The Effect of Cooperative Learning on Reading Comprehension of Iranian EFL Learners

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Abstract
This research attempts the effect of Cooperative Learning (CL) on reading proficiency. A standardized proficiency test was conducted on pre-intermediate learners. Among them 60 learners were chosen to participate in this study. Then they were randomly divided into two groups of 30. First, a pretest was given to the participants and the treatment followed afterwards. After the treatment, the posttest was conducted. Finally the analysis of t-test was used to find the statistical answer for the above mentioned question and the p value obtained (0.000) showed that the experimental groups had better results.

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1. Introduction
During the past decade, a new approach called “Cooperative Learning” seemed to attract a lot of attention and became popular. Even though most college courses are taught in a competitive or individualistic manner, more is understood about the effectiveness of cooperative learning than almost any other facet of education (Johnson, Johnson & Smith, 1991; Blosser, 1993). CL strategies demand a facilitator that transfers greater responsibility for knowledge acquisition, organization and application from the teacher to the student (McKeachie, 2002).

The purpose of this study is to use CL in high school situation to Iranian EFL learners and to see whether using CL has any significant effect on developing the students’ reading ability or not.

2. Statement of the Problem
As a teacher working at schools, the researcher has observed that in mainstream academic content courses at Iranian schools, lectures, class discussions and writing tasks are conducted in L1 (Persian). However, since there is an urge to earn knowledge from international sources, most readings assigned at universities are in English. Thus, Iranian students are L2 users in the sense defined by Cook (1990) since they are not native speakers of English but are expected to read and comprehend academic literature in English at a level comparable to their counterparts in English speaking countries.
Therefore, in designing a course to meet these needs, the main focus of English courses is reading. There should be a good and effective way which can help improving reading among Iranian EFL learners. The aim of this study hence is to see whether using cooperative learning (CL) to Iranian EFL learners has any significant effect on developing their reading ability or not.

3. Research Hypothesis
Cooperative learning (CL) does not have any significant effect on Iranian intermediate EFL learners’ reading ability.

4. Review of the related literature
Cooperative learning has been defined as "small groups of learners working together as a team to solve a problem, complete a task, or accomplish a common goal" (Artz & Newman, 1990, p.448). The cooperative learning model requires student cooperation and interdependence in its task, goal, and reward structures. The idea is that lessons are created in such a way that students must cooperate in order to achieve their learning objectives. The leading developers of cooperative learning include Robert Slavin, Roger and David Johnson and Spencer Kagan, all of whom have slightly different approaches and emphases (Metzke & Bergoff, 1999). Johnson and Johnson (1975) focus on developing a specific structure that can be incorporated with variety curriculums, with an emphasis of integrating social skills with academic tasks. Kagan's work focuses on the use of many different structures to help facilitate active learning, team building, and group skills. Slavin's work utilizes methods from both Johnson and Johnson and Kagan, and has resulted in the development of specific cooperative learning structures.

Cooperative learning activities also offer the opportunity to develop and practice strategies for learning and using language. Especially social-affective strategies such as asking for help and cooperation (O’Malley & Chamot, 1990, p. 139) are fostered in cooperative settings. Consequently, autonomous learning and the ability to plan, control and evaluate the learning process is enhanced by cooperation. Affective factors such as motivation and the reduction of anxiety to use the foreign language as a means of communication are also very relevant for language learning. Cooperative learning can provide a very pleasant learning atmosphere. The willingness to speak and act in a foreign language increases in small groups and students feel more confident to produce utterances in their L2. (Dörnyei, 1997; Jacobs & McCafferty, 2006, p. 27; Schwerdtfeger, 2003, p. 254).

5. Methodology
5.1. Participants: The participants for this study are Pre-University students learning English at Al-Zahra Pre-University Center in Golestan, Iran. The students are female. They had been studying English as a subject at Junior and Senior High School for six years with a maximum of two times seventy-five minutes per week. English is only used in the English class. All of them are native speakers of Persian languages. Language of instruction in English class is English combined with Persian.

5.2. Instrumentation: The Comprehensive English Language Test (CELT) was used to determine language proficiency in students. Also, a standardized TOEFL and PET (Preliminary English Test) reading comprehension test including 6 texts each followed by some reading comprehension multiple choice (MC) items was used in the study as pretest and posttest. The length of the texts used in the RC tests ranged from 100-180 words and the number of T units ranged from 14 to 26. The texts used in the RC tests were examined for their readability level using Fog index of readability to be at pre-intermediate level (below 13) suitable for the selected sample of students. The post test was used at the end of the 12-week instructional period.

5.3. Procedure: The subjects were chosen from among 120 Pre-University students. In order to have two homogeneous classes the researcher administered a proficiency test. Out of them 60 students with one standard deviation above and one below the mean were selected. The students were going to be divided randomly in two distinct groups, one control group (N= 30) and the other experimental group (N= 30). To start with, a pre-test of reading comprehension adapted from a TOEFL and PET reading test was administered to both groups. The test consisted of six texts with twenty-five multiple choice questions. The control group will be instructed via traditional instructional technique following an individualistic instructional approach. The experimental group worked in heterogeneous learning teams. The subjects were informed about the CL process that was going to be used in their classroom. The instructional materials used with experimental group were the reading texts of the pre-University students’ English course book "Learning to Read English for Pre-University Students 1&2" (Birjandi et al, 2010). At the end, all the subjects, the experimental group as well as the control group, took the RC post test in order to determine whether there was any significant difference between the two groups’ mean score after the treatment.

6. Data analyses
The t-test was a suitable statistic used to compare the two means of different groups who received different treatments. The level of statistical significant difference ($\alpha$) was set at .05. In order to test the hypotheses of this study the t-tests were conducted by SPSS program.

6.1. Descriptive statistics of all quantitative variables
Before investing the results on the scores of pretest and posttest, descriptive statistics were presented in order to summarize the available data and describe the main features of the data.

| Table1. Descriptive statistics for all quantitative variables in Control Group |
|---------------------------------------------------------------|
| **CG – Pretest** | **CG – Post-test** | **CG- Gain score** |
| Mean | 74, 2 | 77,76666667 | 3,566666667 |
| Standard error | 1,599137699 | 1,5783618260 | 223263842 |
| Median | 72,5 | 77,5 | 3,5 |
| Mode | 63 | 85 | 3 |
| Standard Deviation | 8,758837901 | 8,64504376 | 1,22866427 |
| Sample Variance | 76,7172413874 | 73678161 | 1,495402299 |
| Kurtosis | -1,306567838 | -1,329055994 | -0.78595774 |
| Sum | 2226 | 2333 | 107 |
| Count | 30 | 30 | 30 |

| Table2. Descriptive statistics for all quantitative variables in Experimental Group |
|---------------------------------------------------------------|
| **CG – Pretest** | **CG – Post-test** | **CG- Gain score** |
| Mean | 73,73333333 | 82,4 | 8,666666667 |
| Standard error | 1,49630451 | 1,491431465 | 0,187747283 |
| Median | 72,5 | 82 | 9 |
| Mode | 78 | 86 | 9 |
| Standard Deviation | 8,19559736 | 8,168906566 | 1,028334218 |
| Sample Variance | 67,16781609 | 66,73103448 | 1,057471264 |
| Kurtosis | -0,988870268 | -1,128526817 | 0,38637591 |
| Skewedness | 0,103281639 | 0,102330328 | 0,332202217 |
| Range | 28 | 28 | 4 |
| Minimum | 60 | 69 | 7 .1 |
| Maximum | 88 | 97 | 11 |
| Sum | 2212 | 2472 | 260 |
| Count | 30 | 30 | 30 |
As it is observable, the mean score of control group in pretest is equal to 74.2 and that of experimental group is 73.33. They are close to each other and it seems that there is not any significant difference between them. Also the mean scores of posttest in control and experimental groups are 77.76 and 82.4 respectively; there are differences observed between the mean scores.

Table 3: paired samples statistics of all groups

|            | Mean | N  | Std. deviation | Std. Error Mean |
|------------|------|----|----------------|----------------|
| Control pretest | 74.20 | 30 | 8.759          | 1.599          |
| Experimental pretest | 73.73 | 30 | 8.196          | 1.496          |
| Control posttest | 77.77 | 30 | 8.645          | 1.578          |
| Experimental posttest | 82.40 | 30 | 8.169          | 1.491          |

The result obtained in the research can be tested using 2-way paired samples t-test.

Table 4: Paired samples Test for TOEFL – Reading score

| Paired Differences                      | Std. deviation | Std. Error Mean | 95% confidence Interval of the Difference | T  | DF | Sig. (2-tailed) |
|-----------------------------------------|----------------|----------------|------------------------------------------|----|----|-----------------|
| Control pretest - Experimental pretest  | 1.479          | .270           | -0.86 - 1.019                            | 1.728 | 29 | .095            |
| Control pretest - Control posttest     | 1.223          | .223           | -4.023 - 3.110                           | -15.975 | 29 | .000            |
| Experimental pretest - Experimental posttest | 1.061    | .194           | -9.063 - 8.270                           | -44.726 | 29 | .000            |
| Control posttest - Experimental posttest | 11.189       | .217           | -5.077 - 4.190                          | -21.352 | 29 | .000            |

Our aim is to test whether or not the outcomes in two groups are significantly different. First, to make sure there was no significant difference in the pretest scores of the two groups and the two groups were actually matched, the pre-test scores of two groups were compared. The significance level was .095 at 95% Confidence Interval and because of this value is bigger than .05, it is concluded that there is no significant difference in performance between the control and experimental groups in pre-test. To see if there has been any difference between the results of pre-test and posttest of each group, the same statistical test was performed. As indicated in pair 2 of table 4.4, the significance value is remarkably less than .05. Thus the null hypothesis is rejected in favor of the research hypothesis. It can be concluded that there has been a significant improvement in the performance of control group and the same goes for experimental group too.

The aim of this study was to investigate the difference in performance of the two homogenized and matched groups after the experiment. The significance level in pair 4 of table 4.4 is remarkably less than .05. Thus the null hypothesis is rejected. It then can be concluded that there is a significant difference between the results of the posttest scores of the two groups and this can be attributed to our treatment.

7. Discussion and conclusion

The experimental group who experienced CL showed superiority over control group and achieved better results in TOEFL reading test than those who participated in control group. The posttest score mean of the experimental group was significantly higher than that of the control group. In a cooperative learning classroom, all students are exposed to a learning environment, which supports and encourages academic, personal, and social growth. Some students’ motivation to stay in school
and work hard at class work seems to be very responsive to the human climate of caring and support they feel from their teachers and peers. Cooperative learning is a possible teaching method that may address the various needs of the students with mixed levels of English ability in a heterogeneous class.

Many scholars assert that cooperative learning is the best option for all students because it emphasizes active interaction between students of diverse abilities and backgrounds (Tsai, 1998; Wei, 1997; Yu, 1995). The findings displayed a strong positive effect of CL as a teaching method in the classroom on Iranian pre-intermediate EFL learners’ reading ability. The result of the study may be beneficial to junior and senior high school teachers and university instructors. It encourages them to transform “teacher-centered” methods into “student-centered” methods. It helps the students to have more self-esteem and less anxiety when they take part in class activities and encourages them to be more active participants in learning process.

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