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IMPACT OF COOPERATIVE LEARNING ON IMPROVING VOCABULARY OF HIGHER SECONDARY ESL STUDENTS

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ABSTRACT:

Cooperative learning is a fairly tried and tested teaching methodology the world over. This is in contrast to the DRTA; cooperative learning is a group learning technique where the learners form small groups between 4 to 6 members, with each member taking on a well-defined part of the task and the others depend on this member for that part of

the task for it to be completed. Cooperative learning has been tested amongst various types of learners, for various grades, various subjects with mostly positive benefits, except that implementing this within an academic calendar and syllabus is challenging. This paper tries to study the impact of cooperative learning on improving vocabulary in 9th grade ESL students at Panchagiri Practicing High School in Chikkaballapur, Karnataka. The study included 80 students split equally into experiment and control group, where the experiment was taught the English subject using the Jigsaw method of cooperative learning. The experiment group and the control group both were given a vocabulary test for 30 marks before and after the treatment and their marks were recorded. The hypothesis was that cooperative learning does impact English vocabulary positively compared to DRTA. The data were analysed using ANCOVA. The results prove or reinforce several findings of different subjects and grades that this is an effective way of improving vocabulary among the English learners where the language is a second language. The study used a 5E lesson plan specifically devised for the study for two lessons which were used from the standard textbook prescribed for 9th graders by the Govt. of Karnataka. It is therefore proposed that teachers in an ESL context should use cooperative learning to improve their students' vocabulary, which is an essential element of learning all the subjects as they are taught in English. This will improve the overall academic achievement and hence the confidence and motivation.

KEYWORDS:

Cooperative Learning, Higher Secondary ESL Students.

INTRODUCTION:

Cooperative learning is defined as "methods for helping students learn effectively by studying in groups". According to Slavin (1983) "cooperative learning as a teaching strategy

that encourages students to work in small, heterogeneous learning groups" in order to promote better individual learning. The fact that learning groups should be mixed or diverse is significant to ensure that learners can learn from each other, and provide encouragement and support to each other in different aspects and at different levels of the curriculum. Jacob

(1999) states that cooperative learning is an approach of having systematic, structured and diverse types of instructional methods in which small groups of students work together and aid each other in completing academic tasks. Cooperative learning is group learning activity planned so that learning is reliant on the socially

structured exchange of information between learners in groups and in which each learner is held accountable for his or her own learning and is motivated to increase the learning of others (Olsen and Kagan, 1992). Likewise, cooperative learning has generally avowed to be the best option for all students since it emphasizes active interaction between students of diverse abilities and backgrounds (Nelson, Gallagher, & Coleman, 1993; Tsai, 1998; Wei, 1997; Yu, 1995).

Vygotsky (1978) believes that learning is a social process that stems from interaction with others and that language plays a central role. One's own perception of the world can be challenged through linguistic formulations and different ways of interpreting specific contents. In addition to this, Vygotsky presented the concept of the zone of proximal development. He argued that for learning to take place, a pupil must interact with someone who can guide him/her further from what they already know into the field where they can solve a task but with the help of others and thereby improving their knowledge horizon. Thus, the process requires dialogue and engagement between two or more persons in order for someone's current knowledge to be challenged and developed, which is implicit in cooperative learning.

Vocabulary is a strong factor for success in learning English and important input for gaining language skills such as reading and speaking. In this view, instructors and learners know that many of the readings involve word recognition and lexicons and language acquisition is an active process that needs to work on vocabularies in a given context.

TYPES OF COOPERATIVE LEARNING STRATEGIES

One widespread CL activity is think/pair/share (TPS) in which students think about a topic provided by the teacher, pair up with another student to discuss it, and then share their thoughts with the whole class (Danebeth Tristeza Glomo-Narzoles 2012). This technique was found to improve students' motivation and achievement significantly Jigsaw is another CL method that can be effectively applied in teaching language. It was first designed by Aronson and his colleagues in the 1970s and later redefined by Slavin (1980). In this activity, learners are divided into heterogeneous home groups and given a particular aspect of a topic to study and explore; the groups are then reconfigured into new groups so that members from each group share their learning with other groups (Ning, 2010).

A third CL method is group investigation by in which learners in their teams determine a general topic and subtopics for investigation, plan for the investigation, carry out the investigation through interaction and interpretation with their teacher, teammates and other teams, and present their findings after which an evaluation session is launched (Aicha, 2012).

Round robin and roundtable are two additional activities. In the round-robin, each learner, in turn, shares something with his or her teammates, while in the roundtable, each learner, in turn, writes one answer on a paper, and then pencil and paper are passed around the group (Kagen, 1993, cited in Grundman, 2002).

There were many studies which also delved into the effectiveness of different cooperative learning strategies like, three step interview, student teams achievement division (STAD) by (De Vries and Edwards, 1973) and (Slavin, 1980) Teams- Games-Tournament (TGT), Reciprocal teaching (Palinscar & Brown, 1984).

EFFECT OF CL ON VOCABULARY

Allen (1983) and Laufer (1986) have pointed out the importance of vocabulary acquisition for second language learners. Although the amount of empirical research on vocabulary acquisition is increasing (e.g., Haastrup, 1991; Mondria and Witde-Boer, 1991), the consensus is lacking over issues such as the conceptualization of the process by which vocabulary acquisition occurs.

Fekri (2016) studied the effect of cooperative learning on the vocabulary of EFL students in Iran and found a positive change in cooperative learners compare to competitive learners. The study used 45 of 77 students from 4 EFL institutions as the experimental group. Bilen and Tavil (2015) investigated the effect of cooperative learning on vocabulary on 48 4th grade ESL students in turkey using pre-test post-test control group design and found a positive effect from the analysis. The study

also noted an improvement in positive attitudes of the learners apart from the vocabulary. Shafiee and Khavaran (2017) studied 90 EFL students in Iran using STAD technique and results were analysed using independent and paired sample t-test. The results were found to reinforce earlier studies of CL on vocabulary learning that it was effective.

HYPOTHESIS

It was hypothesized that cooperative learning, when implemented in a regular ninth grade classroom is more effective in improving vocabulary than the Directed Reading Thinking Activity.

H₀: There is no significant difference in English vocabulary between the Experiment Group and the control group.

H₁: There is a significant difference in English vocabulary between the Experiment Group and the control group.

Sample

The research was conducted in Government High School, Chickaballapur, Karnataka. The study group is made up of 80 9th graders. These students were heterogeneously mixed. They come from low to middle-income families and are similar in ethnicity. Approximately fifteen students from the group speak little or no English. Instead of going to foreign language class, these students go to ESL classes (English as a Second Language) as English is native in India, but used in day to day in the conduct of business and administration. The sample is called an intact sample. The sample was divided into two random groups of 40 each, with one group being the experimental group which received the treatment of learning through the jigsaw method of cooperative learning. The other being the reference group or the control group which was taught using the regular DRTA method.

Experiment

Pre-test: All the 80 students were given, vocabulary and speaking ability and fluency test from the topics given in the prescribed English Textbook. The regular English teacher then evaluated the papers.

Treatment: The experimental group was divided into groups of 4 each and the 2 lessons and a poem were selected from their NCERT textbook prescribed by the government of Karnataka for the 9th grade in the state. A 5E lesson plan was developed for these topics. The cooperative learning was structured within the regular English classroom sessions of 45 minutes each during the first term of the academic year 2019-20. The students and the teacher who carried out cooperative learning were briefed about the exercise.

Post-test: The students from both experiment groups and the control group were given tests of 90 minutes for 30 marks to evaluate their performance on the topics used for teaching in the DRTA and cooperative learning methods. The answer sheets were then evaluated by the same English class teacher.

Analysis

According to (Dimitrov & Rumrill, 2003) in their paper “pretest-posttest designs and measurement of change” suggested (1) Analysis of variance (ANOVA) on the gain scores, (2) Analysis of covariance (ANCOVA), (3) ANOVA on residual scores, and (4) Repeated measures ANOVA. The conclusion drawn by the authors is that for intact group, (similar to this study) and pretest-posttest design ANCOVA is more suitable in reducing error variance.

Results

The results of the test for both pre-test and the post-test were then entered into spreadsheet and analysed using ANCOVA in SPSS 21.0 to check if the scores on the post test was significantly different between the two groups and if the difference between pre-test and post-test was significantly different for the experiment group and control group using the paired sample t-test. The SPSS output is reproduced below.

Univariate Analysis of Variance (ANCOVA)**Table 1: Between Subjects Factors**

		Value Label	N
Group type	1	Experiment	40
	2	Control	40

Table 2: Descriptive Statistics

Dependent Variable: Post-test Vocabulary Marks			
Group type	Mean	Std. Deviation	N
Experiment	18.20	.966	40
Control	11.93	4.417	40
Total	15.06	4.479	80

Table-2 shows that the mean of the experiment group which is 18.20 out of 30 is far higher than the mean of the control group which is 11.93 out of 30. The std. deviation of the experiment group is less .966 compared to the control group on the post-test scores.

Table 3: Levene's Test of Equality of Error Variances^a

Dependent Variable: Post-test Vocabulary Marks			
F	df1	df2	Sig.
33.973	1	78	.000

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.
a. Design: Intercept + Pre_Vocab + group

Table-3 depicts that the two groups variance according to levene's test is not equal on the dependent variable which is post-test vocabulary scores.

Table 4: Tests of Between-Subjects Effects

Dependent Variable: Post-test Vocabulary Marks					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	990.413 ^a	2	495.206	64.164	.000
Intercept	171.418	1	171.418	22.211	.000
Pre_Vocab	202.900	1	202.900	26.290	.000
group	578.548	1	578.548	74.962	.000
Error	594.275	77	7.718		
Total	19735.000	80			
Corrected Total	1584.688	79			

a. R Squared = .625 (Adjusted R Squared = .615)

From Table-4, the F-value for group which is 0.000, this is less than the significance value of 0.05 hence, reject the null hypothesis that the post-test and pre-test scores are equal which means that the null hypothesis is rejected and alternate hypothesis stated above that there is significant difference in English vocabulary between the experiment group and the control group is accepted. This leads us to conclude that there is a positive impact of cooperative learning on vocabulary.

Table 5. Parameter Estimates

Dependent Variable: Post Test Vocabulary Marks						
Parameter	B	Std. Error	t	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Intercept	4.529	1.508	3.003	.004	1.526	7.531
Pre_Vocab	.800	.156	5.127	.000	.489	1.110
[group=1]	5.525	.638	8.658	.000	4.255	6.796
[group=2]	0 ^a					

a. This parameter is set to zero because it is redundant.

Table-5 indicates that the parameter estimates of the effect of the independent variable (pre_vocab score, and the experiment group) on the dependent variable (post-test score on vocabulary). The results indicate that there is slight positive effect of pre-test score on the post-test scores on vocabulary and these 2 parameters are significant as the p-value for both are 0.00 which is less than significance value of 0.05.

CONCLUSION

The result of this experiment based on Table-1 &3 supported that the effectiveness of cooperative learning is significant, hence the impact of cooperative learning on vocabulary on the ESL learners are positive through Cooperative learning. This leads us to conclude like many other researchers like (Fekri, 2016; Shafiee & Khavaran, 2017) that Cooperative learning can be used as an instructional strategy whereby students can improve their vocabulary. The use of active learning strategies, such as cooperative learning, is growing. Although research demonstrates that cooperative learning produces higher achievement than do competitive or individualistic experiences, some of these effects, however, do not automatically appear when students are 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 results of the present study provide some information that students' achievement in vocabulary can be improved by using cooperative learning groups. The findings of the current research have several pedagogical implications for instructors and curriculum designers. First, ESL learners should understand the nature and the purpose of CL. Thus, the language instructor's role should be to enhance their awareness of the advantages of employing various types of CL related methods.

In addition, because of limitation of time and schools' administrative settings in India, this research could not be conducted for longer duration; however, if it was as a longitudinal study, the reliability of the result of this research study could be enhanced more. Therefore, future collaborative strategic vocabulary research should occur over an extended period, at least an academic calendar, but preferably over several academic sessions and on a different level of learners.

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