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Cooperative learning strategies and reading comprehension

Abstract. Cooperative learning strategies have occupied a prominent place among language learning methodologies. This study quantitatively validates the effect of cooperative learning on the reading comprehension performance in EFL classes of Iranian learners in an English institute at Bandar-Abbas. Four groups, with an average age between 14-18 years, of the same English language proficiency level were tested with TOEFL for intermediate English level and a reading comprehension test. Each group consisted of four students. Through one of the cooperative learning strategies, partner strategy, these four groups worked on a story in one class. The other 16 students worked on individually on that story in another class. We employed ex-post-factor design, with four groups who were given a treatment (something to do) and a controlled group who received no treatment. Finally a reading comprehension test was administered to compare the two groups. It is shown through correlation coefficient formula using SPSS software, graphs and diagrams that the group using cooperative learning strategies achieved significantly higher results.

Key Words: Cooperative Learning, Reading Comprehension, Partner Strategy of Cooperative Learning.

1. Introduction

Since the era of post method, which was developed by Kumaravadivelu (1994, 2001, 2003), suggests that the post method paradigm is an attempt at finding an alternative to method rather than finding an alternative method), some methods have come into practice in other to make use

of teaching strategies practically in foreign language classes. Some of these methods are well known as task-based learning and teaching, and cooperative learning and teaching. The matter of concern for EFL learners is group work in classes that significantly affects student performance and improves language proficiency. As a teacher working in the English Institutes, I observed many problems related to individual study in English classes. Some of those problems were that individual study decreased self-confidence, interaction among students, and motivation (internal and external); in contrast, cooperative learning increases the self-confidence, interaction, and motivation of every individual. In addition to the cooperative teaching of the teacher and cooperative learning by students, we should define which language skills effectively relate to cooperative teaching. In this study I focused on the relationship between cooperative teaching and reading comprehension. But first, some definitions are to be discussed.

1.1. Cooperative Learning. Cooperative learning is a successful teaching strategy in which small teams, each with students of different levels of ability use a variety of learning activities to improve their understanding of a subject. Each member of a team is responsible not only for learning what is taught but also for helping teammates, thus creating an atmosphere of achievement. Students work through the assignment until all group members successfully understand and complete it.

Cooperative learning results in participant efforts for mutual benefit so that all group members

1. Gain from each others efforts (your success benefits me and my success benefits you).
2. Recognize that all group members share a common fate or fortune. (We all sink or swim together here).
3. Know that one's performance is mutually caused by oneself and one's team members. (We can not do it without you).
4. Feel proud and jointly celebrate when a group member is recognized for achievement. (We all congratulate you on your accomplishment).

1.2. Why use cooperative learning? Previous research has shown that cooperative learning techniques,

1. Promote student learning and academic achievement
2. Increase student retention (capacity to remember)
3. Enhance student satisfaction with their learning experience
4. Help students develop skills in oral communication
5. Develop students' social skills
6. Promote students' self-esteem
7. Help to promote positive race relations

1.3. Cooperative Learning Strategies. Cooperative learning strategies acknowledge recognition of difference as many students who do not 'fit' the middle class model of the student that schools and curriculum were designed for are supported to participate more effectively.

Working in small groups using cooperative learning strategies supports underperforming students to

1. Think aloud, take risks, and develop deeper understandings and higher order thinking
2. become more self confident as learners
3. Develop oral language skills as student input into activities is valued
4. Improve their relationships with other students and with their teachers
5. Scaffold their learning through talk and the use of cognitive and graphic organizers

1.4. Strategies for Cooperative Learning

1. Think Pair Share
2. Placemat and Round Robin
3. Jigsaw
4. Numbered Heads
5. PMI
6. Graphic Organizers
7. Effective Listening

Another conception for this study is the clear definition of reading comprehension and its nature.

1.5. Reading Comprehension. Reading comprehension according to the Muskingum College - Center for Advancement and Learning (CAL) refers to the ability to understand information

presented in written form. While this process usually entails understanding textbook assignments, reading comprehension skills also may affect one's interpretation of directions on exams, labs, and homework assignments and completion of job applications or questionnaires.

1.6. Reading Strategies for the EFL/ESL Students. Reading comprehension may be especially difficult for students whose primary language is not English. The task of reading is often more time consuming for ESL (English as a Second Language) or EFL (English as a Foreign Language) students. The following strategies are intended for use by foreign students to help with reading comprehension.

1.6.1. Think-pair-share Strategy. Think-Pair-Share is a cooperative discussion strategy developed by Frank Lyman (1981) and his colleagues in Maryland. It gets its name from the three stages of student action, with emphasis on what students are to be DOING at each of those stages.

1. Think. The teacher provokes student thinking with a question, prompt or observation. The students should take a few moments (probably not minutes) just to THINK about the question.
2. Pair. Using designated partners (such as with Clock Buddies), nearby neighbors, or a desk mate, students PAIR up to talk about the answer each came up with. They compare their mental or written notes and identify the answers they think are best, most convincing, or most unique.
3. Share. After students talk in pairs for a few moments (again, usually not minutes), the teacher calls for pairs to SHARE their thinking with the rest of the class. She can do this by going around in round-robin fashion, calling on each pair; or she can take answers as they are called out (or as hands are raised). Often, the teacher or a designated helper will record these responses on the board or on the overhead.

1.6.1.1. Why Should we Use Think-Pair-Share? We know that students learn, in part, by being able to talk about content. But we do not want that to be a free-for-all. Think-Pair-Share is helpful because it structures the discussion. Students follow a prescribed process that limits off-task thinking and off-task behavior, and accountability is built in because each must report to a partner, and then partners must report to the class.

Because of the first stage, when students simply THINK, there is Wait Time: they actually have time to think about their answers. Because it is silent thinking time, you eliminate the problem of eager students who always shout out the answer, rendering unnecessary thinking by other students. Also, the teacher has posed the question, and she has EVERYONE thinking about the answer, which is much different from asking a question and then calling on an individual student, which leads some students to gamble that they will not be the one out of 30 who gets called on and therefore do not think much about the question. Students get to try out their answers in the private sanctuary of the pair, before having to "go public" before the rest of their classmates. Students who would never speak up in class at least give an answer to SOMEONE this way. Also, they often find out that their answer, which they assumed to be stupid, was actually not stupid at all ... perhaps their partner thought of the same thing. Students also discover that they rethink their answer in order to express it to someone else, and they often elaborate on their answer or think of new ideas as the partners share. These, it seems, are powerful reasons to employ Think-Pair-Share in order to structure students' thinking and their discussion.

1.7. Background of the Study

The literature mentioned above offers some some concepts about and scientific definition of cooperative learning, cooperative learning strategies, and reading comprehension and learning. In this subsection we refer to some previous literature review studies.

Kassim Shaaban (1997) has done a study on the effect of cooperative learning strategies on reading comprehension of EFL learners. The findings of this study support the assertion that cooperative learning improves learners' motivation to read.

Tina Almaza (2006) stated that because students work in teams and enjoy more friendship, as found in other studies, they are objectively more likely to succeed. Due to comparison with peers, they learn through cooperative strategies in reading comprehension better than as individuals.

2. Objectives

What is important to work on such a problem is the effectiveness of the new methods like cooperative learning in today modern EFL classes. A few studies have been done on this method and its effect on classroom activities and especially performance of the students in reading comprehension. Another important factor is motivation of students in practicing on reading comprehension activities, which in most Iranian English classes, is a boring activity, so it can be revealed from this study what a teacher can do to generate more student interest in reading comprehension activities. As the class progresses, the teacher may change their method, using different strategies of cooperative learning such as partners, jigsaw, think-pair-share and etc. It should be mentioned at this point that the self-confidence of the students that are shy and afraid of participating in class activities increases through using cooperative learning strategy in reading comprehension.

2.1. Research Question. Is there any relationship between cooperative learning strategies and reading comprehension? In this study we examined the effect of first aim on the later, whether cooperative learning affects performance of the students in reading comprehension or not.

3. Methodology

3.1. Participants. In this study, there were 48 participants, male and female students ages 14 – 18 whose home language is Persian, learning English in an Iranian institute in Bandar Abbas city. They formed a cohort of intermediate proficiency level.

3.2. Instruments. The TOEFL test in Iran is used to determine language proficiency in students in the most of the studies and also for hiring teachers. In this study 50 question in two parts were used for listening, 25 questions for structure, and 45 questions for reading comprehension, with one writing section. Each student received a grade for reading comprehension. If each team member got a minimum of 80 percent correct, all team members were given additional points for contributing to the success of fellow team members.

3.3. Data Collection.

3.3.1. Placement Test and Dividing Groups.

Among these 48 students (sample groups) the mean TOEFL score was 557.9, above intermediate level. The minimum score in the sample group was 518, the maximum score 596. These scores showed much distance between the students in the group. Based on these results, an attempt was made to group students with average scores be on the same level until the results of the research got close to reality. (See Appendix at p. 11 – 13 for statistical data.)

Table 3.1: Background Knowledge of Students in TOEFL Placement Test

mean	standard deviation	max	min
557.9	24	596	518

Two classes were formed of 24 students, who were studying English as a foreign language in Bandar Abbas language institutes, the Noandishan institute and Shokuh institute. We divided each into 6 groups.

3.3.2. Cooperative Learning Group (A). This group employed cooperative learning strategies. Group 1: Reading comprehension scores for Group 1 were 80, 86, 80, 80. The mean of the scores was 81.5 and the standard deviation between the members of the group was 3. This reveals that the scores were on the acceptable level and the students had a good and close correlation.

Group 2: In this group the reading comprehension scores were 72, 82, 82, 84, with a mean of 80.

The standard deviation of 5.4 that showed little distance between the members.

Group 3: In the 3rd group the scores were 96,90,94,80 with mean of 90. The scores were in the high level and the standard deviation was 7.1, which is still quite good.

Group4: In this group also we could see that the scores were 96, 100, 96, and 94. The mean was 96.5 with the standard deviation 2.5. This showed high levels of student understanding and close correlation of the members.

Group 5: In this group the scores were 100, 98,100,100 with a mean of 99.5 and the standard deviation 1, a very high correlation among the students.

Group 6: Like the other groups, the scores were 88, 100, 96,100, with a mean score of 96, with standard deviation of 5, which shows close comprehension among students.

Overall, the mean of total scores was 90.5, with the minimum score 72 and the maximum score 100. Based on these statistics the comprehension of these 6 groups was in the high level and the distance between the obtained scores was very low.

Table 3.2: Comparison of the Cooperative Learning Based Groups

Groups	Reading Comprehension Mean	Standard Deviation
Group 1	81.5	3
Group 2	80	5.4
Group 3	90	7.1
Group 4	96.5	2.5
Group 5	99.5	1
Group 6	96	5

3.3.3. Individual learning (Group B). For reading comprehension of the class which did not employ cooperative learning methods the mean score was 45.2. We conclude that they were on the low level of comprehension. The minimum score for reading comprehension in this group of

16 and the maximum score of 100, with Standard Deviation of 24.3, showed a great distance in reading comprehension of these students.

Table 3.3: Individual Learning Group

Reading comprehension mean	Standard Deviation	Maximum Score	Minimum Score
45.2	24.3	100	16

3.4. Data Analysis. The comparison of the two groups shows significant distance between the two groups on the basis of reading comprehension. The mean of the scores in the first group (cooperative learning, group A) was 90.5, i.e., 90.5%, a high level of comprehension. The average score or mean in the second group (individual learning Group B) was 45.2, which equals 45.2%, a low level of comprehension. The minimum score in group A was 72 and the maximum obtained score was 100. This shows the close distance between the scores and reading comprehension of students in the group. On the other hand, in the second group (B) the minimum obtained score of 16 and the maximum score of 100 demonstrates a high degree of deviation between the members, as shown in Table 3.4.

Table 3.4: Comparison of the Two Groups with Two Learning Methods

	Group Scores	Standard Deviation	Maximum Score	Minimum Score
Group A Cooperative Learning	90.5	8.6	100	72
Group B Individual Learning	45.2	24.3	100	16

4. Results and Discussion

The result of this experiment supported the effectiveness of cooperative learning when dealing with reading comprehension. Cooperative learning can be used as an instructional strategy whereby students can improve on their reading comprehension. The use of active learning strategies such as cooperative learning is growing. Although researches demonstrated that

cooperative learning produces higher achievement than do competitive or individualistic experiences, some of these effects, however, do not automatically appear when students were placed in groups. To be cooperative, a group must have clear positive interdependence; use their skills as a group to work together and each member must hold each other personally and individually accountable to do his or her fair share of the work. In conclusion the result of the present study provides good evidence that students' achievement in reading comprehension can be improved by using cooperative learning groups.

Appendix: Tables

Scores of TOEFL placement test

TOFEL placement test

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	518.00	1	2.1	2.1	2.1
	522.00	1	2.1	2.1	4.2
	524.00	1	2.1	2.1	6.3
	525.00	1	2.1	2.1	8.3
	526.00	1	2.1	2.1	10.4
	528.00	3	6.3	6.3	16.7
	532.00	1	2.1	2.1	18.8
	533.00	1	2.1	2.1	20.8
	535.00	2	4.2	4.2	25.0
	536.00	1	2.1	2.1	27.1
	538.00	1	2.1	2.1	29.2
	542.00	1	2.1	2.1	31.2
	544.00	2	4.2	4.2	35.4
	546.00	3	6.3	6.3	41.7
	548.00	2	4.2	4.2	45.8
	554.00	1	2.1	2.1	47.9
	556.00	2	4.2	4.2	52.1
	564.00	2	4.2	4.2	56.2
	566.00	1	2.1	2.1	58.3
	567.00	2	4.2	4.2	62.5
	568.00	1	2.1	2.1	64.6
	574.00	1	2.1	2.1	66.7
	576.00	1	2.1	2.1	68.7
	578.00	4	8.3	8.3	77.1
	583.00	1	2.1	2.1	79.2
	584.00	1	2.1	2.1	81.2
	586.00	2	4.2	4.2	85.4
	588.00	1	2.1	2.1	87.5
	592.00	3	6.3	6.3	93.7
	594.00	2	4.2	4.2	97.9
	596.00	1	2.1	2.1	100.0
	Total	48	100.0	100.0	

Frequency of cooperative and individual learning groups and reading comprehension

		reading comprehension cooperative learning groups	reading comprehension individual learning groups
N	Valid	24	24
	Missing	0	0
Mean		90.5833	45.2083
Variance		75.64493	593.82428
Minimum		72.00	16.00
Maximum		100.00	100.00

reading comprehension cooperative learning groups

		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	72.00	1	4.2	4.2	4.2	
	80.00	4	16.7	16.7	20.8	
	82.00	2	8.3	8.3	29.2	
	84.00	1	4.2	4.2	33.3	
	86.00	1	4.2	4.2	37.5	
	88.00	1	4.2	4.2	41.7	
	90.00	1	4.2	4.2	45.8	
	94.00	2	8.3	8.3	54.2	
	96.00	4	16.7	16.7	70.8	
	98.00	1	4.2	4.2	75.0	
	100.00	6	25.0	25.0	100.0	
	Total		24	100.0	100.0	

Frequency of each cooperative group and their reading comprehension

Statistics

		group1	group2	group3	group4	group5	group6
N	Valid	4	4	4	4	4	4
	Missing	0	0	0	0	0	0
Mean		81.5000	80.0000	90.0000	96.5000	99.5000	96.0000
Variance		9.00000	29.33333	50.66667	6.33333	1.00000	32.00000
Minimum		80.00	72.00	80.00	94.00	98.00	88.00
Maximum		86.00	84.00	96.00	100.00	100.00	100.00

group1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	80.00	3	75.0	75.0	75.0
	86.00	1	25.0	25.0	100.0
Total		4	100.0	100.0	

group2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	72.00	1	25.0	25.0	25.0
	82.00	2	50.0	50.0	75.0
	84.00	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

group3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	80.00	1	25.0	25.0	25.0
	90.00	1	25.0	25.0	50.0
	94.00	1	25.0	25.0	75.0
	96.00	1	25.0	25.0	100.0
Total		4	100.0	100.0	

group4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	94.00	1	25.0	25.0	25.0
	96.00	2	50.0	50.0	75.0
	100.00	1	25.0	25.0	100.0
Total		4	100.0	100.0	

group5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	98.00	1	25.0	25.0	25.0
	100.00	3	75.0	75.0	100.0
Total		4	100.0	100.0	

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