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# The Impact of Using Information-Gap Activities on Improving EFL Elementary Learners' Willingness to Communicate

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## **Abstract**

The present study focuses on different information-gap activities, and their effect on learners' willingness to communicate. More specifically, this study examines the effect of jigsaw, missing-information, and finding the differences activities on the learners' willingness to communicate. Using non-probability sampling, Ket (Key English Test) was administered as test of homogeneity to select the research subjects. A total of 60 participants above the age of 13 who were at the elementary level participated in this study. The subjects were assigned to three experimental groups. A questionnaire was also administered to measure the learners' willingness to communicate with the WTC scale, as a pretest at the first session of the term. The treatment included the application of the three information-gap activities, in the three experimental groups, and at the end, the same questionnaire was applied as the post-test. The obtained results showed that there were significant differences regarding the effects of information-gap activities on learners' WTC.

**Keywords:** information-gap activities, jigsaw, missing-information, finding the differences, willingness to communicate

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## Introduction

In recent decades, it has appeared that implementing different tasks in the classroom is really helpful. In this regard, Azar and Maragheh (2012) state that task based learning has become more popular and famous, and recommended as a way forward in ELT. Prabhu (1987) classifies tasks into three types based on the cognitive activity as follows: "information-gap activities", "reasoning-gap activities", and "opinion-gap activities" (p. 110).

Learners should be motivated to use these different tasks. It means that they should be willing to communicate. McCroskey & Richmond (1987) believe that willingness to communicate (WTC) refers to a person's personality orientation and willingness to talk or to communicate. Situational variables, the way that the person feels and his previous experiences in communication have an effect on the person's WTC. L2 teachers should implement different activities such as information-gap activities to improve the learners' willingness to communicate. According to Lam Son (2009), "an information-gap activity is an activity where learners are missing the information they need to complete a task and need to talk to each other to find it" (p. 1). Each participant has some information that differs from others' information. So they have to share their knowledge to solve a problem or do a task. As a result, these activities will help the students to talk and have communication in L2. According to Raptou (2001), one of the problems that second language teachers face is motivating their students to speak in the target language.

The most important objective of an ELT class is to develop the learners' rate of communication. When a person starts learning a second language, s/he likes to learn to speak and communicate in the target language. So teachers should help students to develop their ability in speaking. One of the most important problems of our learners is that they do not know how to use the structures and vocabulary that they have already learned and speak in the target language. Previous studies are inconclusive for solving this problem in the classrooms, and it still remains unclear for teachers how to increase the students' communication.

One of the main reasons of limited communication in a second language classroom is that the learners are not willing to speak and communicate in the classroom. Teachers should implement different tasks to increase the learners' willingness to communicate. The previous studies have neglected the use of different information-gap activities in order to improve the students' willingness to communicate.

The results of every study can be useful for a specific group of people who belong to a particular social class. The findings of this study will provide valuable insight for second language teachers, syllabus designers, and the students' rate of communication in the target language. First of all, teachers can benefit from the results and try to apply information-gap activities while teaching. All language teachers are invited to become familiar with assigning information-gap activities which are popular and adaptable frameworks in language teaching. Carrying out a variety of tasks influences students' progress and attitudes towards the lesson. Whenever students are given tasks that involve them completely, their willingness to learn is observed. Learners prefer to be active receivers, rather than being passive listeners. So, teachers should not ignore the communicative needs of their students which are a highly important aspect of motivation. As McNamara (1995) states, "the really important part of motivation lies in the act of communication itself" (as cited in Ellis, 1985, p. 54).

### **Information-Gap Activities**

According to Neu and Reeser (1997), in an information gap activity, each person has some information that the other one does not have, so they start sharing their information to solve a problem or make decisions on some issues. These types of activities are so helpful and they make all the students speak and communicate in the L2 classroom. Another advantage of information gap activities is that students are in a situation that they have to talk and discuss because they must share their information to accomplish the task. The three information gap activities utilized in this study are as follows:

- Jigsaw

Jigsaw was originally developed by Eliot Aronson (1978). Essentially, it is a cooperative learning lesson design that takes the place of lecture and each student is responsible for teaching his section to other students.

- Missing Information

According to Lam Son (2009), students work in pairs. They are both given tables with information missing. What is missing in one partner's table is there on the other partner's table and vice versa. So the students start asking questions from each other to fill out the missed parts of their tables.

- Finding the Differences

According to Doff (1988), the two students in each pair have identical picture with ten important differences. "They do not look at each other's pictures, but they try to find the differences by describing their pictures" (p. 217).

### **Research Questions and Related Hypotheses**

Regarding the aforementioned problem, the following research questions would arise:

1. Do jigsaw activities have any effect on improving the EFL learners' willingness to communicate?
2. Do missing information activities have any effect on improving the EFL learners' willingness to communicate?
3. Do finding the differences activities have any effect on improving the EFL learners' willingness to communicate?

Based on the above research questions, the following null hypotheses are proposed:

1. Jigsaw activities have no effect on improving the EFL learners' willingness to communicate.
2. Missing information activities have no effect on improving the EFL learners' willingness to communicate.
3. Finding the differences activities have no effect on improving the EFL learners' willingness to communicate.

## **Methodology**

### **Participants**

The population of the study consisted of 60 Iranian students above the age of 13 at Shokouh institute who were at the elementary level. The subjects were both boys and girls and from different age ranges. Sampling was done based on Ket (Key English Test) exam, which is the easiest of the Cambridge exams. The test has three sections: 1) Reading and Writing skills; 2) Listening skill, and; 3) Speaking skill. So, in this way the researchers could make sure that all the students were in the same level. Following the administration of the test a process of item analysis was carried out for the test in order to identify and discard or modify the poor items. The item facility and item discrimination of each item were calculated. Items with facility indices below 0.33 and beyond 0.67, and discrimination values below 0.40 were discarded. The reliability of each section was estimated through Cronbach's alpha which is a reliability coefficient calculator. In order to test the effect of different tasks, the non-probability sample of subjects who comprised 60, were randomly assigned to three experimental groups. These groups received five-session treatment.

### **Instrumentation**

The researcher assigned a questionnaire to measure the learners' second language willingness to communicate with the WTC scale as a pretest at the first session of the term. This questionnaire was adapted from MacIntyre, Baker, Clément and Conrod (2001), and its validity and reliability were confirmed by many researchers. In order to reexamine the content validity of the tool, a group of experts in the field of English Language Teaching reviewed the items and the weak items were modified or totally removed from the body of the questionnaire according to experts' comments. The questionnaire included 28 items scored on a 5-point Likert-type Scale, ranging from "completely disagree" to "completely agree" to analyze the rate of the willingness of students to communicate in different situations. To follow the process of piloting, the questionnaire was administered to 158 students. Then, the internal consistency of the items was calculated using

Cronbach's Alpha. The reliability index of the 28 items of the WTC questionnaire was 0.73. Therefore, the WTC questionnaire enjoyed the required index of reliability.

### **Procedure**

The researcher assigned a questionnaire as a pre-test to measure the students' degree of willingness to communicate (WTC). They were asked to respond on a scale from one to five ('completely disagree' to 'completely agree') to items that assess their degree of willingness to communicate. Since the main result of this research was obtained through contrasting the participants' pre-test and post-test, the researchers had to be very careful about the learners' comprehension. So, the teachers helped the participants by translating the difficult and important vocabulary, or even some statements of the questionnaire. There were three experimental groups and as a treatment, for each group the teachers applied a different information-gap activity. In one of the classes, jigsaw activities were applied in which the students were divided into pairs and each pair worked on a separate paragraph of the whole text. Then the members of the group were scattered and merged other groups and shared their own paragraphs with them. At the end, each participant knew all the paragraphs of the text and they were supposed to understand the intention of the whole text, and came to the board and present their understanding. In the second class, missing information activities were applied in which the teacher had prepared some tables with two forms (form A, and form B) and divided the students into pairs and gave each form to one of the participants. They were supposed to ask questions from each other to fill out the blanks, and at the end, the teacher would check their accuracy. In the last group, the differences activities were used in which the teacher had prepared two pictures with some differences and the participants were supposed to find the differences and talk about them. At the end of the term (after five-session of treatment), the researchers assigned the same questionnaire as a post-test, and compared the results of each participant's pre-test and post-test to see whether the application of the tasks would affect the learners' WTC or not.

### Design of the Study

Since there was no randomization, the design of the research was Quasi-experimental. According to Best and Kahn (2006), when “random assignment to experimental and control treatments have not been applied, the equivalence of the groups is not assured” and the research will have Quasi-experimental design (p. 183).

Since there were three experimental groups (more than two groups), analysis of variance (ANOVA) was used. According to Best and Kahn (2006), “in single classification, or one-way analysis of variance, the relationship between one independent and one dependent variable is examined” (p. 423).

According to Pallant (2002), “Paired-sample  $t$  test (also referred to as repeated measures) is used when you have only one group of people (or companies, or machines etc.) and you collect data from them on two different occasions, or under two different conditions, such as Pre-test/post-test experimental designs” (p. 209).

### Results

In order to provide an answer to the research questions, several statistical analyses were performed, the results of which are reported and discussed below.

In order to determine the homogeneity of the participants regarding their willingness to communicate, the researchers applied the analysis of variance i.e., ANOVA.

Table 1  
Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
470	2	57	.627

It should be noted that the three groups were homogenous in terms of their variances. The Levene's  $F$  of .47 has a probability of .62 (Table 1). Since the probability associated with the Levene's  $F$  is higher than the .05 level of

significance, it can be concluded that the three groups enjoyed homogenous variances.

The probability associated with the F-observed value (.051) was higher than the significant level of .05 (Table 2). Therefore, it was safely concluded that the three groups belonged to the same population in terms of their willingness to communicate before the treatment.

In order to compare the means of the three groups on the posttest, an ANOVA was run. It should also be noted again that the three groups were homogenous in terms of their variances.

Table 2

One-Way ANOVA for the Pretest

Sum of Squares		df	Mean Square	F	Sig.
Between Groups	731.100	2	365.550	.087	.051
Within Groups	6642.550	57	116.536		
Total	7373.650	59			

Table 3

Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
.813	2	57	.449

The Levene's F of .81 has a probability of .44 (Table 3). Since the probability associated with the Levene's F is higher than the .05 level of significance, it can be concluded that the three groups enjoyed homogenous variances in the posttest.



Table 4

One-way ANOVA for the Posttest

Sum of Squares	df	Mean Square	F	Sig.	
Between Groups	792.633	2	396.317	4.341	.018
Within Groups	5204.350	57	91.304		
Total	5996.983	59			

As Table 4 indicates, the probability associated with the F-observed value (.018) was lower than the significant level of .05. Therefore, it was concluded that there is a statistically significant difference between the WTC of the students working in different information-gap activities.

A paired sample *t* test was run to find any impact of information-gap activities on the students' WTC. The results of the participants' pre-test and posttest were compared through Paired Sample *t* test.

Table 5

Paired Samples *t* test of Jigsaw Group

		Paired Differences							Sig. (2- tailed)			
		Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference		t	df				
					Lower	Upper						
Pair 1	Post. jigsaw - Pre. jigsaw	.850	13.635	3.049	-5.532	7.232	.279	19	.783			

In order to reject the first null hypothesis, that is, "Jigsaw activities have no effect on improving the EFL learners' willingness to communicate," a paired sample *t* test was run. Since the probability associated with the *t*-observed value (.27) was higher than the significant level of .05, it can be

concluded that jigsaw activities don't have any significant effect on the students' WTC.

Table 6  
Paired Samples Statistics of Jigsaw Group

	N	Mean	Std. Deviation	
	Statistic	Statistic	Std. Error	Statistic
Pre. jigsaw	20	93.95	2.421	10.826
Post. jigsaw	20	94.80	1.946	8.703

As displayed in Table 6, the jigsaw students' mean scores on the posttest and pretest of WTC questionnaire were 94.80 and 93.95 respectively. Although the jigsaw students' mean score on the posttest was higher than the pretest, that was not statistically significant. So, it can be concluded that jigsaw activities have no effect on improving the EFL learners' willingness to communicate. So, the first null hypothesis was failed to be rejected.

In order to reject the second null hypothesis, that is, "Missing information activities have no effect on improving the EFL learners' willingness to communicate, "a paired sample *t* test was also run.

Table 7  
Paired Samples *t* test of MI Group

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Post. MI - Pre. MI	11.350	12.119	2.710	5.678	17.022	4.188	19	.000

Since the probability associated with the  $t$ -observed value (4.18) was lower than the significant level of .05, it can be concluded that MI activities have a significant effect on the students' WTC.

Table 8  
Paired Samples Statistics of MI Group

	N	Mean		Std. Deviation
	Statistic	Statistic	Std. Error	Statistic
Pre. MI	20	89.60	2.696	12.059
Post. MI	20	100.95	2.333	10.435

As displayed in Table 8, the MI students' mean scores on the posttest and pretest of WTC questionnaire were 100.95 and 89.60 respectively. Since the MI students' mean score on the posttest was higher than the pretest, it can be concluded that MI activities have a significant effect on the students' WTC. So the second null hypothesis was rejected.

Table 9  
Paired Samples  $t$  test of FD Group

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Post. FD - Pre. FD	6.900	10.161	2.272	2.144	11.656	3.037	19	.007

Another paired sample  $t$  test was run to reject the third null hypothesis, that is, "Finding the differences activities have no effect on improving the EFL learners' willingness to communicate." Since, the probability associated with the  $t$ -observed value (3.03) was lower than the significant level of .05, it

can be concluded that FD activities have a significant effect on the students' WTC.

Table 10  
Paired Samples Statistics of FD Group

FD Group	N	Mean		Std. Deviation
	Statistic	Statistic	Std. Error	Statistic
Pretest	20	85.40	2.086	9.327
Posttest	20	92.30	2.113	9.448

As displayed in Table 10, the FD students' mean scores on the posttest and pretest of WTC questionnaire were 92.30 and 85.40 respectively. Since the FD students' mean score on the posttest was higher than the pretest, it can be concluded that FD activities have also a significant effect on the students' WTC. So, the third null hypothesis was also rejected.

## Discussion and Conclusions

Based on the obtained results of this study, English language teachers are advised to notice that there should be a reason, i.e., purpose for students to talk to each other. It can be achieved through creating information-gap between the participants of interaction. In this way in order to complete the task, students will have to speak to each other. Actually, language teachers can benefit from these techniques in order to educate more active students who are at the same time better communicators. In this way, language teachers can save great amount of time, and energy. In general, however, it appears that group work—and for that matter, pair work as well—is eminently capable of providing students with chances to produce the target language and to modify interaction. In keeping with second language acquisition theory, such modified interaction is claimed to make input comprehensible to learners, and to lead ultimately to successful classroom second language acquisition. So, group interaction must be carefully planned by the classroom teacher. Since, the teacher's role is critical in setting up the conditions for successful second language acquisition in the classroom.

The main concern of this study was to investigate whether information-gap activities had effect on improving the EFL learners' willingness to communicate. The results of the study showed that different tasks have more or less positive effect on the learners' WTC. There are other studies whose results are in line with, or somehow different from the present study. For example, in a study conducted by Sauro, Kang and Pica (2006), twelve adult, intermediate-level learners of English enrolled in a short-term intensive course, English through Film, in which information gap tasks were a crucial component. On days 1 and 2, participants and their teacher watched *Philadelphia*. Following initial instructions by the teacher, the pairs carried out each of the three information-gap tasks: the Grammar Communication on day 3, the Spot the Difference on day 4, and the Jigsaw on day 5. Each task engaged the pairs in the three noticing processes that comprised Total Noticing. In 85 percent of two of the pairs' Total Noticing occurred during this step for the Jigsaw task, 96 percent for the Spot the Difference, and 92 percent for the Grammar Communication tasks. It is necessary to mention that in the present study, the results showed that jigsaw did not have significant effect on the learners' WTC. Another study was carried out by Fulmer (2010) through a survey questionnaire research design. Participants were the employees of four different organizations. The study included 87 participants (25 males and 62 females). The goal of the study was to investigate how individuals differ in their willingness to communicate, communication apprehension, and self-esteem in organizational settings. Results showed that significant differences do not exist between males and females in their willingness to communicate in daily life. However, significant differences exist between males and females in their level of willingness to communicate in an organization setting. Although the focus of the present study was not on learners' gender, other studies can replicate this study having both male and female students as research subjects. As Fulmer's study shows that there is no difference between male and female subjects regarding willingness to communicate in daily life, but in the work place, men are more eager to communicate. A point that is worthy of noticing and needs further research. In their study, Baker and MacIntyre

(2003) found that the learners' level of confidence has a significant relationship with their WTC. It implies that while teachers observe the learners' preferences related to the application of three information-gap activities studied in this research, they should prepare a friendly atmosphere in which learners feel confident and participate in the given tasks. Another study can be carried out working on different ways to promote the learners' confidence before tackling any type of learning tasks. Because, as Baker and Macintyre have shown reluctant students are not prepared to participate in any kind of learning tasks including the ones studied in this research, i.e., missing-information, finding the differences, and jigsaw.

### References

- Fulmer, B. N. (2010). *An investigation of willingness to communicate, communication apprehension, and self-esteem in the workplace*. Knoxville: University of Tennessee.
- Kang, S. J. (2005). *Dynamic emergence of situational willingness to communicate in a second language*. Retrieved on October 6, 2004 from <http://www.sciencedirect.com/science/article/pii/S0346251X05000175>
- Lam Son, T. (2009). Using information gap activities to promote communication in EFL classes. Paper presented at the 5<sup>th</sup> National VTTN ELT Conference.
- Littlewood, W. (2004). Task-based interaction. *Oxford University Press, ELT journal*, 58 (4), 319-326.
- Loscky, L., & Bley-Vroman, R. (1993). *Grammar and task-based methodology*. In G. Crookes & S. Gass (Eds.), *Tasks in a pedagogical context: Integrating theory and practice* (pp. 130-197). Clevedon: Multilingual Matters.
- MacIntyre, P. D., Baker, S. C., Clement, R., & Conrod, S. (2001). Willingness to communicate, social support, and language-learning orientations of immersion students. *Cambridge University Press, Studies in Second Language Acquisition*, 23 (2), 369-388.

- Mackey, A., & Gass, S. M. (2005). *Second language research, methodology and design*. Mahwah, N. J.: Lawrence Erlbaum.
- McCroskey, J. C., & Richmond, V. P. (1987). *Willingness to communicate*. In J. C. McCroskey & J. A. Daly (Eds.), *Personality and interpersonal communication* (pp. 129-156). Newbury Park, CA: Sage.
- McCroskey, J. C. (1992). Reliability and validity of the willingness to communicate scale. *Communication Quarterly*, 40, 16-25.
- Morreale, Sh. P. (2007). *Assessing motivation to communicate: Willingness to communicate and personal report of communication apprehension* (2<sup>nd</sup> ed.). New York: Cambridge University Press.
- Pallant, J. (2002). *SPSS survival manual: A step by step guide to data analysis using SPSS for Windows (Version 12)*. Sydney: Allen & Unwin.
- Prabhu, N. S. (1987). *Second language pedagogy*. Oxford: Oxford University Press.
- Raptou, V. (2001). *Using information gap activities in the second language classroom*. Oxford: Oxford University Press.
- Sauro, Sh., Kang, H. S., & Pica, T. (2005). Information gap tasks: Their multiple roles and contributions to interaction research methodology. *Working Papers in Educational Linguistics*, 21 (1), 1- 34.
- Sorayaie, A., & Maragheh, R. T. (2012). *The effect of pedagogical tasks in EFL learners' performance*. Retrieved on Autumn 20, 2012 from <http://www.mjal.org/Journal/10.pdf>