



The Impact of Cooperative Games on Young Learners' English Vocabulary Acquisition and Retention

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Abstract

Games are authentic, or pedagogical, classroom activities for fostering, bearing students' mindful inspirations and desires in language learning. This quasi-experimental study examined the impact of cooperative games on young learners' English vocabulary acquisition and retention. 48 third-grade young learners (aged 7-8) were assigned to an Experimental Group (EG), which practiced vocabulary through cooperative games, and a Control Group (CG), which learned vocabulary without games. Data collected via pretest, posttest, delayed posttest, and questionnaires were analyzed using SPSS. The results indicated that the young learners in the EG significantly outperformed those in the Control Group in both vocabulary learning and retention. Most EG young learners also showed their more positive attitudes toward vocabulary learning. The findings highlight the pedagogical value of using cooperative games because it not only helps reduce anxiety and boredom but also cultivates a more effective and enjoyable learning environment for young learners.

Keywords: Cooperative Games, Grammar Translation Method, Younger Learners, Attitudes

1. Introduction

Currently, the importance of embedding games into language lessons and classroom activities has increased in popularity in most schools; especially in several non-English-speaking countries, Vietnam is a good example of this model for increasing basic education. The English language in the lower education system is a medium of instruction. Therefore, teaching English to young learners has gained greater attention in the domestic education system. Teaching English to younger learners in primary schools nationwide has been a top priority. More importantly, it strongly reflects some definite contributions to the implementation of foreign language policy and planning in the context of global integration.

Domestically, the English language, as a medium of instruction heading forward the lower education underlying the National Foreign Language Project (NFLP) given by MOET, is that English is a compulsory subject in the general education curriculum from the lower to higher level, reaching a level of proficiency according to the Common European Framework of Reference for Languages (CEFR) (MOET, 2014) ^[20]. Teaching English as a foreign language in primary schools is gaining much more popularity throughout the world. English has been reported to be an elective subject at the primary level in more than 50 countries, 25 of which have made such a language a compulsory subject (Ko, 1993) ^[12].

In reality, language learners are able to target English with linguistic competence and performance (language skills: listening, speaking, reading and writing), learning aspects (explicit and implicit) and knowledge (declarative and procedural) through engaging in language activities, including concrete situations (formal and informal) and tasks (real-world tasks and pedagogical tasks). Younger learners are gradually stepping on several challenges in their learning process. However, younger learners often face challenges such as low performance, limited competence, anxiety, lack of motivation, and a loss of confidence.

1.1. Problems with teaching and learning English vocabulary in the context of Vietnam

Domestic education in Vietnam relies on heavy theoretical concepts, but renovations of programs and foreign language instruction at most levels are changing from the “traditional mode” to the “communicative competence”. Its traditional appearance took off with abandoning “remembering structures in order to solve the tasks” and then being enthroned with “learning a language for effective communications”. If language structures make up the skeleton of language, then it can only be vocabulary and lexical activities that provide the vital organs and the flesh of language learning” (Harmer, 1993; p. 153) ^[9]. In the same vein, Wilkins (1972) ^[25] wrote “without vocabulary, nothing can be conveyed” (p. 111). No matter how good at grammar students are, no matter how proficient they are in a foreign language, communication does not yield fruitful insights in meaningful ways without words (McCarthy, 1990) ^[26]. Additionally, Cameron (2001) ^[27] stated that using games pertaining to vocabulary and classroom activities plays a significant role in learning a language. It is one of the amazing elements that closely connects the four skills together; it helps learners gain knowledge growth. To communicate smoothly in a foreign language, students need an adequate and meaningful context to use a language that they have learned, but most native learners sometimes feel bored with dull vocabulary lessons, tasteless units with some traditional teaching methods such as the grammar translation method (Nguyen and Khuat, 2003).

In recent years, several studies on the effects of language teaching with games embedded in the lesson as a recipe for fun and attraction to young learners’ English vocabulary learning in Vietnam have been conducted with various models with different researchers. For example, the research of Tuan (2012) ^[19] entitled “vocabulary recollection through games”. Furthermore, Huyen and Nga (2003) ^[13] researched the effectiveness of learning vocabulary through games. In particular, Huong (2009) ^[12] conducted a study on the impact of language games as warm-up activities for 9th-grade students’ vocabulary retention and motivation. Nevertheless. Moreover, Huong (2013) ^[11] investigated the effects of real-world tasks with outdoor activities using lexical games for primary English learners in Vietnam.

1.2. Aims of the study

This research provides fruitful insights into teaching games to younger English-speaking learners in the local context, with two keynotes:

1. To investigate the effects of cooperative games on young learners’ English vocabulary learning achievements and their retention.
2. To discover young learners’ attitudes toward learning English vocabulary through cooperative games within English language classrooms.

1.3. Research questions

Specifically, this research sought to answer the following questions:

1. What are the effects of cooperative games on young learners’ English vocabulary learning outcomes and their retention?
2. What are young learners’ attitudes toward learning EFL

vocabulary through cooperative games used in English-language classrooms?

1.4. Significance of the study

Two keys were used to indicate the importance of this study:

1. For students, embedding cooperative games into lessons helps young learners learn EFL vocabulary quickly, mindfully and effectively. At the same time, they are able to understand the meaning of words, use them easily and actively, and enhance their vocabulary retention better.
2. Teachers can comprehensively understand the roles of games and various enriching teaching methods to promote integrative language teaching and increase the quality and value of teaching and professionals.

1.5. Scope of the study

This study investigated the effects of cooperative games on young learners’ English vocabulary learning outcomes and their retention by 48 third graders in the center city of primary school aged 7-8 years in the academic year 2023-2024.

2. Review of related literature

2.1. Definitions of terms

2.1.1. Younger learners

This term refers to “the learners of the youths in general, and the young language learners under the youths or lie within school age in particular depending on the writer’s purpose” (Nunan, 2016, p. 69) ^[15]. Some, whose purpose is to provide insights for teachers, pay close attention to the primary school years, typically from the ages of 5 to 12 (Linse, 2005, as cited in Nunan, 2016) ^[15]. In a book published in 2013 entitled “*Longman dictionary of language teaching and applied linguistics*”, Richards and Schmidt’s (2013) ^[22] definite statement that the term young learner refers to students of kindergarten and primary school age in a particular context.

2.1.2. Vocabulary retention

There are various definitions of retention in the literature. Heuberger (2017) ^[23] defines the term retention in dictionaries to assist teaching, that is, it is the verbal action of keeping something rather than losing it or stopping it”. Retention usually pertains to a conscious process that may involve learning by heart, practice, and associative learning (Ausubel, 1968) ^[3]. Furthermore, he claimed that learning by heart is the process of acquiring material as discrete and approximately isolated entities. This process involves the mental storage of items that have fewer or empty connections with the existing cognitive structure. On the other hand, the process of conscious learning enables learners to obtain a close linkage to new materials or related items in their prior knowledge (Ausubel, 1968) ^[3].

2.1.3. Cooperative learning

Ali (2017) ^[2] clearly defines any classroom learning situation in which students of all performance levels work together in structured groups to achieve the team’s common goal. Moreover, Johnson & Johnson (as cited in Hung 2019, p. 1124) ^[28] strongly stated that cooperative learning is a set of teaching and learning strategies that are used to enhance students’ collaboration in pairs or groups of up to five to incorporate peer education into students’ learning.

2.1.4. Cooperative Games

This term indicates a real-world game based on collaboration rather than competition (Lyons, 2017) ^[24]. This requires that students work together in pairs and groups to achieve goals successfully that they cannot obtain individually or competitively. There are cooperative games of all types for all ages and situations that include board games, circle games, PE games, digital games, etc. (Lyons, 2017) ^[24]. Notably, cooperative games are all based on the principles of sharing information, helping each other, playing together, and increasing the level of collaboration consciousness within groups rather than working against each other. In this study, a cooperative game is a language game that encourages the student to learn EFL vocabulary through collaborative efforts.

2.1.5. Cooperative games

In this case were selected based on a review of the literature and the small class size at the research site, leading to the choice of two games for the treatment: 1) the topic around us and 2). hope's ladders. These cooperative games were sourced from a website, namely, Tech-This.com or artificial intelligence (AI). These websites were created by Paul Adams and others with a series of well-respected members of the ESL community as a way for English teachers to access

quality teaching resources online. The websites provide teaching activities, lessons, worksheets, articles, games, and ideas that are helpful to both new English teachers and more experienced teachers. It offers the highest-quality teaching resources most cost-effectively to benefit teachers and English students. Below is a brief description of these four cooperative games used throughout the text.

The first game is "*hope's ladders*". This vocabulary game is very helpful for young learners to practice collocations. The procedure of this game is as follows. It starts with writing the first and last word of your run-on collocations on a ladder on the board, leaving empty rungs for the words in the middle. The teacher then explains that each word on the ladder collocates with the word next to it, and the collocations can be read up or down. Next, the teacher divides the class into two teams (A and B). Team A is able to choose either the top or bottom rung of the ladder. The teacher writes the first letter of the word on their chosen rung. For example, if team A chooses the top rung, the teacher adds one "s" for that team. Team A will have to try their best to guess the word from the collocation, e.g., play b. If team A chooses the word wrong, team B would choose the top or bottom rung, and another letter is added. Finally, if a team correctly guesses a word, it will win one score and play again. The team will be the winner if it earns more scores.

Table 1: Sample of a collocation ladder game

Basketball throwing as listening to music in a blind-man's bluff play		
	doll	
Team A	_____	Team B

The second game was "*the topic around us*". These words associated with a familiar game popularly used in the classroom help learners practice vocabulary related to a topic. The game is expected to activate a "*lead-in*" to a topic area. The game's procedure involves the following steps: The teacher first writes a list of some popular topics (at least 5 or 7 topics), and then learners follow to practice on the board with these topics they choose. For example, *school, family, friends, houses, food and drink, sports and games and others*. The teacher then divides his or her class into teams and hands them school equipment such as paper, pencil, etc. The teacher then asks the teams to copy down the topics from the board and think of three potential words associated with each topic and develop them with words that they like. The teacher moves around and waits until the young learners finish writing; The teacher begins by mixing and changing team members, then says one of their associated words to the opposing team. Each team has two turns to play. Learners try to guess which topic the word refers to, using the labels "*Who is right*" and "*Who is wrong*". If the correct topic on the first is the winner, they score two bonus points. These classroom activities will continue until all the words have been used. As a result, the last team with the least bonus points will be the

least winner.

Table 2: Sample of "What's the topic" game

Topics for innermost joys of daily classroom activities				
school	family	friend	house	food
Library playground classroom				

3. Methodology

3.1. Research design

This study used both tests and questionnaires as survey methods. The test is used to measure the effects of cooperative games compared with those of the traditional method (GTM) on young learners' vocabulary learning, and a questionnaire (19 statements) is used to obtain their attitudes toward learning vocabulary through cooperative games after treatment. The quasi-experimental research design is shown in Table 3.

Table 3: Quasi-experimental research design

CG (N=24)	Pretest	No treatment	Posttest	Delayed post test
EG (N=24)	Pretest	Treatment	Posttest	Delayed post test

3.1.1. Participants and locales

Using the stratified proportional sampling technique, this study involved a population of 48 (N=48) randomly selected primary young learners from a state school. The sample represented 17% of the total number of the first year of the 2023-2024 school year in a provincial region of Vietnam.

3.1.2. Instruments

The main instrument used in this study has two parts. Part one

is a questionnaire designed to investigate participants' attitudes toward learning EFL vocabulary through cooperative games. The second half included tests such as the pretest, posttest, and delayed posttest, which are designed to measure the effects of cooperative games on young learners' English vocabulary learning outcomes and their retention, as shown in Table 4.

Table 4: Linkage between the research questions and research instruments

Research questions	Research instruments
Q1. What effects are cooperative games upon the young learners in English vocabulary learning and retention?	Pretest Posttest Delayed posttest
Q2. What are the young learners' attitudes toward learning English vocabulary using cooperative games embedded in the classroom?	Questionnaire survey

3.1.3. Data collection and data analysis procedure

The basic data gathering procedure of this study was a survey of 48 young learners from the 2023-2024 school year in two classes of a state primary school.

The data were collected from the pretest, posttest, and delayed posttest. The questionnaire was analyzed via the Statistical Package for Social Sciences (SPSS version 22.0).

To answer the second research question, the descriptive data collected from the EG students' responses to the questionnaire items were calculated and analyzed with a table of X (Brown, 2001) ^[29]. The mean score (X) represents the response of the young learner to the items examined according to the level of agreement as follows:

Table 5: Measurement of parameters for the levels of agreement

Levels of agreement	1.00-1.80	very low
	1.81-2.60	low
	2.61-3.40	medium
	3.41-4.20	high
	4.21-5.00	very high

3.1.4 Data analysis and discussion

To answer the first research question, descriptive data collected from the pretest, posttest, and delayed posttest were calculated and analyzed precisely. First, the reliability of the pretest, posttest, and delayed posttest of both the EG and CG was evaluated.

The reliability of the test scores was computed precisely to ensure their normal distribution. The researcher had two teachers score the student's paper tests, and then the researcher ran the scores on SPSS 22.0 to check the reliability of the two raters. The results are displayed in Table 6 and Table 7 below:

Table 6: Reliability of the retest, posttest and delayed posttest

Reliability Statistics			
Instruments	Group	Cronbach's Alpha	Item numbers
Pretest	Experimental	.996	2
	Control		
Posttest	Experimental	.996	2
	Control		
Delayed posttest	Experimental	.860	2
	Control		

Table 6 reveals the scores between the two raters of those mentioned tests (rpre = .996, ppre = .000 < 5%; rpost = .996, ppost = .000 < 5%; rdelayed = .860, pdelayed = .000 < 5%). In addition, Table 6 shows that the reliability coefficient

(Cronbach's alpha) of the two raters of the pretest, posttest, and delayed posttest reaches 0.860 ($\alpha < \pm 0.9$), which indicates that these tests have a high degree of reliability.

Performance of Both Groups on the Pretest

Table 7: The results of the variables

Measured Variables	EG	Sig. (2-tailed)	r.
X1	48	.000	1
Y1		.000	.992
X2		.000	1
Y2		.000	.992
Z1		.000	1
Z2		.000	.993

X1= PRE_Judge1; X2=X2 POST_Judge1; Y1= Y1 PRE_Judge2; Y2=Y2 POST_Judge2; Z1= Z1 DELAYED_Judge1; Z2=DELAY_Judge2

The pretest examines whether young learners' English vocabulary background in the two groups was the same or different before treatment. First, descriptive statistic measures (X) and (S.D.) were obtained from the pretest of the two groups (Table 8).

Table 8: Descriptive statistics on the pretest scores of the EG and CG

Method	Group	Min	Max	Mean (X)	S.D
	CG (N24)	3.0	8.0	4.80	1.31
Pretest	EG (N24)	1.2	8.0	4.75	1.65

Table 8 shows that the mean scores of the CG (X= 4.80) are slightly higher than the mean score of the EG (X=4.75), with SD=1.31 for the CG and SD=1.65 for the EG before the treatment, which shows that the former is more reliable in the EG pretest. Therefore, the pretest scores of the EG ranged from 1.2-8.0, whereas those of the CG ranged from 3.0-8.0. There was a significant difference between the EG and the CG in terms of the mean scores before the treatment. In other words, to carefully examine whether the significant difference is ongoing, a t test was run.

Table 9: Independent samples T- test on the pretest of the two groups

Method	Groups	N	Sig	MD	t	df	Sig.(2-tailed)
Pretest	EG	24	.423	-.050	-.116	46	.908
	CG	24					

Table 9 shows that there is no statistically significant difference in the pretest mean scores of the two groups before treatment, as Sig.=0.42 is greater than the alpha value of 0.05 ($p=.423$; $p > \alpha$). Additionally, Sig=.908 is much greater than the alpha value of 0.05 ($p=.908$; $p > \alpha$). Both groups are equivalent in terms of vocabulary performance before the treatment.

Pretest and posttest performance of the control group

A paired samples t test was run to examine the differences in the vocabulary performance of the CG in the pre- and posttests before and after treatment. This process is described in Table 10 as follows:

Table 10: Paired-samples t test at the pretest and posttest of the CG

Group	Test	N	M	Min	Max	SD	MD	t	df	Sig. (2- tailed)
CG	Pre	24	4.80	3	8	1.31	-1.35	-4.78	23	.000
	Post	24	6.15	2.4	8	1.45				

The results in Table 10 show that the vocabulary performance of the CG students slightly fluctuated when the mean scores between the pretest and posttest were compared. Specifically, the pretest mean score was 4.80, whereas the posttest mean score was 6.15. In addition, the S.D. of the posttest is slightly greater than that of the pretest (SD pretest=1.31 and SD posttest =1.45). This has proven that there is more variability in the posttest scores. Additionally, Sig=.00, which is less than the alpha value of 0.05. ($p=.000$; $p < \alpha$). This means that there is a difference between the mean scores of the pretest and posttest in the CG. However, the CG students experienced only slight fluctuations in vocabulary performance after the treatment with GTM. This difference in the mean scores of the two tests was not statistically significant (Table 10). CG students do not significantly improve their vocabulary performance when they learn vocabulary with GTM.

Experimental group performance on the pretest and posttest

Similarly, differences in the EG's vocabulary performance in the pretest and posttest before and after treatment are described in Table 10 below.

Table 11: Paired-samples t test at the pretest and posttest of the experimental group

Group	Test	N	M	Min	Max	SD	MD	t	df	Sig. (2-tailed)
EG	Pre	24	4.75	1.2	8	1.65				
	Post	24	7.36	4	10	1.74	-2.61	-9.90	23	.000

The results in Table 11 show that the EG students achieved a significant improvement in vocabulary performance when the mean scores between the pretest and the posttest were compared. In particular, the mean score of the pretest is 4.75, whereas the mean score of the posttest is 7.36. The pretest scores ranged from 1.2 to 8.0, while the posttest scores ranged from 4.0 to 10, with SD=1.65 and 1.74, respectively. This means that there is more variability in the posttest scores of the EG. Additionally, Sig. =0.00, which is less than the alpha value of 0.05. ($p=.000$; $p < \alpha$). This proves that there is a significant difference between the pretest mean scores and the posttest mean scores in the EG. In other words, the EG students remarkably improved their vocabulary performance under the intervention with cooperative games used during classroom activities.

Performance of both groups on the posttest

The results in Table 12 are delivered to the subjects as a posttest to check whether their English vocabulary

performance in the two groups is the same or different after treatment. First, a descriptive statistic is run to measure the mean score (X) and standard deviation (S.D.) from the posttest of the two groups.

Table 12: Descriptive statistics on the posttest scores of the EG and CG

Method	Group	Min	Max	Mean (X)	SD
	CG	2.4	8.0	6.15	1.45
Posttest	EG	4.0	10	7.36	1.74

Obviously, the EG is greater than the CG. The EG mean score ($X=7.36$) was greater than that of the CG ($X=6.15$) ($S.D.=1.74$; $SD=1.45$) after the treatment. This means that there is more variability in the posttest scores of the EG. Specifically, the posttest means scores of the EG ranged from 4.0 to 10, whereas those of the CG ranged from 2.4 to 8.0. This finding reveals a significant difference between the mean scores of the EG and EG after the intervention; the EG students increased their level of learning and improved their vocabulary performance in cooperative games (see Table 12).

Table 13: Independent samples t test for the CG and EG

Method Groups	N	Sig	MD	t	df	Sig (2-tailed)
CG	24					
Posttest EG	24	.267	1.21	2.62	46	.012

The results of Table 13 reveal that there was a statistically significant difference in the posttest scores between the two groups after treatment. When $\text{Sig}=.012$ is less than alpha ($p=.012$, $p<.a$), there is a significant difference in vocabulary learning outcomes. As a result, teaching vocabulary via cooperative games during a lesson has much more positive and positive effects on students' learning than does teaching vocabulary via GTM in the classroom.

Performance of both groups on the delayed posttest

The delayed posttest was delivered to the subjects to check their English vocabulary retention in the two groups after finishing the intervention two weeks later. First, a descriptive statistic was run to measure the mean scores and standard deviation from the delayed posttest of the two groups (see Table 13).

Table 14: Descriptive statistics on the delayed posttest scores of the EG and CG

Method	Group	Min	Max	Mean (X)	SD
	CG	3.0	8.0	5.49	1.18
Delayed posttest	EG	4.4	10	7.16	1.70

The results in Table 14 show that the mean score of the EG is higher than that of the CG. Statistically, the EG mean scores ($X=7.167$) are greater than the CG mean scores ($X=5.49$), with $SD=1.70$ and 1.18 respectively, after the experiment is finished two weeks later. This reveals that there is more variability in the delayed posttest scores of the EG. Furthermore, the delayed posttest scores of the EG ranged from 4.4 to 10, whereas those of the CG ranged from 3.0 to 8.0. There was an obvious difference between the mean

scores of the CG and EG after the treatment was finished a few weeks later. However, a t test was run to check whether there was a significant difference in the delayed posttest results.

Table 15: Independent samples T-test on the delayed posttest of the two groups

Method Groups	N	Sig	MD	t	df	Sig.(2-tailed)
Control	24					
Delayed Posttest Experimental	24	.030	1.67	2.62	41.1	.000

There was a statistically significant difference in the delayed posttest mean scores of the two groups after the intervention was finished two weeks later. Specifically, $\text{Sig}=.000$ is much less than the alpha value of 0.05 ($p=.000$; $p<.a$), which proves that there is a significant difference in vocabulary retention between the CG and the EG. In brief, the results indicated that the EG recalled vocabulary better and more stable than did the CG during the delayed retention stage (see Table 15).

Comparison of the Pretest, Posttest, and Delayed Posttest Groups

In the pretest, the results in Table 15 show that the difference between the two groups was not statistically significant ($\text{sig}=.908$), which is much greater than the alpha value of 0.05 ($p=.908$; $p>.a$). This proves that the two groups seem to be more or less at the same level before the treatment, which is relevant to vocabulary knowledge.

Table 16: The mean scores of both groups in the pretest, posttest, and delayed posttest

Group	Pretest			Posttest			Delayed posttest		
	X	SD	Sig. (2-tailed)	X	SD	Sig. (2-tailed)	X	SD	Sig. (2-tailed)
CG	4.80	1.31		6.15	1.45		5.49	1.18	
EG	4.75	1.67	.908	7.36	1.74	.012	7.16	1.70	.000

There was a significant difference between the posttest and delayed posttest scores as the intervention progressed. It is obvious that progress in the EG is ongoing. In other words, the EG students performed better than the CG students did ($X=7.36$ and $X=6.15$). Furthermore, $\text{Sig}=.012$ was much lower than the value of the alpha value ($p=.012$; $p<.a$). This finding reveals that after being interfered with cooperative games, EG students achieved greater results and increased their vocabulary performance in the posttest results (see Table 15). Similarly, the EG mean scores (X scores) in the delayed posttest are greater than those from the CG ($X=7.16$ and $X=5.49$), and $\text{Sig}=.000$ is less than the alpha value ($p=.000$; $p<.a$). This means that the EG students retained vocabulary better and more sustainably when they were involved in delayed retention.

The reliability of the questionnaire for the three clusters is as follows:

To reflect the reliability of all of the questionnaire items, Cronbach's alpha was used. The results are shown in Table 17 as follows:

Table 17. Reliability statistics of a series of clusters of questionnaire items

Series	N of Items	Cronbach's Alpha
Cluster 1 (cognitive attitude)	08	.670
Cluster 2 (emotional attitude)	06	.805
Cluster 3 (conative attitude)	05	.815
Total	19	.802

The results indicate that the value of Cronbach's alpha is reliable. The Cronbach's alpha of cognitive attitudes is .670, whereas that of emotional attitudes is .805, and that of conative attitudes is .815. In sum, the overall Cronbach's alpha of the total items is .802.

Students' cognitive attitudes toward learning vocabulary with cooperative games

Table 18: Descriptive statistics of the young learners' cognitive attitudes toward cooperative games

Item	Statements	N	Min	Max	Mean	SD
8	Playing games in a relaxed and comfortable environment helps me learn new vocabulary more quickly and retain it better in learning.	24	3	5	4.13	.680
1	The cooperative games help me learn and learn EFL vocabulary effectively funny.		3	5	4.08	.654
4	I can understand and use vocabulary with the easiest ways as involving into cooperative games.		3	5	4.04	.624
2	I can learn vocabulary from my classmates, teachers and around when playing these games, they are part of my learning process.		2	5	4.00	.722
3	Learning vocabulary through cooperative games is more effective than learning words through word lists written down on the board by teachers, and my mates.		1	4	3.67	.761
5	These games used in the class cannot help me review the old words and practice new words, but I like words on the board.		1	4	2.29	.999
6	These games make me hard to understand the meaning, they are so challenged for me.		1	3	2.25	.737
7	These games cannot help me retain vocabulary longer and better.		1	3	2.08	.504

Table 18 reveals that the cognitive attitude mean scores are favorable in all aspects, e.g., Items 8 ($X=4.13$), 1 ($X=4.08$), 4 ($X=4.04$), 2 ($X=4.00$), and 3 ($X=3.67$), compared with items 5 ($X=2.29$), 6 ($X=2.25$), and 7 ($X=2.08$), are negatively favorable. In general, they are identical, and it can easily be

inferred that they obtain high cognitive scores. Students view games as helpful and important in their inner strengths to run their lesson easily, obtain a deeper understanding of the lesson and capture the core of classroom activities through the use of games.

Students' emotional attitudes toward learning vocabulary through cooperative games

Table 19: Descriptive statistics of the young learners' emotional attitudes toward cooperative games

Item	Statements	N	Min	Max	Mean	S.D
9	I like playing co-games because I am able to review vocabulary learnt previously before a new lesson started to check new-words, and to consolidate the English lesson.	24	1	5	4.08	.717
11	I feel confident using EFL vocabulary in class when participating in games. I truly find my classroom lesson funny and fine.		2	5	4.00	.885
14	I find that playing games in vocabulary learning enriches creativity and motivation for me. It helps me engage and activate my learning meaningfully.		1	5	3.75	.897
12	I get excited when my teacher starts the lesson by playing games, it is truly warm up.		1	5	3.67	.917
13	I am interested in learning vocabulary through these games because these games free my anxiety, fears and pressures.		1	4	3.62	.924
10	I feel fed up with learning EFL vocabulary through co-op games. I think it is wastefulness and usefulness.		1	3	1.92	.584

The results in Table 19 above show the mean scores for the younger students' emotional attitudes toward using games to significantly increase effective vocabulary learning. In contrast, the students' "unpleasant and challenging" feelings

in using games to learn vocabulary are much lower ($X=1.92$; $SD=5.84$). This finding indicates that their emotional attitudes toward cooperative games are favorable and valuable.

Students' emotional attitudes toward learning vocabulary through cooperative games

Table 20: Descriptive statistics of the young learners' conative attitudes toward cooperative games

Item	Statements	N	Min	Max	Mean	S.D
18	I feel that using games to learn EFL vocabulary is more effective in a cooperative learning context than in a competition one. I can use vocabulary to lift up my understanding of the lesson.	24	2	5	4.38	1.013
15	I like finding the answers when participating in games. I can be self-confident without asking teachers or friends for helps.		2	5	4.21	.833
17	The best way to learn and to remember vocabulary is to actively participate in playing games.		2	5	4.21	.779
16	In my opinion, the best way to play is to learn EFL vocabulary.		2	5	4.04	1.122
19	I hope that the teachers use cooperative games every class period.		2	5	3.88	.741

Most of the students are interested in playing games inserted into learner-centered lessons. This is proven in Table 20, which indicates that the mean score for each item is up to the mean score calculated. This finding indicates that students' conative attitudes are positive, with mean scores of $X = 4.38$, 4.21 , and 4.21 . The use of games to increase vocabulary has the highest mean. This proves that students find games vital and necessary to increase their ability to learn vocabulary. In general, the overall mean is so high that the standard deviation is so low that they have a positive conative attitude toward games in the English language.

In summary, most of the EG students attain highly positive and favorable cognitive, emotional, and conative attitudes toward learning EFL vocabulary through cooperative games. Three dimensions are adequate and satisfactory for answering the second research question.

4. Discussion and Results

Research Question 1

The findings revealed that the EG students learned and retained vocabulary more actively and desirably than did the CG students during the immediate and delayed retention stages, as determined through an analysis of pretest, posttest, and delayed posttest data (Table 15). The difference between the two groups in the pretest score was not statistically significant before the intervention ($\text{sig} = .908 > .05$). This means that the two groups can be identical in level before the treatment. The difference only occurred after the intervention, as shown by the results of the posttest and delayed posttest, which confirmed the progress in the experimental group. In particular, the results in Table 15 also show that the EG students performed better than the CG students did in terms of the scores attained on the posttest ($X = 7.36$ and 6.15). Similarly, $\text{Sig} = .012$ was less than the alpha value of 0.05 ($p = .012$; $p < .05$). This means that after engaging in the cooperative games, the EG students achieved a remarkable enhancement in their vocabulary performance on the posttest.

This finding closely aligns with some findings of previous studies by researchers, such as Fotovatnia and Namjoo (2013)^[7], Bilen and Tavil (2015)^[5], Bavi (2018)^[4], and Aghlara and Tamjid (2011)^[1]. More importantly, Aghlara and Tamjid (2011)^[1] reported that the mean scores of EG students were higher than those of CG students, revealing some of the positive effects of using the SHATEX digital game in teaching EFL vocabulary to young learners. Additionally, the results of Fotovatnia and Namjoo (2013)^[7] revealed that the mean scores of EG students outperformed those of CG students. Furthermore, Bilen and Tavil (2015)^[5] reported that EG students obtained more scores on the posttest than did CG students. Finally, the results of Bavi (2018)^[4] were not the same as those of the current study. The findings revealed that the EG's mean scores outstandingly outperformed those of the CG.

Additionally, the results in Table 4.11 show that the EG's mean scores in the delayed posttest seemed to be significantly higher than those of the CG ($X = 7.16$ & 5.49); $\text{Sig} = .000$ was much lower than the alpha value ($p < .05$). This revealed that the EG retained vocabulary better and more sustainably than did the CG in the delayed retention stage. This finding is also similar to the studies of Shabaneh and Farrah (2019)^[17], Tuan (2015)^[30], Azar (2012)^[31], and Taheri (2014)^[32]. More specifically, the findings of a study by Shabaneh and Farrah

(2019)^[17] revealed that games drove students to retain unfamiliar vocabulary. More remarkably, the findings of a study by Tuan (2015)^[30] indicated that EGs recalled vocabulary better than did CGs during both the immediate retention stage and the delayed retention stage. The findings of Taheri (2014)^[32] were also consistent with those of the current study. The EG retained more vocabulary than the CG did in the delayed time.

Research Question 2

In reality, several students expressed positive cognitive, emotional, and behavioral attitudes toward learning EFL vocabulary with cooperative games at different levels.

With respect to their cognitive attitudes, most of the students feel that playing provides them with a comfortable environment, helps them relax to learn new vocabulary more rapidly and easily, and helps them retain it better. This feeling fits well with the research findings of Nguyen & Khuat (2003); Bilen and Tavil (2015)^[5]. Evidently, the EG students also agreed that games used for activating learning can support them in learning vocabulary effectively and outstandingly. This conclusion aligns well with Silsüpür's (2017)^[18] research. Next, a majority of the students asserted that they could learn vocabulary from their classmates when playing games. This expression closely aligns with studies carried out by Nguyen and Khuat (2003). On the other hand, several young learners expressed that learning vocabulary through cooperative games was more effective than learning words through word lists, which was consistent with the findings of Hanh (2018)^[33]. More remarkably, they admitted that games reshaped them to review previous knowledge (reviewing previous words) and practice new words (building new knowledge). In principle, games that are used to ladder students retain increasing vocabulary with their learning capacity. This statement closely aligns with Tuan's (2015)^[30] findings. In summary, after treatment, all the third-grade students appreciated that cooperative games provided many benefits to the students' vocabulary learning and retention. With respect to emotional attitudes, it is worth noting that students are interested in playing cooperative games with their classmates in class to renew vocabulary, especially before starting a new lesson, to check new words, and to consolidate English lessons. This right statement drawn from this research is to align well with Hanh's (2018)^[33] results. Students feel confident in using EFL vocabulary directly in class, as they are centering on the class game. In addition, they admit that games are a part of the soul of lessons, a part of classroom activities, and that games are used to increase vocabulary learning and increase motivation. This expression was emphasized by Silsüpür's (2017)^[18] studies. In addition, students display an excited mood when their teacher starts a lesson involving games. Games activate them, engage them and help them study dynamically. Students are easily free of anxiety, which endangers them and hinders their learning. This was in line with the study of Silsüpür (2017)^[18].

With respect to conative attitudes, using games to activate EFL vocabulary is effective in a cooperative learning context. This expression is also in accordance with the study of Can (2003)^[6]. The students expressed their thoughts that they like finding fun in learning and competitive in games; this statement is well fit with Hanh's (2018)^[33] research. Students believe that the best way to learn and remember vocabulary is to engage in an active way of playing games. Moreover,

most students are expected that their teachers will continue using cooperative games every class; this recommendation is also encouraged and found in Can's (2003)^[6] research.

5. Conclusions and pedagogical implications

5.1. Conclusion

This research satisfies the conditions for answering two research questions. First, the research findings reveal that the EG young learners retain vocabulary better than the CG ones do, as they are in the immediate and delayed retention stages. This means that the effects of cooperative games on young learners' English vocabulary learning outcomes and their retention are significant, adequate and satisfactory. Second, the EG young learners obtain positive, favorable attitudes toward learning EFL vocabulary by using cooperative games as follows:

With respect to cognitive attitudes, young learners feel that playing games can help them learn new vocabulary more rapidly and retain it better, anchoring their explicit learning and declarative knowledge to increase their understanding in the classroom.

With respect to emotional attitudes, young learners feel that they can free their anxiety, fears, pressures, and boredom produced during the learning process. Such an attitude can mediate and mitigate the challenges of learning more or less they face.

For conative attitudes, cooperative games can activate them, engaging them from "what they "switched off" from "what was being taught". Conative attitudes make young learners truly activated and engaged in their learning. Learners acquire better knowledge when they are actively engaged than when they are only partially or not at all involved.

5.2. Pedagogical implications

Games are pedagogical activities that are closely attached to teaching and learning. They pertain to classroom activities. They are closely related to teachers' soft skills and teaching techniques rather than methods. Practically, they are very important in building students' learning scaffolds and learning outcomes. The use of cooperative games, as one of the smart choices, in learning and teaching should be strongly encouraged. Simply put, they are innermost joys to improve young learners' vocabulary learning and retention so rapidly and effectively.

Furthermore, most young children like playing games because they are curious and they find fun in learning. Harmer (2008)^[10] noted that one of the greatest enemies of successful teaching and learning is student boredom (p. 5). The most important thing is that games help learners gain four learning properties "love, laugh, learn and live" because these properties make them happy and help them become integrative and relaxed, especially because they provide them with a friendly learning environment mentally and physically. More importantly, they consider a school in which they spend meaningful time studying at a second home and cannot find such a mood outside even at home. Therefore, teachers need to create learning motivations and beliefs that are interactive and enjoyable in their progress by using cooperative games in English vocabulary teaching and learning. Professionally, to prepare these games well, teachers should consider what students need more than teachers need. An educational motto labeled "*student-centered-lesson*" is always correct. Gower *et al.* (1983)^[8]

stated that good teachers are among the best ways of doing some of the best for students; you are enjoying teaching them as you are teaching them (p. 6).

Finally, by no means using games and embedding them into the core of the lesson, activities are part of teachers' professional skills. They help both students and teachers obtain maximum benefits in learning and teaching. Harmer (2008)^[10] noted that "good learning and teaching is a partnership between good teachers and students" (p. 9). A good body of knowledge, excellent rapport, a cooperative atmosphere, classroom management, etc., are among the numerous examples underlying the use of games in the classroom only, which is true for qualified education.

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