### *Research Question Two*

Another paired-samples t-test was run to compare the mean scores of the jigsaw group on the posttests of listening and speaking in an attempt to answer the second research question. Table 7 illustrates the descriptive statistics.

Table 7  
*Descriptive Statistics; Posttests of Listening and Speaking Jigsaw Group*

	Mean	N	Std. Deviation	Std. Error Mean
Posttest of Speaking	35.233	30	1.4782	.2699
Posttest of Listening	36.633	30	2.0759	.3790

As displayed in Table 7, the jigsaw group showed a higher mean on the posttest of listening ( $M = 36.63$ ,  $SD = 2.07$ ) than on the posttest of speaking ( $M = 35.23$ ,  $SD = 1.47$ ). The inferential statistics reported in Table 8 are in line with the descriptive ones.

Table 8  
*Paired-Samples t-test; Posttests of Listening and Speaking Jigsaw Group*

Paired Differences		95% Confidence Interval of the Difference		T	Df	Sig. (2-tailed)
Mean	Std. Deviation	Mean	Std. Error			
1.4000	2.5134	.4589	.4615	3.051	29	.005

The results of the paired-samples t-test (Table 8) indicate that there was a significant difference between the mean scores of the jigsaw group on the posttests of speaking and listening,  $t(29) = 3.05$ ,  $P < .05$ ,  $R = .49$  which represents an almost large effect size. Thus, the second null-hypothesis, stating that jigsaw task does not have any significantly distinctive effects on improving speaking skill from listening skill of Iranian EFL learners was rejected.

#### *Research Question Three*

In order to answer the third research question, a repeated measures ANOVA was run to compare the decision making and jigsaw groups' mean scores on the diagnostic and achievement tests of speaking and listening. Of course, the assumption of homogeneity of variances was checked and proved to be met since the probabilities associated with all four tests were higher than .05 (i.e., Diagnostic Listening .41; Diagnostic Speaking .85; Achievement Listening .16; and Achievement Speaking .37).

The jigsaw group ( $M = 59.72$ ), as descriptively reported in Table 9, outperformed the decision-making group ( $M = 54.59$ ) on the overall diagnostic and achievement tests of speaking and listening tests, though both types tasks have had significant effects on skill development.

Table 9  
*Descriptive Statistics; Diagnostic and Achievement Tests of Speaking and Listening by Groups*

Group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Decision-Making	54.592	.433	53.726	55.457
Jigsaw	59.725	.433	58.859	60.591

Based on the results displayed in Table 9, it can be concluded that there was a significant difference between the overall mean scores of the decision-making and jigsaw groups on the diagnostic and achievement tests of speaking and listening tests,  $F(1, 58) = 70.43$ ,  $P < .05$ , Partial  $\eta^2 = .54$ , which represents a large effect size.

In the same vein, the results of Tests of between Subject Effects, as shown in Table 10, show the significant effects of the instructions.

Table 10  
*Tests of Between-Subjects Effects; Diagnostic and Achievement Tests of Speaking and Listening by Groups*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	784098.017	1	784098.017	34931.333	.000	.998
Group	1581.067	1	1581.067	70.436	.000	.548
Error	1301.917	58	22.447			

Moreover, triple interactions among the groups, test types and language skills were estimated as reported and accumulated in Table 11.

Table 11  
*Interaction between Groups and Types of Tests and Skills*

Group	Tests	Skills	Mean Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Decision Making	Diagnostic	Listening	49.867.724	48.418	51.315
		Speaking	49.133.666	47.799	50.467
	Achievement	Listening	60.2001.144	57.909	62.491
		Speaking	59.167.731	57.704	60.629
Jigsaw	Diagnostic	Listening	50.000.724	48.551	51.449
		Speaking	49.867.666	48.533	51.201
	Achievement	Listening	68.7001.144	66.409	70.991
		Speaking	70.333.731	68.871	71.796

As a supplementary effort, inferential statistics of the ANOVA run are reported comprehensively in Table 12,  $F(1, 58) = 557.47$ ,  $P < .05$ , Partial  $\eta^2 = .90$ , representing a large effect size. It can be concluded that there was a significant difference between the overall mean scores of the diagnostic and achievement tests disregarding groups and skills.



Table 12

*Tests of Within-Subjects Effects; Diagnostic and Achievement Tests of Speaking and Listening by Groups*

	Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Tests	Pillai's Trace	.906	557.475	1	58	.000	.906
	Wilks' Lambda	.094	557.475	1	58	.000	.906
	Hotelling's Trace	9.612	557.475	1	58	.000	.906
	Roy's Largest Root	9.612	557.475	1	58	.000	.906
Tests * Group	Pillai's Trace	.489	55.593	1	58	.000	.489
	Wilks' Lambda	.511	55.593	1	58	.000	.489
	Hotelling's Trace	.959	55.593	1	58	.000	.489
	Roy's Largest Root	.959	55.593	1	58	.000	.489
Skills	Pillai's Trace	.000	.016	1	58	.901	.000
	Wilks' Lambda	1.000	.016	1	58	.901	.000
	Hotelling's Trace	.000	.016	1	58	.901	.000
	Roy's Largest Root	.000	.016	1	58	.901	.000
Skills * Group	Pillai's Trace	.039	2.338	1	58	.132	.039
	Wilks' Lambda	.961	2.338	1	58	.132	.039
	Hotelling's Trace	.040	2.338	1	58	.132	.039
	Roy's Largest Root	.040	2.338	1	58	.132	.039
Tests * Skills	Pillai's Trace	.007	.385	1	58	.537	.007
	Wilks' Lambda	.993	.385	1	58	.537	.007
	Hotelling's Trace	.007	.385	1	58	.537	.007
	Roy's Largest Root	.007	.385	1	58	.537	.007
Tests * Skills * Group	Pillai's Trace	.013	.765	1	58	.385	.013
	Wilks' Lambda	.987	.765	1	58	.385	.013
	Hotelling's Trace	.013	.765	1	58	.385	.013

<b>Roy's Largest Root</b>	<b>.013</b>	<b>.765</b>	<b>1</b>	<b>58</b>	<b>.385</b>	<b>.013</b>
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Based on the results displayed in Table 12, it can be concluded that there was not any significant difference between the overall mean scores of the listening and speaking tests disregarding groups and types of tests,  $F(1, 58) = .016$ ,  $P > .05$ , Partial  $\eta^2 = .0$  which represent a weak effect size.

Generally, the findings are as follows::

a) There was not any significant interaction between groups and skills and types of tests ( $F(1, 58) = .765$ ,  $P > .05$ , Partial  $\eta^2 = .013$  which represent a weak effect size). As displayed in Table 12, the jigsaw showed higher means on both speaking and listening achievement and diagnostic tests than the decision-making group.

b) There was a significant interaction between types of tests and groups,  $F(1, 58) = 55.59$ ,  $P < .05$ , Partial  $\eta^2 = .48$ , which represent a large effect size. As displayed in Table 13, the jigsaw group showed a much higher mean on achievement test.

Table 13

*Descriptive Statistics; Interaction between Groups and Tests*

Group	Tests	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Decision-Making	Diagnostic	49.500	.506	48.487	50.513
	Achievement	59.683	.718	58.246	61.121
Jigsaw	Diagnostic	49.933	.506	48.921	50.946
	Achievement	69.517	.718	68.079	70.954

c) There was not any significant interaction between skills and groups,  $F(1, 58) = 2.33$ ,  $P > .05$ , Partial  $\eta^2 = .039$ , which represent a weak effect size. As displayed in Table 14, the jigsaw group showed a higher means on both speaking and listening tests.

Table 14

*Descriptive Statistics; Interaction between Groups and Skills*

Group	Skills	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound

Decision-Making	Listening	55.033	.645	53.743	56.324
	Speaking	54.150	.494	53.162	55.138
Jigsaw	Listening	59.350	.645	58.060	60.640
	Speaking	60.100	.494	59.112	61.088

d) There was not any significant interaction between skills and types of tests,  $F(1, 58) = .385$ ,  $P > .05$ , Partial  $\eta^2 = .007$ , which represent a weak effect size. As displayed in Table 15, the participants showed higher means on both speaking and listening achievement tests.

Table 15

*Descriptive Statistics; Interaction between Types of Tests and Skills*

Tests	Skills	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Diagnostic	Listening	49.933	.512	48.909	50.958
	Speaking	49.500	.471	48.557	50.443
Achievement	Listening	64.450	.809	62.830	66.070
	Speaking	64.750	.517	63.716	65.784

## Discussion

To shorten the main findings of this study in terms of research questions placed at the outset, the null hypotheses anticipating no greater listening comprehension and speaking proficiency skills through using decision-making task for the experimental group A than for the jigsaw group were supported in this study. Additionally, the experimental group B indicated more improvement in listening and speaking abilities. In fact, the results showed that the systematic variation between the groups' performance on the post-test was due to the manipulation of experimental treatment. Accordingly, it can be speculated that using jigsaw task more significantly affected the listening and speaking abilities of the experimental group B. This finding is consistent with the results of many researches in that the task-based instruction is an efficient approach to teaching language (Bruton, 2002, Wesche & Skehan, 2002, Long & Crook 1992), which can be attributed to the interaction and interpretation of meaning by speakers and listeners. It is justified on the ground that the participants engaged in goal-oriented jigsaw and decision-making speaking and listening activities in which they comprehended and interacted with each other in order to come to a

decision about a particular solution and share and negotiate information collaboratively.

Based on the interaction hypothesis, negotiation of meaning provides learners with opportunities for both the arrangement of comprehensible input and the production of modified output which are urgent for language development. In this regard, Pica (1992, 1994) states that opportunities to negotiate meaning help language learners in three main ways. First, as Long (1989) and others have claimed, they assist learners to obtain comprehensible input. Second, Pica believes that negotiation supplies learners with feedback on their own use of the target language. When more skilled speakers respond to less proficient interlocutors, they regularly try to reformulate what they think they meant in ways that supply very particular feedback on a problem item. Finally, Pica claims that negotiation pushes learners to adapt, manage and modify their own output. In this respect, negotiation of information appears to operate best while more proficient interlocutor asks for clarification of the less skilled speaker. Therefore, learners are engaged into creating output that is more comprehensible and native-like. Swain (1985, 1995) has claimed that such output contributes to language acquisition.

A jigsaw task needs precise management by the teacher to encourage learners to consider task as a pedagogical activity which is designed to enhance second language acquisition and not as a light-hearted and informal part of class. If learners are relaxed enough about communication difficulties to permit them pass, they miss opportunities to gain comprehensible input and create modified output (Foster, 1998). The findings demonstrated that the participants took advantage of jigsaw task and showed a meaningful difference due to the treatment effect. Therefore, jigsaw listening and speaking tasks can be effective for the improvement of language skills and it can be used as a means of improving learners' ability to gain a good command of the listening and speaking skills. Though the jigsaw task proved far superior to decision-making task, it does not prove that decision-making listening and speaking tasks cannot be considered as a fruitful device for enhancing the listening and speaking abilities.

The present research mainly aimed at testing three research questions. As to the first one, the results indicated that there was not any significant difference between the mean scores of decision-making group on the posttests of speaking

and listening. So, it is concluded that the target task studied in this question in particular does not significantly affect the nature of skill acquisition. It might mean that using decision-making to render speaking and listening is not much associated with skill type; however, other skills like reading and writing might be investigated by their own in relation to task type. Regarding the second research question of the research, the results indicated that there was a significant difference between the mean scores of the jigsaw group; indicating that the jigsaw task has significant impact on improving listening and speaking skills. Contrary to the findings related to the first research question, it seems that each task is of specific nature in that jigsaw entails specific and distinctive effects compared to, for example, decision-making. Then, the safe conclusion could be that skill acquisition in general and speaking and listening in particular is a function of task type. Finally, the results regarding the third research question revealed that there was a significant difference between the mean scores of two experimental groups and the jigsaw group outperformed the decision-making group on the overall diagnostic and achievement tests of speaking and listening tests. This is in line with what was argued as to the second research question on one hand and more effectiveness of jigsaw task than decision-making task on the other. Therefore, it is concluded that certain task produces certain results in language skill development. Contrary to the association of the target skills and tasks, there is still wider room for further studies trying to associate other skills with other task types.

Given the literature more in favor of the effectiveness of jigsaw task (Richards & Schmidt, 2002; Johnson & Johnson, 1993), the present study could be considered as an additional support to this line of research. The advocates of jigsaw task believe that involving learners in performing jigsaw task results in the progress of these skills that they may need in future in real world situations. Thus, this study favors the corollary of language skill-task as identifies the title of this study. So, it can be cogently concluded that assigning language learners to appropriate tasks matching the skill types can result in desired effects.

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### Biodata

**Gholam-Reza Abbasian**, born in Ahar, East Azerbaijan, is an assistant professor of TEFL at Imam Ali and IA (South Tehran) universities, and has presented some papers at (inter) national conferences. He is the author and translator of about 15 books, and publisher of scholarly articles. Dr. Abbasian offers psycholinguistics, language testing, and research methods at MA and PhD levels. Nominated as top scholar and teacher for seven consecutive years, he is the internal manager of JOMM, reviewer of Sage, FLA and GJER journals and a member of editorial board of JSSIR.

**Farzaneh Chenabi** an MA holder in TEFL from Islamic Azad University (South Tehran Branch, Iran) teaches English in language institutes. She is interested in doing research in TBLT, Materials Development and Syllabus Design.