Journal of English Language and Education
ISSN 2597- 6850 (Online), 2502-4132 (Print)
Journal Homepage: https://jele.or.id/index.php/jele/index

OPEN ACCESS Article

Enhancing English Vocabulary Using Story-Based Vocabulary Game of Grade Eight Students

https://doi.org/10.31004/jele.v11i4.2603

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A B S T R A C T

This study examined the impact of Story-Based Vocabulary Game on English vocabulary mastery of grade eight students at SMP Kristen Bala Keselamatan Palu. This study employed a quantitative approach with a quasi-experimental design. Pre-test and post-test were administered to measure students' vocabulary mastery before and after the treatment. The findings showed that the students' vocabulary mastery improved after the implementation of the treatment. The collected data were analyzed statistically to determine whether there was a significant difference between the experimental group and the control group. The results indicated that the average post-test score of experimental groups (56.52) was higher than the control group (42.37). In addition, based on the hypothesis analysis, it showed that the t-test > the t-table (2.032 > 2.008), indicating that the research hypothesis is accepted. Therefore, it can be concluded that the Story-Based Vocabulary Game media significantly improves students' vocabulary mastery.

Keywords: *Story-Based Vocabulary Game, Vocabulary Mastery, Learning Media*

Article History:
Received 19th May2026
Accepted 13th June 2026
Published 02nd July 2026

INTRODUCTION

Vocabulary becomes the key element to master English, that the students need to enhance as it supports them in understanding and using English in their daily communication. Therefore, many educators and researchers have attempted to develop various teaching methods and learning media to improve students' vocabulary mastery in English learning. In the context of language learning, vocabulary plays a fundamental role, as it is the basis for developing the four language skills; listening, speaking, reading and writing (Nation, 2013). For junior high school students, particularly at eighth-grade level, students are expected to develop sufficient vocabulary knowledge to support their receptive and productive language skills. Without sufficient vocabulary, students will struggle to master basic English, comprehend texts, express simple ideas, or engage in meaningful interactions in English.

In addition, vocabulary mastery is not only related to understanding word meanings, but also recognizing how words function in sentences. This understanding enables students to recognize and classify words according to their grammatical functions, such as noun, pronoun, verb, adverb, adjective, preposition, conjunction and interjection. Through the understanding of vocabulary classification and grammatical functions, students can organize vocabulary more effectively, construct simple sentences more accurately, and express ideas more confidently in English learning.

However, a pre-observation conducted at SMP Kristen Bala Keselamatan Palu showed that eighth-grade students were struggling to understand basic English vocabulary. Many students had difficulties in recognizing basic words and categorizing them correctly,

particularly when encountering unfamiliar vocabulary in texts or classroom activities. They also faced challenges in spelling and pronouncing some simple vocabulary items, memorizing new words, understanding word meanings in context and using vocabulary appropriately in sentences, indicating both a quantitative and qualitative deficiency in their vocabulary skills. This lack of proficiency led to frequent mistakes in sentence construction and affected their overall comprehension of the English language. One factor contributing to this issue was the limited opportunities for students to acquire and practice vocabulary in meaningful learning activities, which resulted in low participation during vocabulary learning activities.

To overcome this kind of issues, teachers need to apply effective instructional methods and learning materials that can enhance students' vocabulary growth in more captivating and relevant manners. In the past few years, several researchers have investigated the role of games and narratives in learning vocabulary. Kesgin & Kartal (2022) discovered that utilizing stories and games in instruction led to better vocabulary results and increased student participation. Likewise, Mubarak (2023) noted that games centered around stories enhanced students' ability to grasp vocabulary in context and boosted their enthusiasm for learning English. Furthermore, Addawiyyah & Heryatun (2023) found that vocabulary games significantly aided students in retaining words, while Br Sembiring & Simajuntak (2023) observed that digital storytelling had a positive effect on vocabulary acquisition and student involvement. These results suggest that engaging and context-rich learning experiences can enhance students' vocabulary skills in learning English.

Despite these positive results, many past studies primarily used storytelling and games as separated methods for vocabulary acquisition. There has been little emphasis on combining story-driven learning with board games in one teaching activity, especially concerning vocabulary instruction that involves grammatical categories like nouns, verbs, adjectives, and other types of speech. Moreover, the incorporation of contextual materials, such as local folktales, is still quite still limited in teaching vocabulary to junior high school students. Therefore, this study to use a story-based vocabulary game by integrating a contextual vocabulary learning through Central Sulawesi folktale and interactive game to enhance students' vocabulary skills, participation, and comprehension of vocabulary categories in English language education. This study aims to investigate whether or not Story-Based Vocabulary Game has an impact on English vocabulary mastery of grade eight students. This study focuses on vocabulary learning activities derived from local folktale as the main learning context.

Definition of Vocabulary

Vocabulary has been interpreted in a variety of ways by different scholars. According to McCarthy (1990), vocabulary encompasses the words and phrases utilized in communication, whereas Schmitt (2000) indicates that knowledge of vocabulary involves not just the meanings of words but also their forms and grammatical usage. In the same vein, Thornbury (2002) describes vocabulary as the awareness of words along with their definitions. Furthermore, vocabulary knowledge can be divided into receptive and productive categories, which pertains to how learners perceive and apply words when communicating. From these viewpoints, vocabulary can be seen as the understanding of words that includes their meanings, forms, and applications in communication.

Mastering vocabulary is crucial for facilitating students' process of learning English. With a solid grasp of vocabulary, learners can comprehend information, create simple sentences, and convey their thoughts more effectively during learning activities. Moreover, acquiring vocabulary motivates students to engage more actively in classroom discussions and boosts their confidence when using English.

When it comes to vocabulary acquisition, students are expected not only to memorize words but also to grasp how words are categorized and applied within sentences. Categorizing vocabulary aids students in understanding grammatical roles and systematically organizing their word knowledge. By recognizing different word categories, learners can understand how words operate in conversation and sentence formation. Therefore, learning

vocabulary classification through the parts of speech is essential for assisting students in using vocabulary correctly in their English studies.

Parts of Speech

Part of Speech refers to the grammatical classification that indicates a word's function and placement within a sentence. This means that all words fall into specific categories. Thornbury (2017) identifies several word classes: noun, verb, adjective, adverb, preposition, conjunction, pronoun, and determiner. In a similar vein, Carter & McCarthy (2006) also stress that traditional grammar recognizes various word classes, including noun, verb, adjective, adverb, conjunction, preposition, and determiner.

This suggests that vocabulary involves not just the memorization of words but also an understanding of their grammatical categories and their roles within a sentence. Schmitt (2000) notes that knowing a word involves understanding its grammatical behavior. Therefore, recognizing a word's part of speech is a crucial aspect of vocabulary knowledge. In this research, the discussion of vocabulary classification focuses on parts of speech, including nouns, pronouns, verbs, adverbs, adjectives, prepositions, conjunctions, and interjections.

Definition of Story-Based Vocabulary Game

Vocabulary game based on narratives merge storytelling with gaming, creating an engaging method for enhancing vocabulary acquisition. By using narratives, learners grasp vocabulary within relevant contexts instead of simply trying to memorize detached terms. According to Bruner (1986), stories aid learners in forming their understanding, while Cameron (2001) points out that narratives help young students expand their vocabulary by offering language in context. At the same time, games create chances for students to engage, practice, and participate actively in their educational activities. Wright et al. (1984) assert that games promote meaningful use of language, while Hadfield (1990) notes that they can boost learners' motivation and lessen anxiety in educational settings. For this study, folktales from Central Sulawesi serve as contextual learning resources, and board games are utilized as a platform for vocabulary practice and engagement. This combination is linked to the genre-based approach, specifically Building Knowledge of the Field (BKoF) and Modeling of the Text (MoT), allowing students to develop foundational knowledge, identify vocabulary in context, and notice language patterns prior to engaging in interactive exercises.

Implementing vocabulary game that incorporate stories is crucial as it aids students in comprehending and applying vocabulary through valuable learning experiences. Rather than relying solely on memorization for vocabulary acquisition, students are prompted to identify, categorize, and actively utilize vocabulary during their learning tasks. This method enhances students' involvement, motivation, and self-assurance in learning English. Furthermore, Story-Based Vocabulary Game present various benefits, including heightened student involvement, better retention of vocabulary, enhanced creativity, and the provision of contextual learning opportunities (Silalahi, 2019; Vu et al., 2021). Nonetheless, this strategy might demand additional preparation and thoughtful classroom management to maintain students' attention throughout the tasks. Still, by merging contextual narratives with interactive game, Story-Based Vocabulary Game can deliver a more captivating and impactful vocabulary learning experience for junior high school learners.

Teaching Vocabulary Using Story-Based Vocabulary Game

Teaching vocabulary through game centered around stories involves a number of organized activities. The learning journey starts with presenting a story to enhance students' prior knowledge and give them vocabulary in context. As the story unfolds, students encounter key vocabulary through the characters, events, and circumstances depicted in the narrative. The teacher then brings attention to specific vocabulary words, clarifying their meanings, how to pronounce them, and how they are typically used in order to aid students in grasping the vocabulary within its context.

Once students are accustomed to the vocabulary, games serve as follow-up reinforcement activities. In these games, students are encouraged to identify, categorize, pair, and utilize vocabulary drawn from the story they have engaged with. These tasks promote active student involvement, allow for repeated vocabulary practice, and enhance their comprehension of vocabulary organization in a dynamic learning setting. In summary, Story-Based Vocabulary Game integrate contextual learning with hands-on practice, enabling students to achieve greater mastery of vocabulary skills.

METHOD

The researcher used a quantitative approach, with a quasi-experimental design. The population of the research was all eighth-grade students at SMP Kristen Bala Keselamatan Palu which was divided into 3 classes; VIII A, VIII B and VIII C, 88 students in total. In selecting the sample for this research, the researcher used random sampling technique which enabled each student of the population to have an equal chance of being selected as a participant. This technique was selected to ensure that the sample is representative and free from researcher bias. The random selection was conducted by writing down the classes on pieces of paper, mixing them thoroughly, and then drawing them randomly. The first draw was the experimental group; which was Class VIII A, consisted of 31 students, and the second draw was the control group; which was class VIII B, consisted of 27 students.

The researcher used a design of research by Cohen et al. (2007)

Table 1. Research Design

Group	Pretest	Treatment	Posttest
Experimental	O_1	X_1	O_2
Control	O_3	X_2	O_4

Here is the distribution of the research population.

Table 2. Distribution of Research Population

Class	Number of Student
VIII A	30
VIII B	27
VIII C	31
Total	88

The treatment was conducted in six meetings in the experimental class using Story-Based Vocabulary Game. In each meeting, the researcher introduced the learning objectives and presented an audiovisual story to provide students with contextualized vocabulary learning. Students were encouraged to recognize and understand unfamiliar words that appeared in the story before discussing the target material. Next, the students practiced spelling, pronunciation, and vocabulary memorization. After discussing the parts of speech in each meeting, students participated in vocabulary games involving matching and categorizing words based on the material learned during the lesson to reinforce vocabulary retention. The vocabulary used in the games was taken from the story discussed in class. Lastly, the students practiced constructing ideas and sentences using the vocabulary items learned. Meanwhile, the control class received conventional learning activities, such as vocabulary explanations and textbook-based exercises.

The instruments used for data collection was a test designed to measure the students' prior ability to classify parts of speech in the form of pre-test and after the treatment through a post-test. Meanwhile, the treatment was supported by lesson plans, parts of speech material through PowerPoint, audiovisual and text-based folklore stories entitled *Tadulako Bulili*, as well as vocabulary games involving word categorization activities.

The data were collected through pre-test and post-test during the first and last meetings to measure students' vocabulary mastery before and after the treatment. After that, the collected data were analyzed using the t-test formula proposed by Arikunto to determine whether there was a significant difference between the experimental and control groups.

Variable

Variables used in this research was the independent and dependent variable. Independent variable was the use of Story-Based Vocabulary Game in teaching English vocabulary. This refers to the specific instructional approach or treatment applied to the experimental group. The dependent variable was the students' ability to classify kinds of parts of speech, specifically the experimental group.

Technique of Data Collection

Data was collected through the administration of pre-test and post-test to both the experimental and control groups. This approach allowed for the comparison of learning gains between the two instructional methods.

Pre-test

A pre-test administered to the experimental group and control group before the intervention began. The purpose of the pre-test was to assess the students' baseline ability to classify parts of speech.

Post-Test

A post-test administered to the group after they have completed the treatment period using Story-Based Vocabulary Game. The post-test measured the students' ability to classify parts of speech after the instructional period. Below is the table for distribution and the scoring system of the tests before and after the treatment.

Table 3. Distribution and Scoring of the Pre-test and Post-Test

Kind of Test	Description	Number of Items	Score per item
Multiple choice (meaning and category of words)	Students identify the meaning and the category of each word.	10	1
Matching (category of words)	Students match the word and its correct category.	10	1
Completion (use of words in different contexts)	Students complete each sentence with appropriate answer.	5	1
Total		25	25

Data Analysis Technique

The data obtained from the pre-test and post-test were analyzed using several statistical procedures. First, the researcher calculated the students' individual scores based on the number of correct answers in each test. The researcher computed the individual score both in pre-test and post-test by using the formula proposed by Arikunto (2006) as follows:

$$\sum = \frac{x}{n} \times 100$$

Standard score (∑) was obtained by dividing the sum of correct number (x) by the total number of the test (n) and multiplied the result by 100. Second, descriptive statistics were used to analyze the data, including the calculation of the mean score and standard deviation of both the experimental and control groups by using the formula proposed by Arikunto (2006) as follows:

$$M = \frac{\sum x / \sum y}{N}$$

The mean score (M) was obtained by dividing the sum score of experimental group or control group ($\sum x / \sum y$) by the total number of students (N).

In addition, the deviation scores were calculated to determine the improvement in students' vocabulary mastery between the pre-test and post-test results, by subtracting the pre-test scores from the post-test scores. The deviation scores were then squared deviation to avoid negative values during statistical calculation. Third, the mean deviation was calculated to determine the average improvement of students' scores between the pre-test and post-test, by using the formula proposed by Arikunto (2006) as follows:

$$`Mx/My = \frac{\sum x \ / \sum y}{N}$$

The mean deviation score of experimental group or control group (Mx/My) was obtained by dividing the sum score of experimental group or control group (∑x/∑y) by the number of students (N). Forth,the scores then were squared to determine the variation of students' improvement scores and to support the computation of the t-test calculation.

$$\sum x^2 = \sum x^2 - \frac{(\sum x)^2}{N}$$

The square deviation square of the experimental group ($\sum x^2$) was obtained by subtracting the squared total deviation score of the experimental group ($\sum x^2$) divided by the total number of students (N) from the total square deviation score $(\sum x)^2$. Meanwhile, the square deviation score of the control group was calculated using the same procedure.

T-test Analysis

Finally, a t-test formula was applied to examine whether there was a significant difference between the pre-test and post-test results of the experimental group and the control group. The t-test was used to determine the effectiveness of the story-based vocabulary game in improving students' vocabulary mastery.

$$t = \frac{Mx\text{-}My}{\sqrt{\left\{\frac{\sum x^2 + \sum y^2}{nx + ny\text{-}2}\right\}\left\{\frac{1}{nx} + \frac{1}{ny}\right\}}}$$

The t-test value (t) was obtained by dividing the difference between the mean score of the experimental group and the mean score of the control group (Mx-My) by the square root of the total square deviation of both groups divided by the degree of freedom $\left(\sqrt{\left\{\frac{\sum x^2 + \sum y^2}{nx + ny\text{-}2}\right\}\left\{\frac{1}{nx} + \frac{1}{ny}\right\}}\right)$ and multiplied by the reciprocal of the total number of students in each group $\left\{\frac{1}{nx} + \frac{1}{ny}\right\}$.

FINDINGS AND DISCUSSIONS

The data were collected from March 3, 2026 which was the pre-test to March 10, 2026, which was the post-test. Meetings were held three times a week, and each meeting lasted for 80 minutes. The results are presented in the following tables.

Result of Pre-test and Post-test Score of Experimental Group

Below is the table of pre-test score of experimental groups. The number below each abbreviation indicates the total number of items in each category; Noun (N) 4 items, Pronoun (P) 0 items, Verb (V) 3 items, Adverb (Adv) 5 items, Adjective (Adj) 3 items, Preposition (Prep) 3 items, Conjunction (Conj) 4 items, and Interjection (Int) 3 items.

Table 4. Pre-test Score of Experimental Group

No	Initials	Parts of Speech								Raw Score	Max. Score	Standard Score
		N	P	V	Adv	Adj	Prep	Conj	Int			
		4	0	3	5	3	3	4	3			
1	ADL	1	0	1	3	3	1	2	2	13	25	52,00
2	AK	0	0	0	1	0	0	0	2	3	25	12,00
3	ACB	1	0	0	3	1	3	4	3	15	25	60,00
4	CPS	2	0	1	1	1	2	3	1	11	25	44,00
5	DVO	2	0	1	3	1	2	3	2	14	25	56,00
6	DM	1	0	1	3	0	1	0	1	7	25	28,00
7	EJP	0	0	1	3	1	0	3	3	11	25	44,00
8	EJT	1	0	0	1	0	0	1	1	4	25	16,00
9	EA	1	0	1	1	0	0	1	1	5	25	20,00

No	Initials	Parts of Speech								Raw Score	Max. Score	Standard Score
		N	P	V	Adv	Adj	Prep	Conj	Int			
		4	0	3	5	3	3	4	3			
10	FPS	1	0	0	1	0	0	1	1	4	25	16,00
11	FMCP	1	0	0	0	0	0	0	1	2	25	8,00
12	GMP	1	0	1	4	0	0	2	0	8	25	32,00
13	GTH	2	0	0	1	0	0	1	0	4	25	16,00
14	GCLB	0	0	0	1	0	0	2	0	3	25	12,00
15	HW	1	0	1	2	0	1	0	0	5	25	20,00
16	HM	1	0	0	2	0	1	0	1	5	25	20,00
17	JSL	4	0	2	4	3	2	4	2	21	25	84,00
18	KA	1	0	3	2	3	1	2	2	14	25	56,00
19	K	1	0	0	1	0	1	1	1	5	25	20,00
20	LGPT	2	0	1	3	1	1	2	1	11	25	44,00
21	NPS	3	0	1	2	2	0	1	1	10	25	40,00
22	NRPK	1	0	1	3	1	2	2	2	12	25	48,00
23	OI	1	0	1	2	0	1	0	0	5	25	20,00
24	RA	1	0	1	3	1	1	2	1	10	25	40,00
25	RT	0	0	0	2	1	0	1	1	5	25	20,00
26	VMH	1	0	2	1	2	0	0	3	9	25	36,00
27	VFT	3	0	3	3	2	3	2	3	19	25	76,00
28	YA	1	0	1	2	0	1	0	1	6	25	24,00
29	ZTVL	0	0	1	2	1	0	0	0	4	25	16,00
30	SP	1	0	2	1	2	2	3	2	13	25	52,00
31	MGL	1	0	1	2	0	0	1	0	5	25	20,00
								Total Score ($\sum x$)				1052,00
								Mean Score (Mx)				33,94

Below is the table of post-test of the experimental group. The number below each abbreviation indicates the total number of items in each category; Noun (N) 4 items, Pronoun (P) 0 items, Verb (V) 3 items, Adverb (Adv) 5 items, Adjective (Adj) 3 items, Preposition (Prep) 3 items, Conjunction (Conj) 4 items, and Interjection (Int) 3 items.

Table 5. Post-test Score of Experimental Group

No.	Initials	Parts of Speech								Raw Score	Max. Score	Standard Score
		N	P	V	Adv	Adj	Prep	Conj	Int			
		2	3	3	4	3	3	4	3			
1	ADL	1	3	2	4	2	2	4	3	21	25	84,00
2	AK	0	0	0	1	0	1	1	0	3	25	12,00
3	ACB	2	1	3	3	3	1	1	3	17	25	68,00
4	CPS	2	1	0	3	2	3	3	3	17	25	68,00
5	DVO	1	1	1	3	2	2	3	2	15	25	60,00
6	DM	1	1	2	2	1	0	2	1	10	25	40,00
7	EJP	0	2	1	2	2	2	3	3	15	25	60,00
8	EJT	0	2	0	0	0	2	1	1	6	25	24,00
9	EA	1	1	0	3	2	2	3	1	13	25	52,00
10	FPS	0	1	1	1	1	0	2	0	6	25	24,00
11	FMCP	1	2	1	2	2	1	1	1	11	25	44,00
12	GMP	1	2	2	2	1	3	3	2	16	25	64,00

No.	Initials	Parts of Speech								Raw Score	Max. Score	Standard Score
		N	P	V	Adv	Adj	Prep	Conj	Int			
		2	3	3	4	3	3	4	3			
13	GTH	0	2	3	0	1	3	3	0	12	25	48,00
14	GCLB	1	2	0	1	1	2	1	2	10	25	40,00
15	HW	1	2	2	3	2	2	3	2	17	25	68,00
16	HM	1	2	2	3	2	3	3	2	18	25	72,00
17	JSL	1	2	2	3	1	2	4	3	18	25	72,00
18	KA	2	2	2	3	3	2	4	3	21	25	84,00
19	K	1	1	3	3	2	2	2	2	16	25	64,00
20	LGPT	1	2	2	3	2	3	3	2	18	25	72,00
21	NPS	0	1	0	2	3	0	3	1	10	25	40,00
22	NRPK	2	1	1	2	1	2	3	3	15	25	60,00
23	OI	1	2	2	3	2	3	3	2	18	25	72,00
24	RA	1	2	2	2	2	2	4	2	17	25	68,00
25	RT	0	0	0	1	0	1	2	1	5	25	20,00
26	VMH	2	0	0	2	1	0	2	2	9	25	36,00
27	VFT	2	3	2	3	3	3	4	3	23	25	92,00
28	YA	1	2	2	2	1	2	4	2	16	25	64,00
29	ZTVL	0	1	0	1	0	2	3	2	9	25	36,00
30	SP	2	3	1	2	1	3	3	3	18	25	72,00
31	MGL	1	2	2	3	2	3	3	2	18	25	72,00
								Total Score *(∑x)*				1752,00
								Mean Score *(Mx)*				56,52

Based on the tables above, the mean score of experimental groups increased from the pre-test (33.94) to the post-test (56.52). From the result above, it can be concluded that the students' vocabulary mastery in the experimental group improved significantly after the implementation.

Result of Pre-test and Post-test Score of Control Group

Below is the table of pre-test of the control group. The number below each abbreviation indicates the total number of items in each category; Noun (N) 4 items, Pronoun (P) 0 items, Verb (V) 3 items, Adverb (Adv) 5 items, Adjective (Adj) 3 items, Preposition (Prep) 3 items, Conjunction (Conj) 4 items, and Interjection (Int) 3 items.

Table 6. Pre-test Score of Control Group

No.	Initials	Parts of Speech								Raw Score	Max. Score	Standard Score
		N	P	V	Adv	Adj	Prep	Conj	Int			
		4	0	3	5	3	3	4	3			
1	AP	1	0	0	2	0	2	1	0	6	25	24,00
2	AY	0	0	1	1	0	0	1	0	3	25	12,00
3	CGHP	2	0	3	3	3	3	2	3	19	25	76,00
4	DVK	1	0	2	2	2	2	2	1	12	25	48,00
5	DMW	2	0	1	2	1	1	1	3	11	25	44,00
6	DA	0	0	1	0	0	0	1	0	2	25	8,00
7	FL	1	0	1	1	1	1	1	1	7	25	28,00
8	GM	0	0	2	2	1	1	2	1	9	25	36,00
9	G	0	0	2	1	0	2	0	1	6	25	24,00
10	JV	1	0	1	1	1	2	2	1	9	25	36,00

No.	Initials	Parts of Speech								Raw Score	Max. Score	Standard Score
		N	P	V	Adv	Adj	Prep	Conj	Int			
		4	0	3	5	3	3	4	3			
11	JAS	0	0	2	1	0	1	2	1	7	25	28,00
12	KSS	3	0	3	4	3	3	3	3	22	25	88,00
13	LJR	3	0	2	3	0	3	1	3	15	25	60,00
14	LV	0	0	0	0	0	1	2	0	3	25	12,00
15	MSSL	0	0	0	1	0	0	3	1	5	25	20,00
16	MW	1	0	1	2	2	1	2	1	10	25	40,00
17	MJCP	1	0	0	3	0	2	1	1	8	25	32,00
18	NF	1	0	2	1	2	1	4	1	12	25	48,00
19	RLIT	2	0	0	2	1	1	0	1	7	25	28,00
20	RAR	0	0	0	0	0	0	0	0	0	25	0,00
21	SYP	0	0	1	1	0	0	2	0	4	25	16,00
22	E	0	0	0	0	0	1	1	1	3	25	12,00
23	SFA	1	0	0	3	2	2	2	2	12	25	48,00
24	DA	1	0	0	1	1	0	2	2	7	25	28,00
25	I	1	0	1	0	1	0	0	0	3	25	12,00
26	A	1	0	0	2	0	1	2	1	7	25	28,00
27	CM	2	0	2	3	2	2	2	1	14	25	56,00
								Total Score (∑*y*)				892,00
								Mean Score (*My*)				33,04

Below is the table of post-test of the control group. The number below each abbreviation indicates the total number of items in each category; Noun (N) 4 items, Pronoun (P) 0 items, Verb (V) 3 items, Adverb (Adv) 5 items, Adjective (Adj) 3 items, Preposition (Prep) 3 items, Conjunction (Conj) 4 items, and Interjection (Int) 3 items.

Table 7. Post-test Score of Control Group

No.	Initials	Parts of Speech								Raw Score	Max. Score	Standard Score
		N	P	V	Adv	Adj	Prep	Conj	Int			
		2	3	3	4	3	3	4	3			
1	AP	2	2	1	2	2	1	3	2	15	25	60,00
2	AY	1	2	0	2	1	3	2	2	13	25	52,00
3	CGHP	2	1	1	2	3	2	3	3	17	25	68,00
4	DVK	2	1	1	3	3	3	4	2	19	25	76,00
5	DMW	0	2	2	0	2	1	1	1	9	25	36,00
6	DA	1	1	1	0	2	1	1	2	9	25	36,00
7	FL	2	0	1	2	2	3	4	3	17	25	68,00
8	GM	1	2	0	2	1	0	1	2	9	25	36,00
9	G	0	2	2	2	0	1	0	0	7	25	28,00
10	JV	1	0	1	1	0	3	1	0	7	25	28,00
11	JAS	0	0	1	1	1	2	2	1	8	25	32,00
12	KSS	2	1	1	3	3	3	4	3	20	25	80,00
13	LJR	1	1	2	0	2	2	0	3	11	25	44,00
14	LV	1	0	2	0	0	2	1	1	7	25	28,00
15	MSSL	1	0	1	2	1	2	0	1	8	25	32,00
16	MW	2	0	1	2	2	3	4	3	17	25	68,00
17	MJCP	2	0	2	1	2	1	1	1	10	25	40,00

No.	Initials	Parts of Speech								Raw Score	Max. Score	Standard Score
		N	P	V	Adv	Adj	Prep	Conj	Int			
		2	3	3	4	3	3	4	3			
18	NF	1	0	0	1	1	1	2	2	8	25	32,00
19	RLIT	0	2	3	2	1	2	1	1	12	25	48,00
20	RAR	0	0	0	0	0	0	0	0	0	25	0,00
21	SYP	1	0	0	1	1	0	1	1	5	25	20,00
22	E	0	2	0	1	0	1	1	0	5	25	20,00
23	SFA	0	1	2	2	2	2	2	1	12	25	48,00
24	DA	1	1	2	1	2	3	2	2	14	25	56,00
25	I	0	0	0	1	2	1	0	0	4	25	16,00
26	A	1	0	0	1	0	1	1	2	6	25	24,00
27	CM	2	0	1	2	2	3	4	3	17	25	68,00
									Total Score (∑*y*)			1144,00
									Mean Score (*My*)			42,37

Based on the tables above, the mean score of control group increased from the pre-test (33.04) to the post-test (42.37). From the mean score comparison of both groups, it can be concluded that the experimental group obtained a higher improvement than the control group.

Deviation

The deviation scores of both groups were calculated to determine the variability of students' scores. In the experimental group, with a total of 31 students, the deviation value (∑x) was 700. The mean deviation was 22.58, and the sum of squared deviations (∑x²) was 25,008. These values indicate the degree of score dispersion among students in the experimental class after the treatment.

Meanwhile, in the control group, which consisted of 27 students, the deviation value (∑y) was 252. The mean deviation was 9.33, and the sum of squared deviations (∑y²) was 9,552. Compared to the experimental group, the control group showed a lower level of score variability. Overall, the experimental group demonstrated higher deviation and greater score dispersion than the control group. This suggests that the students in the experimental class experienced more varied improvement after the implementation of the treatment.

Result of T-test Analysis

The calculation below presents the process of obtaining the t-test score used to determine whether the difference between the two groups is statistically significant.

$$t = \frac{Mx\text{-}My}{\sqrt{\left\{\frac{\sum x^2 + \sum y^2}{Nx + Ny - 2}\right\}\left\{\frac{1}{Nx} + \frac{1}{Ny}\right\}}}$$

$$t = \frac{22{,}58 - 9{,}33}{\sqrt{\left\{\frac{25008 + 9552}{31 + 27 - 2}\right\}\left\{\frac{1}{31} + \frac{1}{27}\right\}}}$$

$$t = \frac{13{,}25}{\sqrt{\left\{\frac{34560}{56}\right\}\{0.032 + 0.037\}}}$$

$$t = \frac{13{,}25}{\sqrt{\{617.14\}\{0.069\}}}$$

$$t = \frac{13{,}25}{\sqrt{42{,}58}}$$

$$t = \frac{13{,}25}{6{,}52}$$

$$t = 2.032$$

In conclusion, it can be determined that the t-test is 2.032.

Testing Hypothesis

The final step of the analysis was hypothesis testing to determine whether the research hypothesis was accepted or rejected. The decision was based on the comparison between the t-test value and the t-table value at a 0.05 level of significance. The degree of freedom (df) was calculated using the formula df = Nx + Ny – 2 = 31 + 27 – 2 = 56. Since the exact df value of 56 was not available in the t-distribution table, linear interpolation was applied between df 50 (t = 2.009) and df 60 (t = 2.000), resulting in a t-table value of 2.008.

The hypothesis criteria state that if the t-test is greater than the t-table value, then the story-based vocabulary game significantly improves students' vocabulary mastery. Conversely, if the t-test is lower than the t-table value, it means the media does not significantly improve students' vocabulary mastery. Based on the calculation, the t-test value (2.032) was higher than the t-table value (2.008), indicating that the difference between pre-test and post-test scores was statistically significant. Therefore, the research hypothesis is accepted, meaning that the story-based vocabulary game effectively improves the vocabulary mastery of eighth-grade students at SMP Kristen Bala Keselamatan Palu.

Discussions

This section reviews the outcomes of the study regarding the use of a story-themed vocabulary game to enhance students' understanding of vocabulary related to parts of speech. In general, the findings reveal distinctions between the experimental group and the control group based on their scores from the pre-test and post-test assessments. While both groups showed progress, the experimental group typically outperformed the control group. Nonetheless, the advancements were not uniform across all types of parts of speech.

Looking at the specific outcomes, the experimental group demonstrated more significant gains in various parts of speech when compared to the control group, particularly in areas like pronouns, prepositions, conjunctions, and interjections. This suggests that the story-themed vocabulary game was particularly beneficial for aiding students in grasping vocabulary that relies on contextual understanding. The engaging activities encouraged increased participation from students and facilitated their comprehension of how to use words in real-life scenarios.

In contrast, certain categories, such as nouns and some grammatical elements, exhibited minimal improvement or even showed better outcomes in the control group. This might be attributed to the fact that students were already acquainted with nouns, allowing both groups to advance without substantial influence from the experimental method. Additionally, students struggled with correctly applying certain parts of speech, indicating that recognizing vocabulary does not necessarily ensure a complete grammatical grasp.

Various factors could have affected these results. Students came in with different levels of background knowledge, and many were not yet comfortable with the concept of parts of speech. Throughout the learning experience, students often concentrated more on the narrative and gameplay rather than thoroughly examining grammatical structures. This indicates that while the approach increased interest and motivation, it did not uniformly enhance all dimensions of vocabulary education.

In summary, the findings indicate that the Story-Based Vocabulary Game is effective for improving students' mastery of vocabulary, particularly in contexts that require understanding of parts of speech. Additionally, these results align with educational theories that highlight the importance of active engagement and meaningful context in learning English. However, for a more profound comprehension of grammar elements, including parts of speech, further direct instruction is still necessary.

CONCLUSIONS

This study aimed to examine the effect of Story-Based Vocabulary Game on students' mastery of parts of speech. Based on the findings of the study, the use of Story-Based Vocabulary Game had a positive effect on students' vocabulary learning, particularly in

improving their engagement and participation during the learning process. The findings indicate that Story-Based Vocabulary Game were effective in enhancing students' mastery of parts of speech among eighth-grade students at SMP Kristen Bala Keselamatan Palu. Through contextualized learning activities, students were able to understand and experience vocabulary more meaningfully. In addition, the method supported students' active involvement and contextual learning throughout the teaching and learning process. Therefore, Story-Based Vocabulary Game can be considered an effective alternative strategy for teaching vocabulary in junior high school classrooms.

ACKNOWLEDGEMENTS

The researcher would like to express her deepest gratitude to God for His blessings and guidance throughout the completion of this study. The researcher also sincerely thanks the supervisor and co-supervisor for their valuable advice and continuous guidance during the writing process. Finally, the researcher extends her appreciation to the school and all parties involved for their cooperation and assistance in the data collection process.

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