



ISSN: 2663-8118 (Online) | ISSN: 2074-9554 (Print)

Journal Of Al-Frahedis Arts

Available Online: <http://www.jaa.tu.edu.iq>

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Keywords:

- Cooperative Learning
- Jigsaw Strategy
- Improve
- Writing Skill

ARTICLE INFO

Article history:

Received : 02/04/2019
Accepted : 10/06/2019
Available Online : 23/07/2019

Using Jigsaw Cooperative Learning Strategy to Improve The EFL Iraqi Students in Writing Skill

A B S T R A C T

The current study aims at finding out the impact of Jigsaw strategy on Iraqi EFL students ` writing performance as well as it investigates if there is any improvement of students writing ability . The researchers adopted the experimental design and use a sample of (52)male and female students in English Department /College of Education for Humanities /Tikrit university during the academic year(2018-2019). The sample is divided into a control group with (51)students and experimental group with (52)students. The two groups are equalized according to certain variables . The students in the experimental group are taught according to Jigsaw strategy ,while those in the control group are taught according to the conventional method.

The researchers use a writing post-test which is conducted on the sample at the end of the experiment which is 12 weeks . The findings of the study revealed that there are statistically significant differences in academic writing between both groups (experimental and control groups)in favor of the experimental group due to the use of the Jigsaw strategy.

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1. Introduction

1.1. Statement of the problem

Writing represents a significant set of skills through which language learning and communication can be achieved (Defazio et al,2010.34).

According to the requirements of the nowadays academic settings and communication situations .

It is very important for EFL students to develop effective writing skills. Teaching writing is usually neglected in language learning .

Many people paid more attention to the communicative aspects like speaking without realizing that writing is also important for a language learner to be able to produce an understandable and correct sentences when speaking or writing (Lombardo,2010 : 10).

In addition , many EFL students have limited exposure to academic writing instruction in their classes and are unprepared for the academic writing demands required in their content area classrooms.

So , it is important to explore students` abilities in writing and to provide pedagogical implications that teachers can integrate into their writing instruction .

Accordingly , the researcher notice that there is a real need for Iraqi EFL students to develop their academic writing (Ibid).

1.2 Aims of The Study

This study aims at :

- 1.Developing team work and cooperative learning skills among students.
2. Examining the impact of Jigsaw strategy in improving writing skills.
3. Raising students` motivation and interest to share and learn through Jigsaw strategy.
4. Increasing teachers` awareness about using modern strategies and techniques inside the classroom in teaching “Introduction to Academic Writing “by Alice Oshima and Ann Hogue”.

1.3 Hypotheses of The Study

The following hypotheses have been formulated in order to be verified :

1. There are no statistically significant differences between the mean scores of the experimental group and that of the control group in the pre-test.
2. There are no statistically significant differences in the mean scores of the experimental group and that of the control group in the post-test.
3. There are no statistically significant differences in the mean scores of students` performance of the experimental group in the pre and post-tests .

1.4 Limits of The Study

The current study is limited to :

1. The use of the Jigsaw strategy .
2. The second year students of English Department/ College of education for Humanities/Morning studies/ Tikrit University who are studying “Introduction to Academic Writing” by Alice Oshima and Ann Hogue during the academic year (2018-2019) .

1.5 Value of The Study:

The value of the current study can be stated as the following :

1. The study suggest perspectives for improving writing skills among second year students.
2. It may attract the attention of students to the importance of applying jigsaw strategy in learning writing skill.
3. It improves students performance in writing skill and faster their learning process.
4. It gives chances for researchers to apply jigsaw strategy on other language skills.
- 5.It can benefit teachers to rise there awareness about the importance of activating jigsaw strategy in teaching writing skill.

1.6 Definitions of Basic Terms

- Cooperative learning : is a teaching method in which small groups of four or five students of different levels of ability , use a variety of learning activities to improve their understanding of a subject. Each member of the group is responsible not only four learning what taught but also for helping group mates to learn". (Choe ,2000:14).

- Cooperative learning: is an effective method for classrooms with language learners. Pair and small group activity provide learners with more time to speak the target language than teacher-fronted activities as well as it promotes learners' autonomy and self-directed learning.(Ghaith,2004:84).

- Jigsaw strategy: is a type of cooperative learning in which each member of a group has a piece of information needed to complete a group work; therefore, jigsaw considered as an effective strategy since it creates an atmosphere of competition and group work to achieve certain objectives(Astane &Rerimani,2014:54).

-Jigsaw strategy: is a special form of information gap in which each member of a group is given some specific information to achieve certain objectives(Brown,1994:182).

-Writing skill: Writing is a mean of communication between people.Itshouldfollowsomeconventionsthatareuniqueofallwhichrelatelette rstowords and words to sentences and which must be well organized to have a coherent whole called "text" (Bader, 2007:10).

- Writing is an essential skill for success in school as well as in the work place. Competent literate people are not only able to read but also are able to write. Writing (written composition) is particularly a challenging literacy skill to be achieved and which taking years to be developed. Thus, understanding development of writing skills is critical, particularly at the early stages because longitudinal studies examining writing growth trajectories are lacking (Kim, et. al, 2015:593).

- Writing is also defined as a skill that needs knowledge and proficiency in many areas. It is a multidimensional skill. So it is a complex skill that results from the interaction of the writer's knowledge, experience, skills and the cognitive demands of the task (Sagban,2016:270-271).

-Improve: is an act of enhancing or making better in terms of quality, value or usefulness. This can be by making ideas, objects or processes more desirable by adding or removing components .
(<http://www.businessdictionary.com/definition/improve.html>).

Section Two

Theoretical Background

2.1 The Concept of Writing

Writing is viewed as a basic skill of English language in which students should be competent so as to achieve the aims of EFL learning and academic success.

Writing place an important role in English language learning (Atay and Kurt,2007 :15).

Foong (1999:34) claims that learning to write is useful and important for English language. In addition(Brown ,2007:336) Considers the purpose of writing is part of an overall structure that needs to be carefully chosen to avoid inappropriate writers` response.

As Harmer (2007: 73) states that the first thing the authors should do before writing is considering the pyramids of their writing since it will influence not only the type of the text they wish to create , but also the language they use, and the information they choose to include.

The purpose of writing depends on who the target readers are. According to Lombardo (2010 :85) there are five purposes of writing:

1. Is to inform, which is giving the fact objective as possible.
2. Is to explain, which is explaining how something works and why something happened.
3. Is to persuade, which is convincing the readers to be in the same perspective with the writer.
4. Is to entertain, which is entertaining the readers with the enjoyable writing.

5. Is to describe, which is revealing something about a subject as detailed as possible.

Moreover, writing cannot be separated from the acquisition of other EFL skills, and writing is supposed to be an interesting task in which students can express their own ideas and interests on certain topic. For several factors writing may instead be a laborious and even dread exercise of attempting to place thoughts on paper while developing mastering of all the rules of writing such as spelling citation format and grammar (DeFazio et al , 2010:34) . According to Lombardo (2010 : 41) there are at least three steps involved in the writing process.

Step one: prewriting, which means to think about a topic and organise the ideas.

Step two: Writing which means to use the ideas to write the first draft.

Step three: revising; which means to improve have been written.

2.2 Teaching Writing

Teaching writing skills is a very challenging task for the teachers because developing this skill takes a long time to see the improvement. Hence, jigsaw strategy is considered to be used in teaching writing skills

As it is stated by Slavin (1995:41) jigsaw is “a teaching strategy in which students work in small groups to help one to learn academic content than they are expected to discuss and argue with each other to assess other's current knowledge .

In addition, this strategy offers the opportunity for students to work in a group cooperatively, and then allow groups to work independently and finally get feedback from each other.

In teaching writing teachers need to use different strategies and techniques that can make students do the tasks and also communicate using the language in the classroom. Harmer(2014: 124) says that writing is used in a wide variety of purpose and produce many different forms of writing. Teaching writing is almost neglected in language learning, and more intention is paid to the communicative skills like speaking without realizing that writing is also important for a language learner to be able to produce an understandable and correct sentences when writing.

2.3 Cooperative Learning:

Cooperative learning may be characterized as “a learning approach in which students build small mixed groups in classrooms and other environments to assist each other in learning a certain academic subject according to a common objective in which the individuals` self-confidence is encouraged and their communication ,interaction are developed as well as problem-solving and thinking –capacity are enhanced and in which students participate in learning process actively to learn and teach something new to each other. (Bolling ,1994:26).

Cooperative learning is still a concept considered significantly by teachers ,school managers ,and educationalist ,however .

It is one of the approaches prevalently seen in the area of theory ,research and educational practices (Graham,2005:89).

It is found that cooperative learning is a successful teaching strategy at all levels from pre-school to post secondary .

Cooperative learning is a peer-centered pedagogy that can promote academic achievement and build positive social relationships(Sapon,2004:68).

Moreover cooperative learning facilitates the learning and teaching processes by dividing students to small groups in which they can work together to increase the learning of each other (Colosi ,1998:43). In addition to that cooperative learning is viewed as a tool for preparing students to work in teams as required in various employment settings , in the home and in the community when there is a need to combine energies and work towards a common goal (Bolling,1994:78).

In short, cooperative learning is an umbrella term for a variety of educational approaches and strategies involving joint intellectual effort by students ,or students and teachers together (Delucchi,2006:59).

2.4 The Concept of Jigsaw

There are several tasks under the umbrella of task- Based language teaching, one of them is jigsaw.

States that jigsaw is one of the four typology of pedagogy task. Proposed by Richard. the pedagogical task as work plan that requires learners to process language pragmatically in order to achieve an outcome that can be games of whether the correct or appropriate proportional content has been conveyed (Nunan, 2004: 63) .

On the other hand Aronson (2000 ,81) states that jigsaw is a strategy used in cooperative learning classroom that has diversity in t terms of student's ethnicity or skin colour.

This strategy is used to make students cooperative and can communicate with each other through the lesson. Jigsaw is defined as" a special form of information gap in which each member of a group is given some specific information to achieve certain objectives (Brown, 1994:183).

2.5 The History of jigsaw Strategy

The jigsaw classroom strategy is developed by Elliot Aronson in 1971 in Austin- Texas, and it is considered effective because it increases positive educational outcomes. In the original of jigsaw the teacher divides the students in to home group and expert group , each member in the home group is assigned a different part of material .

Then all students from different home groups who have the same learning material gathered to form an" expert group" to discuss and communicate with each other until they all master the material, later the

students returned back to the home group to teach the material to other numbers of the group (Hedeen, 2003:332-335) .

Furthermore jigsaw strategy places great emphasis on Cooperation and shared responsibility within groups.

The success of each group depends on the participation of each individual in. completing their tasks. This means that Jigsaw strategy effectively increases the involvement of each student in the activity.

New types of jigsaw are emerged as a result of some modifications as well as of the various studies conducted on the jigsaw strategy .

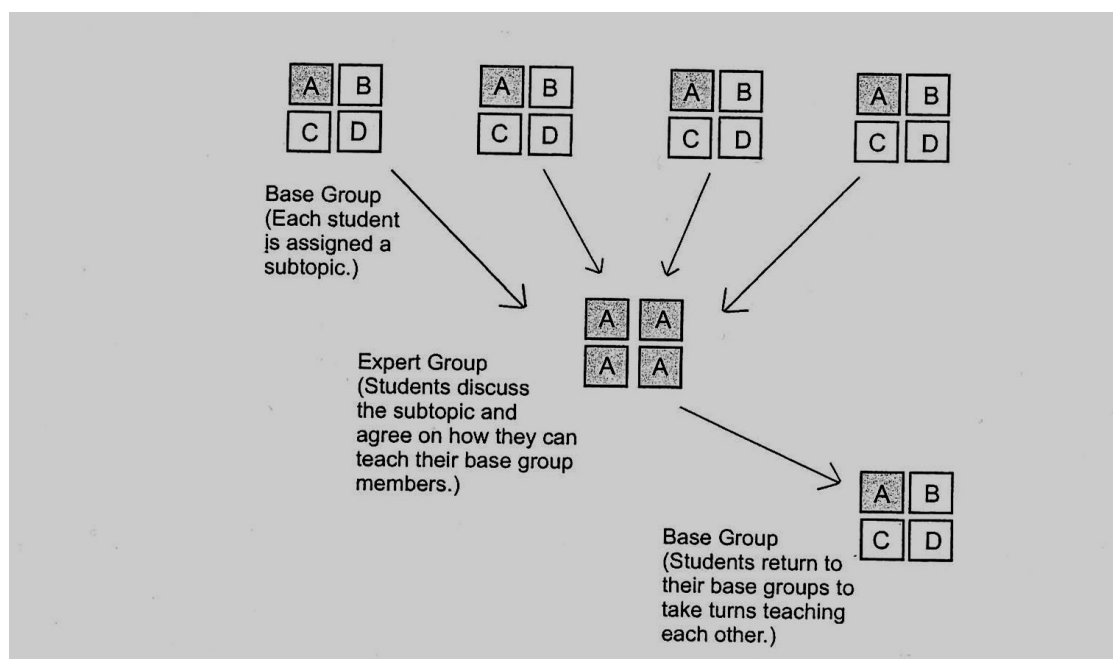
Accordingly, modifications are made in the practice process that reveal many sub-jigsaw types. The original is jigsaw I , and it is developed by (Aronson in 1978) and jigsaw II is developed by (Slavin in 1987) . Jigsaw I and Jigsaw II differ only in the fact that team competition is allowed in jigsaw.

Then jigsaw IV is developed by Holliday- 2000. It is distinguishable from Jigsaw I-II because students have quizzes for checking correct learning in expert and home groups and the practice includes re-teaching the missing parts in the subject at the last step.

In addition Hedeen -2003 develops Jigsaw V which considered as a reverse to jigsaw I and II . Doymys -2007 develops subject jigsaw strategy in which the home groups are broken into parts like pieces of a jigsaw puzzle and the student moves into jigsaw groups consisting of members from the other home groups who have been assigned the same portion of the material while in the jigsaw groups , the students discuss their particular material to ensure that they understand it.

Students then return to their home groups , where they teach their material to the rest of their group (Colosi and Zales,1998:13-17).

Figure 1 Jigsaw Disruption



2.6 The Procedures of Jigsaw Strategy

Slavin (1995,43-46) explains that the teacher who uses this strategy can follow the following procedures :

1. Provide structure: the teacher divides students in to home and expert groups ,
2. Each student is assigned a sub- topic,
3. Ask expert group to search their sub-topic individually and this can be done through a closed or an open structure ,
- 4.Students meet with other experts researching the same sub-topic,
5. The teacher visits the groups to assist students in working together and making sure that the given information is accurate .
6. The Students will teach each other , then return back to their home group to share information .
- 7.The teacher assesses students `understanding of the whole topic (i.e. test students understanding).
- 8.The teacher asks each group to solve a problem that requires students to synthesize what they have learned from the whole topic.
- 9.At the end students are able to reflect on what have been and what level of improvements they have made.

2.7 The Advantages of Jigsaw Strategy

Lucas(2000:221) states that Jigsaw provides students with the following advantages :

1. Jigsaw strategy provides students with the opportunity to be active and enjoy learning.
2. Students gradually will feel comfortable with multiple exposure to jigsaw strategy .
- 3.Jigsaw strategy increases the competition among students to share information and knowledge .
4. The active students may help the non-active classmates to learn the material thoroughly .
5. Jigsaw strategy includes two different practices the first is to assist learning and the second is to develop cooperation among students .
- 6.Jigsaw strategy creates positive learning environment and implies mere individual responsibility as well as it encourages cooperation and peer teaching.
7. Jigsaw strategy can be integrated in to a number of classrooms activities that are structured so that everyone doesn't have to read the entire work .
8. Jigsaw strategy is adaptable to a wide variety of curricular settings and teachers will find it useful in a number of respects .
9. The success of each group depends on the other participation of each individual in completing their tasks. This means jigsaw strategy effectively increases the involvement of each student in the activity.

2.8 The Disadvantages of Jigsaw Strategy

Hedeen (2003:55) explains some disadvantages of Jigsaw strategy :

1. Jigsaw strategy takes much time to organize the group. The teacher should make groups that combine the students who have different intelligences.
2. The class situation become noisy ,so the teacher needs to control the students.
3. If the group setting is too big it will make the group less effective in working among the members .
4. If students don't get to write their initial tasks quickly enough , it will run out of time.
5. If the Jigsaw structure is somewhat complex it may be best applied when the students are comfortable with group work.
6. There are high expectations and responsibilities placed on the students.

Section Three Procedures

3.1 The Experimental Design

Selecting an appropriate design for a research work is one of the most important decisions that a research should make (Van Dalen,1979:232) .

Experimental design is "the blueprint of the procedures that enable the researcher to test hypotheses by reaching valid conclusions about the relationship between independent and dependent variables."(Best and Khan, 2006:77).

In the current research , the experimental group of students is taught by Jigsaw strategy and the control group is taught by the traditional strategy. This study has built on the pretest-posttest equivalent groups design.

3.2 Population and Sampling

Population comprises all the subject under study(Bluman,2007:797).

The population of the current study includes second year university students from the Department of English at the College of Education for Humanities/Morning studies/ Tikrit university during the academic year (2018-2019).

The total number of those students is (130) who are chosen randomly.

The sample of the current study includes (103) students majoring in EFL and divided into two equal groups. The first group is labeled as the experimental group and taught by using the Jigsaw strategy and the second group is labeled as the control group, and taught by the traditional strategy. The experimental group consisted of fifty two students and the control group consisted of fifty one students, as shown in table (1).

Table (1) The Sample of the Study

Group	N. of students	Strategy
Experimental	52	Jigsaw
Control	51	Traditional

3.3 Equivalence of The Groups

After choosing the sample of the two groups and before implementing the experimental , an equivalence has been done depending upon certain information provided by the students and other resources such as the age of the involved students, and the educational attainment of their parents .

3.4 Instructional Material

The writing skill has been chosen to be taught by using Jigsaw cooperative learning strategy.

The material is the book in title "Introduction to Academic Writing", during 12 week period.

The experiment of this study has been done in the first semester of the academic year (2018-2019).

The instruction of both groups of students began on the seventeenth of October, continued for about twelve weeks, and ended on the eighteenth of January, 2019.

The experimental group is taught by using Jigsaw strategy while the control group is taught by traditional method.

3.4.1 Construction of The Test

In teaching any language construction there should be a test which follows the teaching process in order to elicit some samples of language learners' oral and written performance as well as listening and reading ability to understand what learner can and cannot do in the language. (Elian,2008:184).

The test scores are used to equate the experimental and control groups to describe relative skills at this task prior to the application of the teaching methods to measure what the students have gained from the application of the experimental and control teaching methods.(Best& Khan,2006:292).

In order to achieve the aim of the test, the researchers have constructed an achievement test based on the subject matter, that is determined at the beginning of this research which is teaching the (Ex) group by using Jigsaw cooperative learning strategy and the (Co)group without using Jigsaw cooperative learning strategy.

The specific aims, contents and behaviors of the test are specified ,as shown in table (2) .

Table(2) The Specifications of The contents ,Behaviours , and Scores of the Post-Test

Question	The content	Behaviors	Scores
Q1	Students are required to number the sentence in the correct order	Rearrange the following sentences	20
Q2	Students are required to fill in the blanks with additional supporting ideas and sentences	Add some points	20
Q3	Students are required to match a sentence from column A to column B and make a paragraph	Match from A to B	20
Q4	Students are required to discuss the advantages of the text	Write a summary	20
Q5	Students are required to choose a topic sentence	Write a topic sentences	20
Total			100

The researchers have designed a written test of five questions, each question scores (20) marks, the total is (100) marks.

The test is constructed to measure learners' participation and progress at the end of classroom work and to reflect the objectives of this study.

A good test is one which serve a useful purpose in terms of the goals of learning (Namaral,2000:6).

3.4.2 Plan of The Study:

Teaching English, like teaching any subject, requires lesson plan. Many books and curricula provide advice on teaching English learning materials.

However, sometimes teachers are required to create their own lesson plan when teaching ESL or EFL.

The plan of the current study consists of goals, objectives, materials, development, and practice according to writing skills at Jigsaw cooperative learning strategy at 2nd grade. The goals are presented in language real-life situations emphasizing, comprehension fluency, production and accuracy.

People learn English best inside or outside a classroom, not only by regarding the language as an object of study, but by using it as a medium of communication.

3.5 Validity and Reliability of The Post-Test

Validity refers to "the truth of the test when it measures the components that the examinee intended to measure". (Bynom, 2001:13). There are two important types of validity : face validity and content validity.

The final form of the test is given to a jury of specialists in order to obtain its face validity. The jurors have approved the appropriateness of the items of the test and put forward some modifications which have been considered.

Reliability refers to the consistency of the results when the researchers give the same test to the same group of testees on two different occasions(Brown,2004:20).

The test of the study is considered reliable because the calculated coefficient is (0.81) which is considered acceptable according to the formula of Cronbah's Alpha test.

3.6 Item Analysis:

It means "checking responses built by all students for each item included in the test "(Oliva,1988:15).

The process of knowing the easiness and the difficulty of each item and to change the unsuitable one.

After scoring the test papers of the pilot study, the testes' total scores have been ranked from the highest to the lowest in order to select the 27% of the highest scores to be put in one group (those represent the upper group) and 27% of the lowest scores to be put in the other group (those represent the lower group) .

It is important to obtain the difficulty level as well as the discrimination power of the items of the test .

3.6.1 Difficulty Level (DL) and Discriminating Power (DP) of The Post- Test

The DL refers to the proportion of the examiners who passed the test.

It is studied d by determining the proportion of students who answered the item correctly divided by the total number of students.

The aim behind this procedure is to select the items whose difficulty is proper to students' level (Madsen,1983:182).

Ebel (1972:399) states that when the administrating power is (0.30) and above the item is acceptable ; less than (0.30) then the item is weak , the teacher should change them .

All the test items have proved to have satisfactory discrimination power of acceptable difficulty level.

There are only some items which are modified and changed to be satisfactory.

3.7 Final Administration of The Post-Test.

Having ensured that the test is valid, reliable , administrative and has a suitable level of difficulty, the test is administrated to a sample of (52) students in college of education at Tikrit University .

It have been applied to students under the same conditions.

The teacher asks the students to write their responses on the test papers .

After the test papers are distributed, the researchers read the instructions to the students , explain how to answer some items and tell them the purpose behind the exam so that they take test more seriously and to interact with the test more effectively.

The subjects are given enough time to answer the questions completely. The maximum time allowed for the test is one hour.

3.8 Scoring Scheme of The Post- Test

Scoring scheme is the way according to which the obtained results are in interpreted properly.

The whole mark given to the test is (100) marks. The test is consists of five questions, each question scores out of (20) marks.

3. Statistical Means

The statistical means which have been utilized in the present study for the purpose of analyzing the collected data are:

1. T-test for Two Independent Samples is used to find out the significance between the two groups in the equalization of age and their pervious scores

It is also used to find out the significance of differences between the two groups in the Post-Test

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\left(\frac{(N_1 - 1)S_1^2 + (N_2 - 1)S_2^2}{N_1 + N_2 - 2} \right) \left(\frac{1}{N_1} + \frac{1}{N_2} \right)}}$$

\bar{X}_1 = the mean of the experimental group

\bar{X}_2 = the mean of the control group

n_1 = the number of students in the experimental group .

n_2 = the number of students in the control group

S_1^2 = the variance of the experimental group

S_2^2 = the variance of the control group

(Glass and Stanley, 1970).

2. Chi²: It is used to find out the significance of differences between the experimental and control groups in the educational level of the students' parents.

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

Where:

χ^2 = value of Chi-square

O = the observed Frequencies

E = the Expected Frequencies

(Minimum and Clark, 1999:78).

3. Pearson's Correlation Formula is used to find out the reliability of the test.

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

N= number of pairs scores

$\sum xy$ = sum of the Y scores

$\sum x$ = sum of the X scores

$\sum y^2$ = sum of the squared Y scores

$\sum x^2$ = sum of the squared X scores

(Gass and Stanley, 1970:88).

4. Difficulty level formula has been used to measure the difficulty level of the pilot items. The following formula is used for difficulty level

$$DL = \frac{HC + LC}{N}$$

Where

HC= High correct

LC= Low correct

T= Total number of testees.

(Madsen,1983:181)

5.Discrimination Power: To compute the discrimination power of the test items, the following formula is applied:

$$-DP = \frac{Ru - RL}{1/2T}$$

Where

-Ru= The number of testees in the upper group who get the items right.

-RL= The number of testees in the lower group who get the items right.

T= Total number of two groups.

(Madsen, 1983:181).

Section Four

Analysis of Data, Discussion of Results, Conclusions and Recommendations

After subjecting the involved sample of students to the post- test, the data has been collected and statistically analyzed as follows:

4.1 Comparison between the performance of the control group and that of the experimental group in the pre-test.

The obtained mean scores of the control group in the pretest is (19.53) and that of the experimental group is (19.57) .

Then t-test formula for the two independent samples is employed in order to point out whether there is any statistically significant difference between the obtained mean score.

The computed t-value is found to be (2.54) and the tabulated t-value is (2.000) at (50) degree of freedom and (0.05) level of significance, as shown in table (3).

This means that there is no significant difference between the two groups of the study in the pre-test.

Thus, the first hypothesis which states that "there are no significant differences in the mean scores of students' achievement in the pre-test between the two groups", is accepted.

This result is considered normal especially the two groups belong to the same social and cultural background, and get the same English language courses in their previous teaching periods.

Table (3) The results of the two groups in the pre-test.

Group	No. of Students	Mean Scores	SD	DF	T-Value		Level of Significance
					Computed	Tabulated	
Experimental	52	19.57	5.5	50	2.54	2.000	0.05
Control	51	19.53	5.49				

4. 2 Comparison between the performance of the control group and that of the experimental group in the post-test.

The obtained mean scores of the control group in the post-test is (20.00) and that of the experimental group is (22.44) .

Then ,t-test formula for the two independent samples is employed in order to point out whether there are any statistically significant differences between the obtained mean score.

The computed t-value is found to be (4.95) and the tabulated t-value is (1.96) at (50) degree of freedom and (0.05) level of significance, as shown in table (4).

This means that there are statistically significant differences between the two groups of the study in the post-test. Thus, the second hypothesis which states that "there are no significant differences in the mean scores of students' achievement in the post-test between the two groups", is rejected. This means that students have developed their performance in writing when they are taught by using Jigsaw cooperative learning strategy.

Table (4) The results of the two groups in the post-test.

Group	No. of Students	Mean Scores	SD	DF	T-Value		Level of Significance
					Computed	Tabulated	
Experimental	52	22.44	6.38	50	4.95	1.96	0.05
Control	51	20.00					

			6.46				
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4.3 Comparison between the performance of the control group and that of the experimental group in the pre and post-test.

The obtained mean scores of the experimental group in the pre-test is (19.57) and that of the post-test is (22.44) .

Then ,t-test formula for the two independent samples is employed in order to point out whether there are any statistically significant differences between the obtained mean score. The computed t-value is found to be (3.35) and the tabulated t-value is (1.96) at (51) degree of freedom and (0.05) level of significance, as shown in table (5).

This means that there are statistically significant difference between the pre and post-test scores of the experimental group which is taught by using Jigsaw cooperative learning strategy, and in favor of the post-test. Thus, the third hypothesis which states that "there are no significant differences in the mean scores of the experimental group between the pre and post-test", is rejected.

These results may be attributed to the following points:

- 1- The effect of using Jigsaw strategy in teaching English, which leads to the improvement of writing skill for university students. This will provide them with sufficient knowledge and skills to improve their abilities to use English appropriately.
- 2- The effect of using Jigsaw strategy provides students with opportunities to express themselves and to use the language productively to reinforce their vocabulary, pronunciation and develop their language competence

Table (5) The results of the two groups in the pre and post-test.

Test	No. of Students	Mean Scores	SD	DF	T-Value		Level of Significance
					Computed	Tabulated	
Pre	52	19.57	6.67	51	3.35	1.96	0.05
Post	51	22.44	7.74				

5. Conclusions

In light of the obtained results, the following conclusions can be drawn:

1. The data treatment prove that Jigsaw strategy is an effective strategy in making students learn and master the material easily.
2. All of the students agree that jigsaw strategy is able to improve their writing skill, advance their grammatical mastery ,increase their

vocabulary mastery, expand their creative thinking and improve their presentation skill as well as their confidence.

3.The obtained data prove that the students are found of being able to express their ideas and write more than what they have done before the study or research is carried out .

4. The Jigsaw strategy is not only stimulated the students` interest but also attracting and increasing their attention.

5. The Jigsaw strategy increases students` enthusiasm toward the instruction and the whole learning process . Their enthusiasm lead them to be serious in discussing the subject matter and doing their writing activities.

6.The students are highly involved in the learning process , making comments or asking questions about the instruction and the given tasks.

7. The use of Jigsaw strategy increases the interaction among students .

8. The Jigsaw strategy also enables the students to correct each other which indicates that the students` are cooperating with each other during the whole process.

9. The Jigsaw strategy facilitates students` interaction in the class enabling the students to value each other as contributors .

10. The Jigsaw strategy is less threatening for many students and it can increase the amount of students `participation in the classroom.

6. Recommendations :

It may be recommended that:

1.The Jigsaw strategy can be also used in other studies intended for other language skills.

2. The Jigsaw strategy can be used in other learning material and to be modified according to the needs and the material to meet students `needs in the learning process .

3. To do a similar research using jigsaw strategy ,but with different skill like reading or speaking .

4. To organize training courses about how to use Jigsaw as a teaching strategy by senior university teachers who are specialized and well equipped in this field.

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Appendix

The Pre-Post-Test

Note: In groups

Q1: The following sets of sentences are not in correct time order. Number the sentences in the correct order.

- 1.-----she put the clean dishes away
- she removed the dirty dishes from the table
- she turned on the dishwasher
- she put them in the dishwasher
- she piled them in the sink and rinsed them
- it was Sara's turn to wash the dishes last night
- finally, the dishes were clean.

Q2: Work with a partner or in a small group. Read each topic sentence. Then fill in the blanks with additional supporting sentences. Add as many supporting sentences as you can, but you don't have to fill in all of the blanks.

1. A good friend has two/three/four important qualities
 - a- He/she can keep secrets
 - b- -----
 - c- -----
 - d- -----
2. To keep your teeth healthy and your smile bright, do the following things.
 - a- Don not eat sugary foods
 - b- -----
 - c- -----
 - d- -----

Q3: Combine an independent clause from column A with a dependent clause from column B to make a complex sentence. Then write the sentences on a separate piece of paper in order to make a paragraph. Punctuate each sentence correctly.

In a book about animal morality, the author tells the following story.

<u>A</u>	<u>B</u>
1.during World II, a British soldier got Caught in a tree	a- While he hung helplessly in the trees
2-the monkey continued to bring him fruit	b- after he had parachuted In to the jungles of Sumatra, Indonesia
3-the soldier finally succeeded in freeing himself	c-after twelve days had passed
4-however, he still had a problem	d-because it seemed to understand the problem and to want to help
5-a wild monkey brought him bananas and other fruit every day	e- As he had no way to contact his comrades

Q4:

Animals in the Captivity

Animals living in modern zoos enjoy several advantages over animals in the world. The first advantage is that zoo animals are separated from their natural predators. They are protected, so they live without risk of being attacked. Another advantage is that someone feeds them regularly, so they do not have to hunt for food. Also, they do not suffer times when food is hard to find. A third advantage of living in zoos is that veterinarians give animals regular checkups, and sick animals get prompt medical attention.

- In conclusion, Living in a zoo has many advantages for animals, but it also has some disadvantages.
- In conclusion, zoo keeps animals safe from predators.

Q5: Read the following paragraph . Then choose best topic sentence for each one from the list. Write sentence on the line.

----- For example, Kansas city, in the very center of the United States, is known for its beef, and Kansas city barbecue is every ones' favorite way to enjoy it. In Boston, people baked beans. In the southwest, chili, stew made of meat, beans, tomatoes, and hot peppers, is the regional dish.

Wisconsin, a state with many dairy farms, is famous, for its cheese. Go to Maryland and Virginia for crab cakes and to the northeast for clam chowder and maple syrup. Indeed, many U.S. cities and regions have a special food for everyone to enjoy.

- a-There is a variety of food in the United States.
- b- Food in the United States varies from sweet desserts to spicy stews.
- c-Different regions of the United States have their own traditional foods.
- e. Food in the United States is quite delicious.