

The Effect of Jigsaw Task on Iranian EFL Learners' Reading Skills Improvement

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Abstract – The purpose of the present study was to investigate the effect of jigsaw task as a cooperative learning technique on reading skills improvement of Iranian EFL learners. To accomplish the purpose of the study, two intact groups were randomly selected as a control group (N=24) and an experimental group (N=24) of the study. Reading comprehension test was administered as the pretest of the study. After that, the experimental group received a special treatment of task-based instruction including jigsaw the task, while the control group received traditional reading comprehension instructions. The treatment lasted 18 sessions or about three months. A parallel test of reading comprehension was administered as the posttest of the study. The results of the pretest and posttest in data analysis through statistical procedure of Independent pair T-test confirmed the superiority of the experimental group to the control group. A conclusion was drawn that jigsaw task not only improve learners' language skills, but also create a supportive learning environment. Finally, the teacher presented suggestions for implementation of jigsaw technique to other skills.

Keywords: Jigsaw task, cooperative learning, and reading comprehension

1. INTRODUCTION

Among English Language Skills, reading is the most emphasized skill in Traditional English Language Classroom (Susser & Robb, 1990). Anderson (2003) considers reading as “an essential skill which is the most important skill to master for most of the learners of English in order to ensure success in learning” (p. 2).

Reading is a key skill for most students in a foreign language and it should therefore take its place alongside the development of the others skills of language: listening, speaking and writing. Reading process means not only “read” but tries to make interaction between the reader and the text. It deals with how the readers can convey the meaning through the written symbols and process them into their mind. This assumption is supported by Grabe and Stoller (2002). Similarly, Chastain (1991) assumed that there are two approaches for achieving meaning from the text; top down and bottom up. In many second or foreign language teaching situations, reading receives a special focus. Many foreign language students often have reading as one of their most important goals. They want to be able to read for information and pleasure, for their career, and for study purposes. In fact, in most EFL situations, the ability to read in a foreign

language is all that students ever want to acquire. For these purposes the researchers wanted to apply a specific task called the jigsaw tactic, as a technique in cooperative learning in order to find out its effect on this important skill.

2. LITERATURE REVIEW

2.1. Reading skill

Knowing a foreign language is clear for the students to get better job, access to literature, etc. Reading is usually recognized as a necessary part of these activities. Richard & Renandya (2002) state that, “Many of Foreign language students often have reading to be able to read for information and pleasure, for their career and for studies purposes”. Alderson (1986) adds in many parts of the world a reading knowledge of a foreign language is often important to academic studies, professional success and personal development. English as so much professional, technical and scientific literature published in English today. In fact, it is frequently the case that the ability to read in English is required of students by their subject departments.

2.2. Top-down Strategy

Mc. Donough & Shaw (2003) argue that the readers activate their knowledge of the world and linguistic knowledge, to arrive at a meaning of a text. Top-down process can be explained as follows; the reader first looks at a passage or a text. Then he/she suggests or predicts what the text will be about (based on their prior knowledge and experience of the topic) after reading the title, the headings and sub-headings. The reader then continues to read the text seeking confirmation about the topic. Therefore, readers fit the text into knowledge and experiences they already hold.

2.3. Bottom-up Strategy

Bottom-up means the reader not just try to find the meaning of individual lexical items but will also have clear idea about the overall rhetorical organization of text (Mc. Donough & Shaw, 2003). The essential features of the bottom-up strategies are that the readers tried to decode each individual letter encountered by matching it to the minimal units of meaning in the sound system (the phoneme) to arrive at a meaning of the text. The bottom up strategies can be explained as follow; when people read, they extract the prepositions from the text. This is where the reader chunks the sentences into constituents and constructs the prepositions from there. Comprehensions that have been extracted and these serve as the basic of what readers understand and recall.

2.4. Reading Aloud

Reading aloud used to be one of the normal methods for giving pupil language practice, quite regardless of its value. A lesson used to be with pupils reading a passage aloud, usually before they knew what it was about or understand it properly. Pronounce mistakes are encouraged by this method. There is often little time for much reading aloud (Byrne, 1976).

2.5. Silent Reading

Is the skill that the students needed in order to be able seize the gist of the passage in the books they have to study, in order to be able to find out what some experts have said on some subject and in order to be able to read quickly through books which will enlarge one's idea or in some other way are worth attention (Byrne, 1976).

2.6. Skimming

Skimming is used to get general idea or information. Skimming involves very superficial, rapid reading to get a general overall impression. Skimming enables students to select content that they want to read and discard that which is inconsequential for their purposes. Skimming permits the students to gain a general idea about the material when that is their purposes, rather than to read all material in detail (Chastain, 1991). One of usual skimming technique is to read only the first sentence of each paragraph and read the introduction or summary more carefully. So when skimming, the reader goes through the material quickly in order to get the gist of it, to know how it is recognized, or to get an idea.

2.7. Scanning

Scanning is used to find specific information that a reader need. Scanning involves rapid reading to find the answer of a very specific question, such as a name, a date, a telephone number, and so on. Scanning enables the students to locate specific information without reading all the material around it. In scanning, a reader should have purpose in order to find specific information needed because when scanning the reader only tries to locate specific information and s/he simply let his eyes over the text until s/he find what s/he looking for (Harris & Sipay, 1975).

2.8. Cooperative Learning

During the past decade, "cooperative learning" seems to have attracted a lot of attention and became popular. That provides general principles on a theoretical framework that provides general principles on how to structure cooperative learning activities in teachers' specific subject area, curriculum, students and setting. It is the one that teachers can use to stimulate

students to acquire the knowledge as well as interpersonal and team skills. It helps to promote student-student interaction via working in small groups to maximize their learning and reach their shared goal (Brown, 1989, p.81). Cooperative learning has been defined as “small groups of learners working together as a team to solve a problem, a complete task, or accomplish a common goal” (Artz & Newman, 1990, p. 448).

Cooperative learning produces greater student achievement than traditional learning methodologies (Slavin, 1984). A Cooperative Language learning class, compared with a teacher-centered class, is likely to be more beneficial in terms of producing supportive relationships among students. All members have a chance to think about the issues or problems that the teacher raises; they have a chance to discuss and determine the answer for the group. This can maximize the students' interaction in English. It solves the problem that one teacher cannot pay attention to all the students. With this method, they receive attention from the teacher, but also from their friends. When working together, each student can see how much effort their team members are making. Students possess a sense of community. Cooperative learning can solve the problem of isolation and alienation that are two predictors of failure.

2.9. Jigsaw Task

“**Jigsaw task**” is the specific cooperative learning task which the group is divided into four- six persons in a group. It makes students focused on the learning material and they have to cooperate to one another (Aronson, 2008).

According to Aronson (2008) there are ten steps that are considered important with regard to the implementation of the jigsaw classroom technique:

1. Students are divided into a 5 or 6 person jigsaw groups. The group should be diverse in terms of ethnicity, gender, ability, and race.
2. One student should be appointed as the group leader. This person should initially be the most mature student in the group.
3. The day's lesson is divided into 5-6 segments (one for each member).
4. Each student is assigned one segment to learn. Each student should only have direct access to their own segment.
5. Students should be given time to read over their segment at least twice to become familiar with it. Students do not need to memorize it.
6. Temporary expert groups should be formed in which one Student from each jigsaw group joins other Students assigned to the same segment. Students in this expert group should be given time to discuss the main points of their segment.
7. Students come back to their jigsaw group.

8. Students present their segment to the group. Other members are encouraged to ask question for clarification.
9. The teacher needs to observe the process from group to group.
10. A quiz on the material should be given at the end so Students realize that the sessions are not just for fun and games, but they really count.

2.10. Research Question and Hypothesis

The present study tried to answer the question raised about the effects of task types on listening comprehension.

Q1: Does jigsaw task have any effect on Iranian EFL learners' reading skills improvement?

To reveal the purpose of this study, the researchers tried to find the confirmation or rejection of null hypothesis presented here:

H01: A jigsaw task does not have any effect on Iranian EFL learners' reading skills improvement.

3. METHODOLOGY

3.1. Participants

The participants of the present study were 48 female (N=48) intermediate students at Farhangian high school in Kermanshah, Iran. They were all native speakers of Persian and their age range was 16 years old. They were randomly assigned to an experimental and a control group. All participants were female and male, and differed in terms of age. None of them had ever lived in a foreign country or traveled to an English speaking country. The classes were conducted in the afternoon twice a week and 90 minutes a session.

3.2. Instrumentation

Three instruments used in this study to collect data. In order to manifest the participants' homogeneity in terms of language proficiency level, a version of *Oxford Placement Test* called was used in the study. The test enabled the researchers to select those learners who were compatible with the conditions of the study. It also enabled the researchers to have a greater understanding of what level their participants were at. Parallel tests of reading comprehension were administered as a pre- and the post-test of the study. Parallel tests are those which have the same mean and the same standard deviation and measure the same construct.

3.3. Procedures

After the homogenization process, a pretest of reading comprehension was administered, and then jigsaw technique activities were practiced with the students in the experimental group. The materials that assigned for the control and the experimental groups chose from reading sections of English high school book.

In jigsaw technique, group members shared information with each other. Students began in their home group. One of the researchers as the teacher introduced the topic to them and divided the topic into four different parts. Each member of the group got a different part for one topic. The teacher gave time to read over their segment. Each member of the group found the others who got the same part with him and from the expert groups. The teacher gave key questions to the expert groups. Learners came back to their jigsaw groups, and then learners exchanged their information and completed their ideas about a topic. The teacher observed the work and assisted their students in their processes. At the last session, the teacher gave an exam in order to evaluate learners' progress.

But the researchers used a traditional method for control group. In the control group, the participants received the same passages but no jigsaw technique was used. Intensive reading performed in this class under supervision of the teacher who followed a careful lesson plan. The teacher introduced the topic to the learners. Then he gave some detailed information or background information to the students in relation to the topic. The teacher familiarized the students with key words and structures. Learners read the passages individually and then they had to answer the comprehension questions. Finally a post-test of reading comprehension was administered.

4. RESULTS

This section outlines the entire technical and statistical procedures involved in the study. It describes all the steps taken by the researchers in the analysis of the relevant data and elaborates on the results.

4.1. Statistical Analysis

Data were analyzed using both descriptive and inferential statistics. Descriptive statistics encompassed the means, standard deviations. Inferential statistics comprised of the application of an Independent sample T-Test to test the null hypothesis at the .05 level of significance.

4.2. Independent sample t-test as the pre-test

First of all it is worth noting that Independent Pair t-test is used to determine whether there is any significant difference between the means of two independent groups. Since there

were two groups in the present study, the researchers used Independent Pair t-test to compare the means of different groups.

Table 1: Descriptive data for two groups in pre-test

	N	Range	Minimum	Maximum	Mean	Std. Deviation
control	24	20.00	45.00	65.00	54.00	3.68
experimental	24	25.00	35.00	60.00	52.33	3.51
Valid N (list wise)	24					

Table 1 provides useful descriptive statistics for two groups. The data include the mean, the standard deviation, minimum / maximum scores, and range.

Table 2: Output of the independent pair t-test analysis for two groups in pre-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
peripheral	Equal variances assumed	.542	.468	1.267	46	.216	1.66	1.315	-1.02	4.36
	Equal variances not assumed			1.267	47.94	.216	1.66	1.315	-1.02	4.36

Table 2 indicates the output of the Independent Pair t-test analysis and whether there is any significant difference between the means of two independent groups. As can be seen in this table the significance level is 0.216 ($p=.216$) which is above 0.05. Therefore, the null hypothesis could not be rejected.

Table 3: descriptive data for two groups in post-test.

	N	Range	Minimum	Maximum	Mean	Std. Deviation
control	24	15.00	50.00	65.00	57.00	3.68
experimental	24	15.00	70.00	85.00	76.66	4.87
Valid N (listwise)	24					

Table 3 shows useful descriptive statistics for two groups. The data include the mean, the standard deviation, minimum/ maximum scores, and range.

Table 4: Output of the independent pair t-test analysis for two groups in post-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
peripheral	Equal variances assumed	2.441	.129	-12.45	48	.000	-19.66	1.578	-22.90	-16.43
	Equal variances not assumed			-12.45	46.04	.000	-19.66	1.578	-22.91	-16.42

Table 4 indicates the output of the Independent Pair t-test analysis and whether there is any significant difference between the means of two independent groups. As can be seen in this table the significance level is 0.000 ($p=0.000$) which is below 0.05, therefore, there is statistically significant differences between groups. Therefore, the null hypothesis could be rejected. It means that telegram-based instruction was effective.

5. CONCLUSION AND DISCUSSION

In the present study, the effects of jigsaw as one of the cooperative learning techniques were investigated, it was found that after the treatment, there was a significant difference between the experimental group and the control group was observed. The effectiveness of jigsaw technique on the improvement of reading skills was evidenced in various studies as well.

5.1. Summary of the Main Finding

In the study it can be seen in the posttest that jigsaw technique was more effective than the traditional question-answer technique in acquiring reading skills. Therefore, it found that jigsaw technique was more effective than question-answer model.

In brief, jigsaw task increases students' interest, motivation and confidence. Jigsaw task can provide an exciting and motivating learning environment where students have a sense of ownership and readership. They can be used to create social interactions between students and the instructor. Jigsaw task is recommended to foster students' English language development in a genuine learning environment.

The following points could be taken as the advantages of jigsaw in teaching reading skill. Using this tactic could help learners:

1. To increase the sense of community in a class. Making telegram can help foster a feeling of community between the members of a class, especially if learners are sharing information about their interests, and are responding to what other students are writing.
2. To encourage shy students to participate. There is evidence to suggest that students who are quiet in class can find their voice when given the opportunity to express themselves in a telegram.
3. To help build a closer relationship in large classes. Sometimes students in large classes can spend all year studying with the same people without getting to know them well. A cell phone is another tool that can help bring students together.

However, there are various challenges involved in using jigsaw technique such as time consuming. Some students tend to dominate during the activities. The nature of the time assigned does not allow enough time for pupils to do their presentation. That is time constraint and students who are academically good will give problems for the weaker students. With these challenges it implies that the use of jigsaw technique has not only benefits to the students but it has some problems as well. This view on the challenges in using jigsaw technique agrees with that of (Aronson, 2008). According to him, the dominate student is an obstacle to successful jigsaw activity. To reduce this each jigsaw group is given an appointed leader. Another obstacle in using the jigsaw technique in teaching is that of the slow student in the group as it is important that individuals with poor study skills do not presents reports to this group. In order to reduce this problem the technique relies on "experts" groups. These suggestions make jigsaw technique more beneficial and effective. Teacher should be time conscious and creative. Every student was allowed to participate. So there was an active participation of every student. Number of students in groups must be looked at for effective participation. All the students must be involved. Each member in the group should be given the chance to talk and contribution the presentations.

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