

The Effect of Jigsaw Strategy on ESL Students' Reading Achievement

Sabah Salman Sabbah
Community College of Qatar
Qatar

Abstract

It is educationally acknowledged that reading is an important skill for acquiring a second language academically. However, it has been noticed that students' results in reading in the Foundation program in the Community College of Qatar (CCQ) are not satisfactory. This study used a quasi-experimental pre-posttest design to investigate the effect of using jigsaw cooperative strategy on ELS students' achievement in reading comprehension. Convenience sampling of the two classes was used from the female students enrolling in Level 4 reading classes in the Foundation Program in the Community College of Qatar in the fourth quarter of the academic year of 2013-2014. It is a non-probability sampling technique where two classes were selected because of their convenient accessibility to the researcher as the researcher was supposed to teach them reading. The two classes were assigned randomly to two groups: the experimental group (n=16 students) which was taught seven units in Real Reading Textbook via the jigsaw strategy and the control group (n=10 students) which was taught via the traditional strategy-no grouping. Analysis of Covariance (ANCOV) was used to analyze students' scores on the posttest. The results revealed significant differences in favor of the experimental group.

Keywords: cooperative learning, English as a second language, jigsaw strategy, and reading teaching techniques

Cite as: Sabbah, S. S. (2017). The Effect of Jigsaw Strategy on ESL Students' Reading Achievement. *Arab World English Journal*, 8 (1).

DOI: <https://dx.doi.org/10.24093/awej/vol7no1.27>

Introduction

Reading is a very important skill in learning a foreign language. The differential success among second language learners and their understanding of reading texts are affected by many factors which include the setting, the teaching strategies and the task, learner's beliefs about language learning, the interaction with other learners, and the mode of teaching. (Ellis 1994; Larsen-Freeman and Long 1991; Brown 2000; Oxford 1989; Wharton 2000). There is evidence to suggest that when students cooperatively and collaboratively discuss and share their perspectives about a text, greater understanding is achieved, leading to a greater overall comprehension development (Morrow & Sharkey, 1993). There are many forms of cooperative language strategies used in teaching the skill of reading. A commonly used one is the jigsaw strategy. It consists of a regular instructional cycle of activities that include reading, grouping, regrouping, expert group discussion, team reporting, testing, and finally team recognition (Kagan, 1994). Slavin (1991) stresses that the preceding cycle of instructional activities provides useful opportunities for communicative language practice in a supportive and stress-reduced environment. Along similar lines, Wittrock (1991) concludes that it is important to change students' perception of their roles in learning from one of recording and memorizing information to one of generating understanding by relating concepts to their experiences and to their knowledge base. What Wittrock stresses on is the idea that interactive approach recognizes the importance of both the text and reader's learning characteristics in the reading process.

Furthermore, jigsaw reinforces important cooperative learning elements, such as positive interdependence and individual accountability. This is because in Jigsaw learners must teach one another in order to get the "big picture" and must learn "all the information, not just their own portion, since they are tested individually" (Millis & Cottell, 1998, p. 129). Each student within a team has a piece of the information to be learned by all students and each student is responsible for teaching their section to the other students in the team. When all the pieces are put together, the students should have the whole picture - hence the name, Jigsaw ((Millis & Cottell, 1998). A third theory that explains the rationale behind the jigsaw strategy is constructivism. The assumption that learning is an active process of construction rather than a passive assimilation of information or rote memorization enhances the merits of jigsaw strategy which is built on encouraging active learning rather than absorbing information from a teacher or a book.

As for the rules for Cooperative Learning Groups, they include mutual respect among the group members, listening to what other teammates say, putting efforts into doing the work, and encouraging each other when losing the willingness to participate. Prescott cited in (Wan 1995: 7) states the roles practiced by the cooperative learning groups. The "checker" keeps track of time allotted for completing task. He/she keeps everyone on task. The "monitor" collects, returns, and disseminates material. He/she makes sure everyone is participating. The "recorder" takes notes during discussion. He/she makes sure everyone understands the task. The "reporter" reports groups' ideas to class. He/she contacts teacher if necessary.

In an attempt to investigate the effect of the jigsaw strategy on ESL students' reading achievement, the current researcher conducted a quasi-experimental pre-posttest design research. The analysis of the collected data revealed that this strategy is greatly influential on students' achievement.

Cohen (1994) pinpoints that teachers have special responsibilities in a classroom where jigsaw is dominant. The jigsaw teachers usually make pre-instructional decisions about grouping students and assigning appropriate tasks. They also do all the necessary preparation as dividing the topic into appropriate chunks and designing the activities for each chunk. They monitor students and interfere when necessary, facilitating class reflection or summary. They are also responsible for evaluating students' learning and the effectiveness of each group's work (Cohen, 1994). In general, a teacher who implement the jigsaw strategy have the following roles:

- A facilitator. He/she does not only facilitate the communication process among learners, but also between the learners' various classroom activities and the text.
- An organizer of resources and a resource himself.
- A guide within the classroom procedures and activities.
- A group process manager: this implies that the teacher should monitor, encourage and bridge gaps in students' lexis, grammar and use of strategies. He/she should provide alternative and extensive activities and help learners in self-correction discussion.
- A needs analyst. This means that he/she should assume the responsibility for determining and responding to the learners' linguistic needs.

Review of Related Literature

Theoretical Literature

Learning is a social activity. It is intimately associated with our connection with other human beings. Conversations, interaction with others and collaborations are integral aspects of learning. Olsen and Kagan (1992:8) define Cooperative Learning as follows:

Cooperative Learning is a group learning activity organized so that learning is dependent on the socially structured exchange of information between learners in groups in which each learner is held accountable for his or her own learning and is motivated to increase the learning of others (1992:8)

One of the theories that Cooperative Learning is based on is Vygotsky's theoretical framework which highlights the idea that social interaction plays a fundamental role in the development of cognition. Vygotsky (1978: 57) states: "*Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological).*"

The two significant terms in the cooperative learning strategy are learning and rewarding (Slavin, 1991). Group learning is usually enhanced by the essential contribution of all students to the understanding of class concepts so everyone knows the information which usually fosters a cooperative environment. As the students are working together, they can learn from each other's experiences and level of knowledge. As for reward, there are two types of reward structures; the first is individual in nature. A person's reward depends upon her/his own contribution to the assignment. The second is group rewards in which members' contributions are combined for one total score and all group members receive the same score (Webb, 1982). Webb (1982) supports the idea that group rewards seem to produce more cooperation than individual rewards.

From a motivational perspective, cooperative incentive structures create a situation in which the only way group members can attain their own personal goals is if the group is successful. Students work in mixed-ability teams (heterogeneous groups) to tackle material initially presented by the teacher. The only way the team can succeed is to ensure that all team members have learned, so the team members' activities focus on explaining concepts to one another, helping one another practice, and encouraging one another to achieve success.

In Chapter Four of his book *Cooperative Learning*, Kagan (1994: 5-11) lists six principles that are essential for a group to be cooperative. Kagan refers to them as the "PIES". These principles are:

1. Positive interdependence: This refers to the feelings of responsibility that group members have towards each other. Each feels that he/she shares the success or failure of others, that what helps one helps all and what hurts one hurts all. This feeling can be promoted by roles, information distribution and rewards
2. Individual accountability: This implies the idea that group success depends on the learning of each individual member. This feeling can be promoted by individual quizzes or assignments following group work.
3. Collaborative skills: Developing social and communication skills is a necessity for cooperation to be successful. These skills include asking for help, making suggestions, disagreeing politely, leadership, decision-making, trust-building, communication, conflict-management skills, turn-taking, polite interruption, encouragement and moral support.
4. Heterogeneous grouping: Groups should, if possible, contain both male and female students of different ability levels so that each group will have one top-level, two middle levels and one struggling.
5. Equal participation: Group activities can be structured to encourage all group members to participate to an equal degree. Means of doing this include providing each member with a turn to speak or particular information that they need to contribute to a group. The opportunity for students to discuss, to argue, to present and hear one another's viewpoints is the critical element of cooperative learning with respect to student achievement.
6. Simultaneous interaction, in teacher- fronted instruction; one person speaks at a time. When group activities are used, one person per group may be speaking, i.e. if a class of 40 students are working in groups of four, ten people may be talking simultaneously.

In planning cooperative learning, teachers take several roles. First, teachers make pre-instructional decisions about grouping students and assigning appropriate tasks. Teachers have to be able to explain both the academic task and the cooperative structure to students and then must monitor and intervene when necessary. Finally, the teacher is also the one who is responsible for evaluating student learning and the effectiveness of each group's work (Cohen, 1994). The cooperative structure includes both the roles of students and the rules of interaction.

The cooperative strategy used in this study is the Jigsaw Strategy. The Jigsaw Strategy belongs to the Student-Team Investigation Cooperative Learning model and was originally developed in 1970s by Elliot Aronson and his students at the University of Texas and the University of California (Jacobs, 1998).

The Jigsaw Strategy consists of a regular instructional cycle of activities that include reading, grouping, regrouping, expert group discussion, team reporting, testing, and finally team recognition. Rolheiser and Stevahn (1998) associate the Jigsaw Strategy with Wittrok's theory of cognitive restructuring that emphasizes the importance of rehearsing, explaining and elaborating on reading material in order to link information into existing cognitive structures for long term memory (Millis & Cottell, 1998, p. 129). Each student within a team has a piece of the information to be learned by all students and each student is responsible for teaching their section to the other students in the team. When all the pieces are put together, the students should have the whole picture - hence the name, Jigsaw.

The Jigsaw Strategy involves the following procedures: dividing class into home teams (mother groups), each consisting of 3-6 students and dividing the reading material into a number of sub-topics that match the number of students within each home team. Each member in each home team takes a sub-topic to study. Group members in each home team who are studying the same topic meet to form expert teams in order to study and discuss their sub-topic and become experts in that sub-topic." Experts" then return to their original home teams to teach their sub-topics to the members within their home team (Thompson & Pledger, 1998). The following figures illustrate the grouping and regrouping grouping and regrouping:

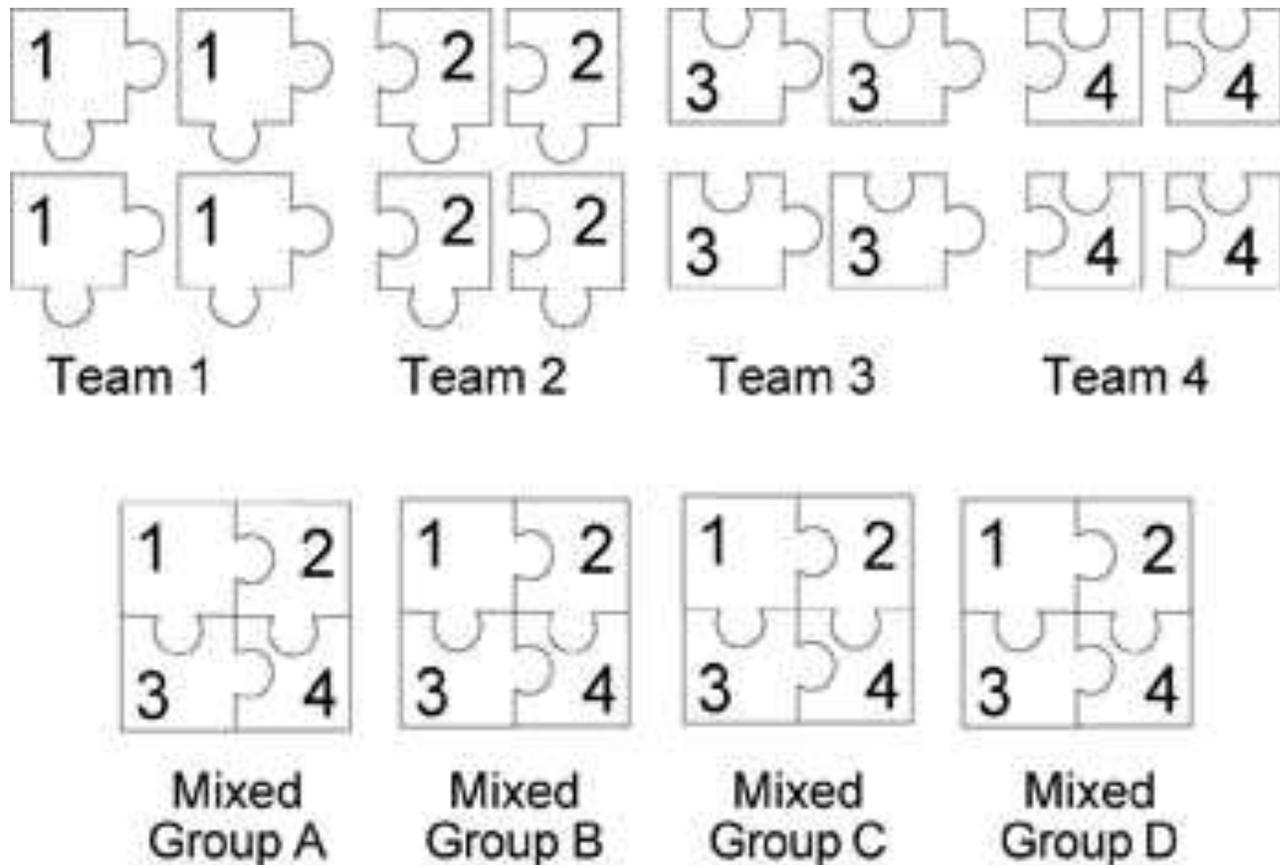


Figure 1 Grouping and regrouping in jigsaw

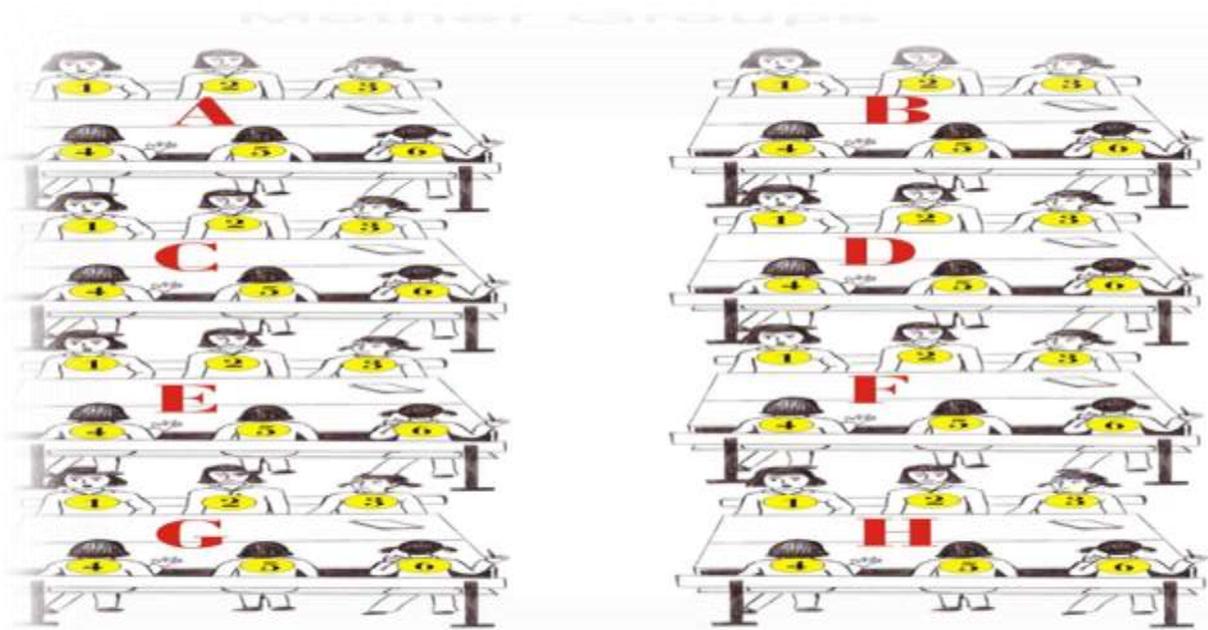


Figure 2 Mother Groups

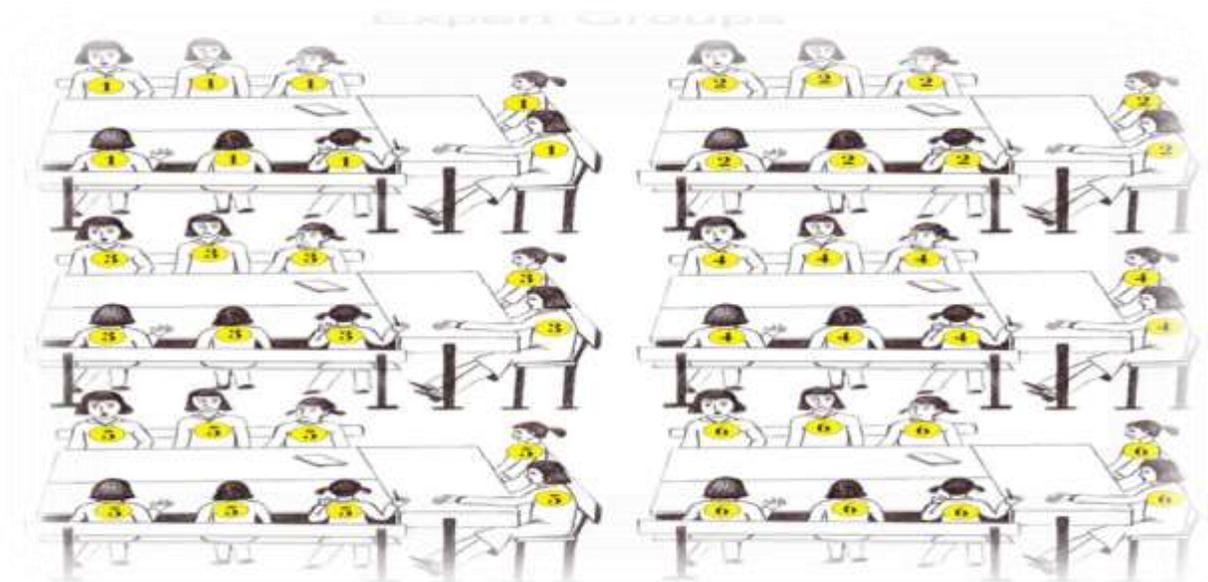


Figure 3 Expert Groups

Empirical studies

In Chapter Three of his book *Cooperative Learning*, Kagan (1994:3) remarks that "Cooperative learning is the most extensively researched educational innovation of all time. And the results are clear." As an endeavor to verify Kagan's conclusion, the researcher of the current study listed the following research.

Thompson and Pledger (1998) explore the efficacy of two methodologies: traditional lecture versus cooperative learning. Samples of 50 students were taken from a mid-size, southern, metropolitan university in the southeastern United States. The subjects were divided into two groups: 27 students who learned course material via the traditional lecture format and 23 students, who learned course material via a cooperative learning technique called jigsaw. The results did not reveal any significant differences in the scores of students taught by the two strategies.

Halliday (2002) investigates whether cooperative learning could improve the academic achievement of inner city middle school students in Gary, Indiana. Two seventh-grade classes taught by one African American male teacher served as one experimental group of 20 at-risk students, and one non-experimental group of 24 high achievers. Both groups took the same pretest on a unit about India. The experimental group was taught using cooperative learning. Achievement results indicated that the cooperative learning strategies worked well with the group of at-risk students.

Working with 166 students of eighth-grade African classes learning English as a foreign language,

Natalia (2001) examines the implementation and effectiveness of whole class teaching followed by task-oriented cooperative group activities in comparison with whole class teaching followed by individual work on learning English. Two classes of at least 80 students were assigned as an experimental group that used cooperative group activities and a control class that was taught by the traditional method. The results of the study indicated that cooperative learning improved the quality of language practiced, improved the quality of students' talk, created a positive affective climate, increased students motivation, and enhanced thinking.

Ghaith and Abd-ELMalak (2004) examine the effect of the cooperative Jigsaw method on improving literal and higher order English reading comprehension of forty-eight university students of EFL. Applying the experimental design, the result indicated no significant differences between the control and experimental group on the dependent variables of overall reading comprehension and literal comprehension. However, the results revealed a statistically significant difference in favor of the experimental group on the variable of higher order comprehension.

Abu-Khader (2006) examines the effect of cooperative learning strategies Jigsaw & Learning Together Strategies on Palestinian EFL freshmen's reading comprehension. The population of the study consisted of 600 Palestinian freshman EFL learners distributed into 12 assigned sections at Al-Quds University in the second academic semester 2005-2006. The participants of the study were engaged in experimental and control groups. A pre-posttest technique for the reading comprehension was administered. The results showed that there were

significant differences in students' scores on the overall reading comprehension in the post-test between the two groups in favor of the experimental group which was taught by cooperative learning strategies.

Ghaith and Bouzeineddine (2003) investigate the relationship between reading attitudes, achievement, and learners' perceptions of their Jigsaw cooperative learning (CL) experience. One hundred eleven ($n = 111$) eighth-grade students of English as a Foreign Language (EFL) enrolled in four sections in a middle school in Lebanon participated in the study. The participants completed two questionnaires and a semantic differential scale that assessed their reading attitudes and perception of their Jigsaw II cooperative learning experience. In addition, the participants took a pretest and a posttest specifically designed for the purpose of the study. The results indicated that reading attitudes and reading achievement were positively internally related, but not related to the perception of the Jigsaw cooperative experience. Furthermore, the results revealed certain statistically significant differences between high and low achievers and between males and females across the variables of reading attitudes, achievement, and perception of the Jigsaw cooperative experience.

Shaaban (2006) investigates the effects of the jigsaw cooperative learning (CL) model and whole class instruction in improving learners' reading comprehension, vocabulary acquisition, and motivation to read. Forty-four grade-five English as a foreign language learners participated in the study, and a posttest-only control group experimental design was employed. The results did not indicate any statistically significant differences between the control and experimental group reading comprehension and vocabulary acquisition. However, the results revealed statistically significant differences in favor of the experimental group on motivation to read and its dimensions, the value of reading, and reading self-concept.

Badawi (2008) attempts to investigate the improvements in 44 learners' reading achievement and motivation as a result of the employment of jigsaw technique in contrast to the holistic approach. The results of treatment showed that although there were no differences between the experimental and control groups with regard to the vocabulary acquisition and reading achievement, there were significant effects for the students' affective aspects such as self-concept, their value, and motivation.

Kazemi (2012) investigates the effects of the jigsaw teaching method on the achievement of Iranian EFL learners. One intact group 38 Guilan university students, majoring in engineering, management and biology, participated in this study. The experimental group participants included 38 freshman and sophomore intermediate level male ($N=17$) and female students ($N=21$). The students received pre-test and post-test. Jigsaw technique was used with experimental group participants where there was an emphasis on the cooperative learning of the language and specially the reading comprehension. The results of a paired-samples T-test showed that the students' post-test reading scores improved significantly ($P= 0.000$) when compared with their pre-test scores.

In Ghana, Adams (2013) conducts an action research study on 40 pupils and 10 teachers of Basic six of Holy Child Practice Primary School. Adams explored the causes of the poor performance of students. The intervention was the effect of cooperative learning with the use of

Jigsaw technique in. Action research design was used in addition to a case study design to conduct the study. The research instruments were observation and questionnaire. The researcher employed the Jigsaw technique as the intervention. Responses gathered from both the observation and the administration of the instruments indicated that some of the causes of pupils' poor performance in school were poor teaching methods during lessons and the inability of teachers to vary teaching techniques.

Statement of the Problem

There was a widely-spread dissatisfaction among the instructors in the CCQ about the students' lack of interest in participating in classroom reading activities. This, in turn, has negatively influenced their overall achievement and their enthusiasm to learn. This study would hopefully contribute to fill that gap in research in Qatar, help CCQ instructors to engage students in reading activities and activate students' potentials to gain high achievement in reading.

Significance of the Study

Due to the increasing amount of knowledge available worldwide, the increasing complexity of knowledge, and the increasing speed of changes, individual learning methods and traditional teaching techniques are no longer sufficient for mastering the complexity of knowledge. To the researcher's knowledge, this study will be the first one in Qatar to investigate the effect of using jigsaw strategy in to enhance students' achievement in reading. Hopefully, the results of this study will guide the instructors in the ESL program in the CCQ to implement cooperative strategies in their teaching.

Purpose of the Study

This study aimed to explore the possible effects of using jigsaw strategy on the achievement of level-four female students enrolling in ESL foundation program in the CCQ.

Hypothesis of the Study

More specifically, the study aims to investigate the validity of the following hypothesis: There are statistically significant differences at ($\alpha = 0.05$) between the mean scores of the two ESL Level 4 experimental group and control group in the achievement reading comprehension test due to the teaching strategies: jigsaw reading and traditional strategy of teaching reading.

Definitions of Terms

The following terms are operationally defined to clarify usage in this study:
Co-operative learning: It refers to classroom strategies which require students to work on learning activities in small groups and receive rewards or recognition based upon the performance of the group to what they belong (Slavin, 1980:315).

The jigsaw strategy: It is a cooperative learning technique that encourages listening, engagement, interaction, teaching, and cooperation by giving each member of the group an essential part to play in the academic activity. The strategy involves breaking the classroom into small groups of four to six students. Each group is responsible for a specific piece of knowledge that they will discuss with other classmates.

Limitations of the Study

1. The study was restricted to the female students enrolling in Level 4 Reading classes.
2. The generalization of the study findings was confined to the instructional material that the researcher redesigned from the textbook: Real Reading 4 for jigsaw reading strategy.

Population of the Study

The population of the study consisted of all the female students enrolling in Level 4 Foundation Reading Course in the ESL Center in the CCQ during the second quarter of the academic year 2013-2014. The students were learning "Real Reading 4" (2011) as a textbook in their class.

Sample of the Study: 26 ESL foundation female students enrolling in two Level 4 classes in • the CCQ. Convenience sampling was used. It is a non-probability sampling technique where the subjects are selected because of their convenient accessibility to the researcher. The researcher was supposed to teach them reading. Random assigning was used to assign the two groups. The experimental group included 16 students, who were taught the reading material using the jigsaw strategy. The control group consisted of 10 students, who were taught by the traditional method, namely no grouping. The **instructional material** used in the intervention consisted of 7 reading texts in Real Reading 4 Textbook.

Design of the Study

The researcher used the quasi-experimental pre-posttests design. •

Period of the intervention: The intervention lasted for 8 weeks. It was implemented in the 4th quarter of the academic year 2013-2014.

Instruments of the Study:

Reading Achievement Test (Appendix 1): This was used as a Pre- and Post- test. The test was designed by the researcher on the basis of the redesigned instructional material. The purpose of the test was to assess the subjects' reading comprehension. The test was constructed in accordance to the reading comprehension outcomes stated in the Common Delivery Plan prepared by the Reading Committee in the Community College of Qatar. A table of specifications was constructed to ensure the type, marks and number of questions used in the test. The test included two one-page reading comprehension texts followed by different types of questions: multiple-choice questions, short-answers questions. The unseen reading texts were selected from different resources taking into consideration that they are related to the texts of the to the topics of "Real Reading 4" textbook that the subjects were studying in their reading course. The total mark of the test was 50 where each correct sub question was given one mark.

Statistics and Findings

Reliability of the Achievement Reading Test

To establish the reliability of the reading comprehension test, it was administered to a pilot group of 60 students chosen randomly from the population of the study and not included in the sample of the study. The students were tested and retested after 15 days. By using Pearson Formula, the reliability coefficient of stability was computed. It was 84%

Validity of the Achievement Reading Test

To establish the validity of the research instruments, a jury of TEFL specialists were consulted for the appropriateness of the reading achievement test in terms of the number of the questions, the appropriateness of the reading texts, the general production of the test, the marks allotted for each question, pertinence of question category and the clarity of the questions and the suitability of the font by which the exam was typed. The jury consisted of four university professors. The instrument was modified in response to their comments.

Reliability

To test the reliability of the study tool, test-retest method was applied, by applying and re-applied the test after two weeks on an exploratory sample from outside the study sample consisted of 25 students, and then Pearson correlation coefficient was calculated between their estimates on both occasions as it was (0.89). This value was considered appropriate for the purposes of this study.

Equality between Groups:

To find out the equality between the groups, means and standard deviations for pretest were calculated according to Group variable, to find out whether there are statistical significant differences in these means t-test was conducted and the results are shown in table below.

Table 1 Means, Standard Deviations and t-test for pretest according to Method

	GROUP	N	Mean	Std. Deviation	t	df	Sig. (2-tailed)
PRE	Experimental	16	65.06	11.234	.176	24	.862
	Control	10	64.20	13.514			

Table 1 shows there are no statistically significant differences at ($\alpha = 0.05$) in the pretest due to group variable. We conclude those groups were equal according to group variables.

To answer the question of the study, means and standard deviations and estimated marginal means were computed according to group variable as presented in tables 3.

Table 2. Means, standard deviations and estimated marginal means for responses on post test according to Method variable.

Group	Mean	Std. Deviation	Estimated Marginal Means	N
Experimental	76.88	8.943	76.62	16
Control	67.60	13.209	68.02	10
Total	73.31	11.488	72.32	26

Table 2 shows a variance in the means of the posttest according to group, to find out whether there are statistical significant differences in these means, one way ANCOVA was conducted and the results are shown in tables below.

Table 3 One way ANOCVA results of post related to their group of study (Experimental, Control).

Source	Sum of Squares	df	Mean Square	F	Sig.
Pre test	2167.924	1	2167.924	82.797	.000
Method	454.519	1	454.519	17.359	.000
Error	602.226	23	26.184		
Corrected Total	3299.538	25			

Table 3 shows there are statistically significant differences at ($\alpha= 0.05$) in the posttest due to group variable in favor of Experimental group.

Findings and Discussion

The statistical analysis on the obtained data revealed a great significance of the effect of jigsaw strategy on ESL students' reading achievement. This might be due to the merits of the jigsaw strategy as it empowers students to take charge of their learning and it enhances their learning autonomy. It also encourages peer tutoring and makes learning fun. It increases retention and retrieval of concepts. It works for application, knowledge or critical thinking types of questions. It develops communication skills. Most importantly, it decreases stress, tension and absentmindedness.

The findings of the current study are consistent with those of Kazemi2012; Gaith 2003; Abu Khader 2006; and Halliday (2002) as all of them revealed that the use of cooperative jigsaw reading strategy correlates positively with students' academic achievement. However, there is some inconsistency of the current results and those of Shaaban (2006) and Adams (2013) as they did not show any statistical significance of jigsaw on students' achievement. Nevertheless, many pieces of research revealed that jigsaw increased students' motivation and enthusiasm.

Recommendations are suggested that qualitative studies should be conducted where students' attitudes towards using cooperative teaching strategies in teaching English language skills in general and reading in particular. Furthermore, the researcher of the current study feels that studying the correlation between cooperative learning and students' motivation to learn.

In conclusion, it can be noticed that many prior studies indicated that jigsaw strategy has a probable impact on learners' achievement, motivation, anxiety and classroom management.

About the Author:

Dr. Sabah Sabbah holds Ph.D. in English Language Curriculum and Instruction. She worked as an assistant professor in Jordan, Saudi Arabia, and Qatar. She published eight papers and presented in Innovations 2014 in the U.S.A., in the International Journal of Arts and Science Conference/2016 in Las Vegas, and in TESOL conferences in Qatar and Dubai.

References

- Adams, F.H. (2013). Using jigsaw Techniques as an Effective way of Promoting Co-operative Learning among Primary Six Pupils in Fijai. *International Journal of Education and Practice*, 1(6):64-74
- Abu-Khader, F.H. (2006). *The Effect of Cooperative Learning on Palestinian EFL Freshmen's Reading Comprehension and their Anxiety toward EFL Learning*. Unpublished Doctoral Dissertation, Amman Arab University for Graduate Studies, Amman, Jordan.
- Brown, D. (1994). *Principles of Language Learning and Teaching*. Indiana: Prentice Hall.
- Cohen, E. (1994). Restructuring the Classroom: Conditions for Productive Small Groups. *Review of Educational Research*, 64 (1), 1-35.
- Ellis, R. (1994). *The Study of Second Language Acquisition*. New York, Oxford University Press.
- Ghaith, G. & Abd El-Malak, M. (2004). Effect of Jigsaw 11 on Literal and Higher Order EFL Reading Comprehension. *Educational Research and Evaluation*, 10 (2), 105-115.
- Ghaith, G. (2003). Effects of the Learning Together Model of Cooperative Learning on English as a Foreign Language Reading Achievement, Academic Self-esteem, and Feelings of School Alienation. *Bilingual Research Journal*, 27 (3), 100-106.
- Ghaith, G. & Bouzeineddine, A. (2003). Relationship Between reading attitudes, Achievement, and Learners' Perceptions of Their Jigsaw Cooperative Learning Experience. *Reading Psychology*, 24, 105-121.
- Halliday, D. (2002). Using Cooperative Learning to Improve Academic Achievement of Inner-City Middle School Students. (*ERIC Reproduction Service No. ED 464136*).
- Jacob, G. (1998). Cooperative Learning Techniques in Reading Instruction, (*ERIC Document Reproduction Service No. ED 432739*).
- Kagan, S. (1994). *Cooperative Learning*. San Juan Capistrano, CA: Kagan Cooperative Learning.
- Larsen-Freeman, D & Long, M. (1991). *An Introduction to Second Language Acquisition Research*. NY: Longman Inc. New York
- Morrow, L., & Sharkey, E. A. (1993). Social Cooperative Literacy Experiences. *The Reading Teacher*, 47, 114-120.
- Mahnaz, K. (2012). The Effect of Jigsaw Technique on the Learners' Reading Achievement: The Case of English as L2. University of Guilan, Iran. *Modern Journal of Applied Linguistics*. 4(3) Autumn 2012 ISSN 0974-8741
- Retrieved from <http://mjal.org/journal-current-articles.htm>
- Millis, B., & Cottell, P. (Eds.). (1998). *Cooperative Learning for Higher Education Faculty*. Phoenix: Oryx Press.
- Millis, B., & Cottell, P. (Eds.). (1998). *Cooperative Learning for Higher Education Faculty*. Phoenix: Oryx Press.
- Natalia, B. (2001). The Effect of Cooperative- Task-Oriented Group Activities on Student Achievement in English as a Foreign Language in Large Classes in Bukina Faso, *Dissertation Abstracts International*, 61, 114-A.
- Olsen, R., & Kagan, S. (1992). "About Cooperative Learning". In Kessler, C. (eds). *Cooperative Language Learning. A Teacher's Resource Book*. Englewood Cliffs. NJ: Prentice Hall.
- O'Malley, J. & Chamot, A. (1990). *Learning Strategies in 2nd Language Acquisition*. Cambridge, Cambridge University Press.

- Oxford, R. (1989). The Use of Language Learning Strategies: A Synthesis of Studies with Implications for Strategy Training. *System*, 12 (2), 235-47.
- Rolheiser, C., & Stevahn, L. (1998). The Role of Staff Developer in Promoting Effective Teacher Decision-Making. In C. Brody & N. Davidson (Eds.), *Professional Development for Cooperative Learning*. (pp.61-78), New York: State University of New York Press.
- Rolheiser, C., & Stevahn, L. (1998). The Role of Staff Developer in Promoting Effective Teacher Decision-Making. In C. Brody & N. Davidson (Eds.), *Professional Development for Cooperative Learning*. (pp.61-78), New York: State University of New York Press.
- Shermila, J. (1999). A Study of the Skills of Reading Comprehension in English Developed by Students of Standard IX in the Schools in Tuticorin District, Tamilnadu. *Language in India* 6 (5), 1-304, Retrieved March 8, 2009 from www.languageinindia.com
- Slavin, R. (1991). Synthesis of Research on Cooperative Learning: The Use of Cooperative Learning Strategies Results in Improvement both the Achievement of Students and the Quality of Their Interpersonal Relationships. *Educational Leadership*, 48, pp71-82.
- Shaaban, K. (2006). An Initial Study of the Effects of Cooperative Learning on Reading Comprehension, Vocabulary Acquisition, and motivation to Read. *Reading Psychology*, 27, 377-403.
- Thompson, M., Pledger, L. (1998). Cooperative Learning Versus Traditional Lecture Format: A Preliminary Study. (*ERIC Document Reproduction Service No. 426 418*).
- Vygotsky, L. (1978). *Mind in Society*. Cambridge, MA: Harvard University Press
- Wharton, G. (2000). Language learning strategy use of bilingual foreign Language Learners in Singapore. *Language Learning*, 50 (2), 203-244.
- Wan, Y. (1995). Implementing Cooperative Learning Techniques in Second Language Teaching. (*ERIC Document Reproduction Service No. ED 396526*).
- Webb, M. (1982). Student Interaction and Learning in Small Groups. *Review of Educational Research*, 52, 421-445.