



The Effectiveness of Flashcards and Dragon Games in Teaching English Vocabulary to Kindergarten Students

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ABSTRACT

Introducing vocabulary to kindergarten children is difficult, especially for foreign languages. They need clear visuals to illustrate a word. Based on the researcher's experience at BiMBA Kindergarten, students were less interested and less motivated in learning English because the learning methods and media were less interesting. Therefore, the researcher aims to conduct this study to assess the effectiveness of the methods and media used on vocabulary mastery. This research was conducted at BiMBA Genuksari with a sample of 30 kindergarten students. A quantitative research method was applied using a pre-experimental design with a pre-test, post-test, and observation as data collection. The results showed the statistical analysis using a paired sample t-test produced a p-value of 0.000, indicating a significant difference after treatment. The observation results also showed that students' learning motivation increased after treatment. Therefore, teachers can use flashcards and dragon games to create an engaging and student-centered learning environment.

Keywords : *Dragon Game, Flashcard, Vocabulary*

ABSTRAK

Memperkenalkan kosakata kepada anak-anak TK itu sulit, terutama untuk bahasa asing. Mereka membutuhkan visual yang jelas untuk mengilustrasikan sebuah kata. Berdasarkan pengalaman peneliti di TK BiMBA, siswa kurang tertarik dan kurang termotivasi dalam belajar bahasa Inggris karena metode dan media pembelajaran kurang menarik. Oleh karena itu, peneliti bertujuan untuk melakukan penelitian ini untuk menilai efektivitas metode dan media yang digunakan terhadap penguasaan kosakata. Penelitian ini dilakukan di BiMBA Genuksari dengan sampel 30 siswa TK. Metode penelitian kuantitatif diterapkan dengan menggunakan desain pra-eksperimental dengan pre-test, post-test, dan observasi sebagai pengumpulan data. Hasil menunjukkan analisis statistik menggunakan uji t sampel berpasangan menghasilkan nilai p 0,000, menunjukkan perbedaan signifikan setelah perlakuan. Hasil observasi juga menunjukkan bahwa motivasi belajar siswa meningkat setelah perlakuan. Oleh karena itu, guru dapat menggunakan flashcard dan permainan naga untuk menciptakan lingkungan belajar yang menarik dan berpusat pada siswa.

Kata Kunci : *Permainan Ular Naga, Kartu Flash, Kosakata*

INTRODUCTION

Language facilitates communication, particularly through an international language like English, which is essential for connecting with friends and colleagues globally. In developing countries like Indonesia, proficiency in English is critical for competition in education, business, and politics, making it vital for national progress. Consequently, learning English is important for young learners as they represent the nation's future (Saputri & Ramli, 2018). According to (Nurkamto, 2003), he believes that the objective of English instruction in schools has been to cultivate students' communicative skills to assist them in their university studies.

(Wulandari, 2025) 'Young learners' refers to young students acquiring proficiency in English. Young learners are categorized into two types. The initial group comprises first-level or beginner participants aged 5 to 7 years, whereas the subsequent group consists of participants aged 8 to 10 years (Scott & Ytreberg, 1990). Young learners begin English by recognizing vocabulary, which forms a crucial foundation for language acquisition (Ryan et al., 2024). Mastery of vocabulary enhances sentence construction, but preschoolers often struggle with this due to their developmental stage. Visualization tools like images, animations, or videos are necessary to aid them in vocabulary recognition.

Learning methods aim to enhance student efficiency, but inappropriate and uncreative teaching can lead to boredom and decreased assessments. (Fitriana et al., 2021) highlight that learning difficulties, especially in English, stem from the chosen methods and media. Selecting suitable learning methods is crucial, with game-based learning being particularly effective for young children. An example is the dragon game, a popular traditional game in Indonesia suitable for kindergarten settings, encouraging engagement through play. According to (Budiman et al, 2022) the dragon snake game is a popular group activity among kids in Indonesia. (Rakhmawati et al, 2020) explained that

Snake and Dragon is a singing-based game for groups of five or more people. Rakhmawati stated that In this game, two children act as the gate (holding hands to form a gate), and the other children line up in front, gripping their friends' shoulders (like a train). This game improves children's gross motor skills, such as walking and running (Yulita, 2017).

Learning media, such as flashcards, enhance creative learning by facilitating engaging teaching methods for preschool children. Flashcards are usually made of small paper that is full of color and interesting pictures. According to (Wulandari, 2025) Flashcards are 25x30 cm paper with pictures that can be hand-drawn, graphs, or photos attached to the card. According to (Rachmadi et al, 2023) Flashcards are a tool that shows children the English meaning of an image through visuals. Flash cards can be useful for teachers and students. For teachers, this media is easy to carry anywhere and flexible in adjusting the material being taught. For students, this media can provide enthusiasm for learning and stimulate children's memory by seeing colorful visuals. This approach not only makes learning enjoyable but also motivates students to participate actively and speak during lessons, as noted by (Dian Hikmawati et al., 2024) Students exhibit increased motivation, interest, and activity in learning when using picture cards or flashcards for vocabulary acquisition. While according to (Ngarofah & Sumarni, 2019), there are some advantages of flash cards as follows: a) practicing are important questions, b) writing a sentence or story, c) describing a picture, d) arranging the words list in alphabet, e) combining the opinions, f) to get inspiration on writing a fable, g) playing cards. While media usage is not a requirement for teachers, employing a creative approach is essential; effectiveness in education must be acknowledged by teachers.

With the explanation above, the researcher examined the changes that occur in kindergarten children before and after

being taught using the dragon game method and flashcards as teaching media.

METHODS

The research employed a quantitative methodology to assess vocabulary mastery in teaching English to young learners through a dragon game and flashcards, focusing on animal names. Utilizing a pre-experimental design, pre- and post-tests were administered to a kindergarten class of 30 students from Bimba Genuksari Semarang, selected through total population sampling due to the limited population size. The study aimed to evaluate the effectiveness of the intervention via an oral examination with flashcards, assessing the number of words correctly identified by students. Data collection involved a pre-test and post-test to measure improvements after the teaching method, with statistical analysis conducted using SPSS 25.

RESULTS AND DISCUSSION

Pre-tests and post-tests were administered to kindergarten students and data was obtained that will be discussed in the research findings. Treatment was also conducted for several days to maximize the delivery of material to students. Because the study focused on developing vocabulary mastery of animal names, the pre- and post-tests were conducted in the form of vocabulary tests involving memory, listening, and speaking skills. The researchers did not assess students' pronunciation in detail, but instead emphasized students' recall of the vocabulary given. Each student went forward one by one to complete a pre-test face-to-face with the researcher. Then, they had to mention ten flashcard provided by the researcher. The goal was to assess the students' vocabulary skills related to animals and the results of the pre-test showed that most students still lacked language mastery. According to the data collection process, after completing the pre-test, the class was given treatment in the form of learning animal names using flashcards and game-

based learning methods. Here, the researcher used the traditional dragon snake game. After the treatment, the researcher administered a post-test. The pre-test was the same as the post-test. The ten picture cards that had been tested in the pre-test were distributed to the students again using the same pattern, with students advancing one by one. This was to assess students' understanding of the terms on the picture cards given by the researcher while they played the dragon game and to identify significant variations in the results before and after the intervention.

Data Results

Table 1. Students' Category Score

Categories	Score	Total		%	
		Pre-test	Post-test	Pre-test	Post-test
Great	90-100	0	6	0	20
Good	70-80	0	11	0	37
Enough	50-60	0	9	0	30
Inadequate	30-40	4	3	13	10
Failed	<30	26	1	87	3

Researchers compared the pre-test and post-test score percentages in table 1 above. The scores are categorized from "failed" to "great." Most students are in the failed position. The total percentage of failed is 87% containing 26 students. Next in the inadequate category. The total percentage is 13% containing 4 students. Lastly from the pre-test is in the enough, good and great categories. The total percentage is 0%, there are no students in this category. Next from the post-test column. There is good development in the post-test, namely 3% in the failed, containing 1 student. Next total percentage in the inadequate category is 10% containing 3 students. The total percentage in the enough category is 30% containing 9 students. The next total percentage in the good category is 37% containing 11 students. And the final total percentage in the great category is 20% containing 6 students.

The failed category decreased from 26 to 1. only 1 student was still in the failed category, the rest have moved up to a higher category. Next the Inadequate category

decreased from 4 to 3. All students come from the failed to inadequate category. Next the enough category increased from 0 to 9. All students come from the failed to enough category. Next, the good category increased from 0 to 11. The 11 students consist of 9 students from failed to good, 2 students from inadequate to good. The last, the great category increased from 0 to 6. The 6 students consist of 4 students from failed to great and 2 students from inadequate to great.

After examining the comparative data from the experimental class, it can be concluded that the results showed a significant difference after the treatment. Almost all students showed an increase in vocabulary mastery, especially in the "good" category. This is indicated by a significant increase from 0 to 11 students. Meanwhile, one student with slight improvements remained in the "failed" category. These students responded well to the learning process. The researchers found that the language mastery of students in the experimental class had improved significantly.

Data Analysis

In two phases, the researchers used SPSS version 25 to analyze student scores. A normality test was used to determine whether the pre- and post-test results were normally distributed. A t-test formula was then used to determine whether there were significant differences in students' vocabulary before and after the task. The researchers used a paired-samples t-test. A paired-samples t-test was used to determine whether there were differences in means between the data. After a thorough data analysis, the findings supported the research questions. The following are the results of the data analysis:

1. Normality Test

The normality test is essential in data analysis to determine if data is normally distributed. For the paired sample t-test, the researcher applied Lilliefors Significance Correction using IMB SPSS version 25. The data is considered

normally distributed if the significance level exceeds $\alpha = 0.05$. The Shapiro-Wilk test indicated that the significance level for the experimental class's learning outcomes was 0.65, which is greater than 0.05, confirming that the pre-test and post-test data were normally distributed.

2. Hypothesis Test

After confirming a normal distribution of data, a paired sample t-test was conducted to assess the significance of differences in means before and after treatment. The researcher used the paired sample t test. The paired sample t-test is used to determine whether the means of two paired samples differ in a way that is statistically significant. The value of Sig. (2-tailed) must be examined in order to ascertain whether the data is significant. Before and after the treatment, there is a significant difference if the value is less than ($<$) Sig.(2-tailed) < 0.05 . Following the t-test, the research problem can determine whether or not using the dragon game and flashcards as learning tools can help students become more proficient in vocabulary.

2.1. Paired Samples Statistics

The result of paired sample statistics are the pre-test mean is 40,6667, the post-test mean is 77,0000, and the total sample size in both is the same, at 30. The pre-test standard deviation is 13,11312, and the post-test standard deviation is 12,07734. The pre-test las standard error mean is 2,39412, while the post-test standard error mean is 2,20501.

2.2. Paired Samples Correlations

The result of paired samples correlations was the total sample size was 30 both before and after the test. Then, $0,220 > 0.05$ is the value in the significant column. This indicates that the pretest and posttest scores do not significantly correlate.

2.3. Paired Sample Test

The result of paired sample test was The pre-test and post-test is Sig.(2-tailed) $0.000 < 0.05$. So it can be concluded that there is a significant

difference in the average student learning outcome between before and after the treatment.

Discussions

Analysis was conducted on the pre-test and post-test results, both before and after the treatment. Diagram 1 shows that the pre-test line begins with a high graph in the fail category. This indicates that before receiving the treatment, students' vocabulary mastery was still low. The beginning graph in the pre-test shows that 26 students are in the fail category and followed by 4 students are in the inadequate category. Meanwhile, in the enough, good, and great category, none of the students reached that category. This shows that no student received a score higher than the average of 70. After the treatment, the class was given a dragon game and flashcards. Diagram 1 shows that the post-test line experienced an increase. The beginning graph in the post-test shows that only 1 student was in the fail category and showed the highest increase in the good category, namely 37%.

The normality of each test has been examined using IMB SPSS version 25. Table 1 shows that the learning outcome results' Shapiro-Wilk significance is 0.062. If significance $\alpha = 0.05$ (5%), the number was more than the degree, according to the significance. Thus, it may be said that the pre-test and post-test data were distributed properly. The paired sample t test was performed when it was determined that the data was normally distributed. Table 4 shows that the pre-test and post-test values are Sig.(2-tailed) 0.000. Thus, it can be said that the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted. Considering that the (H_0) is rejected and the (H_a) is accepted, Thus, the study challenge has been resolved: flashcards as a learning tool and the dragon game as a learning technique are both successful in enhancing students' vocabulary mastery.

After the pre-test and post-test instruments showed significant results, the questionnaire statements conducted through interviews with kindergarten children before

and after treatment will be discussed in more detail. Based on the interview results, The first questionnaire showed little student interest in learning English. Then, after treatment, the second questionnaire showed an increase in student interest in learning English. This indicates that students' motivation towards English lessons is still low. Next, it will be explained in more detail regarding the questions asked during the interview.

The first statement, "I really like learning English," showed the highest Likert scale at "I strongly disagree." This means that more students dislike English because foreign languages are difficult to understand and pronounce. While the results of the second questionnaire showed the highest Likert scale at "I agree." This means that there was an increase in the number of students who liked English after learning using flashcards and the dragon snake game. The reason they started to like English was because foreign languages can be learned easily using fun media such as flashcards.

The second statement, "I believe that learning English is essential since it will allow me to interact with individuals from around the globe," showed the highest Likert scale at "I agree." This means that more students realized that learning English would make them have many friends, especially friends from abroad. The reason they agreed was because some children play online games that allow them to communicate with everyone, including foreigners. The results of the second questionnaire showed the same highest Likert scale at "I agree." Although showing the same highest scale, the resulting percentage was higher after the treatment. This means that there was an increase in the number of students who felt that English was important for having many friends.

The third statement, "I want to learn as many other languages as I can, thus studying English is important to me," showed the highest Likert scale at "I disagree." This means that more students disagreed that learning English is important. The reason they disagreed was that they did not plan to

learn many foreign languages, so they did not consider learning English very important. The results of the second questionnaire showed the same highest Likert scale score, "I disagree." Although it showed the same highest score, the percentage was lower after the treatment and there was an increase in the "I agree" and "strongly agree" scales. This means that there was an increase in the number of students who felt that English is important for mastering other foreign languages.

The fourth statement, "Studying English is notable to me because an educated person is supposed to be able to speak English," showed the highest Likert scale at "I disagree." This means that more students disagreed that learning English is important. The reason they disagreed was because smart children do not have to be able to speak English. Smart children can be achieved through diligent study. The results of the second questionnaire showed the same highest Likert scale at "I disagree." Although showing the same highest scale, the resulting percentage was lower after treatment and an increase in the scales of "I agree" and "strongly agree". This means that there was an increase in the number of students who felt that children who can speak English are educated people.

The fifth statement, "I place a high value on learning English in order to become a more knowledgeable individual," showed the highest Likert scale at "I disagree." This means that more students disagreed that learning English is important. The reason they disagreed was because knowledgeable children do not necessarily have to be able to speak English. Because knowledge of many things can be obtained through information media such as TikTok, Instagram, YouTube, etc. The results of the second questionnaire showed the highest Likert scale at "I agree." This means there is an increase in the number of students who think that children who can speak English are knowledgeable people because they can understand English-language programs directly without needing help.

The sixth statement, "I think learning English is important because it will let me see the world more broadly," showed the highest Likert scale at "I strongly disagree," meaning more students strongly disagreed that learning English is important. The reason they strongly disagreed was the same as the fifth statement, namely that broad-minded children are not obtained through English language skills, but through information media such as TikTok, Instagram, YouTube, etc. The results of the second questionnaire showed the highest Likert scale at "I disagree" and an increase in the scales of "I agree" and "strongly agree". This means there is an increase in the number of students who think that English can broaden their horizons by watching foreign shows, not just Indonesian shows.

The seventh statement, "Learning English is mandatory for me because I might need it later (for work, study)", showed the highest Likert scale at "I disagree". This means that more students disagreed that learning English can be used for work. Their reason was because they can work anywhere without having to use English. They think that living in Indonesia requires using their mother tongue, which is Indonesian. The results of the second questionnaire showed the highest Likert scale at "I agree". This means there is an increase in the number of students who think that English can influence the world of work later. Working abroad is one of their new aspirations after learning English in a fun way.

The eighth statement, " Learning English is important to me so that I can understand movies, videos, TV, and radio that are in English," showed the highest Likert scale at "I strongly disagree." This means that more students strongly disagree that learning English can understand English films, videos, TV, or radio. Their reason is because they can watch via YouTube which has a language changer feature to the desired language such as Indonesian. This is taught by their parents with the aim of making it easier for children to understand. However, this is what forms the habit of children becoming less

interested in English. The results of the second questionnaire showed the highest Likert scale at "I agree." This means there is an increase in the number of students who think that English is important to be able to understand English videos without parental assistance or application features. That way, they can choose what videos they want to watch without having to worry about not understanding the language being conveyed. However, parental figures still need to supervise children's viewing.

The ninth statement, "I study English because I want to be able to read books, newspapers, and magazines in English," showed the highest Likert scale at "I strongly disagree." This means that more students strongly disagreed that English is important for reading books, newspapers, or magazines. They think that they no longer need books, magazines, or even newspapers. They can get information through TikTok or other media that have translation features. The results of the second questionnaire showed the highest Likert scale at "I strongly agree." This means there is an increase in the number of students who think that English is important for reading books, magazines, and newspapers. Similar to their reasons in the eighth statement, they can watch videos without needing assistance.

The tenth statement, "Studying English is important to me because I want to travel to another country and spend time there," showed the highest Likert scale at "I disagree." This means that more students disagreed that if they travel abroad, they must be able to speak English. Their reason was because they were still too young to be able to speak English. They still needed their parents' help in communicating. The results of the second questionnaire showed the highest Likert scale at "I strongly agree." This means that there was an increase in the number of students who thought that English was important in order to be able to spend time abroad. Those who initially thought that their parents could help them communicate, but now want to be able to speak English because they want to spend their holidays abroad with new friends there.

The results of the study are similar to several of the theories that researchers have employed. The researcher used the dragon snake game as a game-based English learning media taken from traditional games for young learners. It is similar with a study done by nur I.S. Rakhmawati, Rachma Hasibuan, Imroatus Sholichah 2020. They also chose samples aged 5-6 which means the same as the age of kindergarten children. Another research finding is similar with a study done by Dian Hikmawati, Yon A. E, Syamsi Edi 2024. In their study, it stated that by applying this media, the students also became more motivated to speak, interested, and active during learning (Dian Hikmawati et al., 2024).

The difference between this research and other research is that this research collaborates using flashcard learning media with traditional game-based English learning methods. Not many teachers today still use traditional game methods. This research indirectly helps preserve this tradition by introducing age-appropriate games to children. Significant changes between the pre-test and post-test results before and after the treatment demonstrate that dragon game and flashcard are effective in enhancing students' vocabulary acquisition for kindergarten, which is the research problem that the experiment has addressed. Students learn animal names through flashcards and learn them happily by playing dragon game. It can help students remember the names of animals from vocabulary flashcards that offer attractive and colorful images. Clear visualizations make it easy for students to understand and remember.

Learning vocabulary using engaging visual media like flashcards can help children memorize new vocabulary, especially in foreign languages. They will easily grasp every shape, image, and color in each vocabulary word, and also clearly understanding the sounds exemplified by the teacher. However, based on observations, not all children prefer visual learning; some find it easier to memorize through writing or listening. To reconcile these differences,

game-based English learning is provided to students. Students will be happier and more comfortable if learning activities are interspersed with games. It's no surprise that this is preferred by them, considering their young age and the need for sensory stimulation through games. When students feel happy and comfortable with learning activities, their learning motivation will increase and their focus will be better maintained. By increasing students' learning motivation, teachers can easily manage the class and direct students. Students will be more courageous and confident in following the learning process to completion. The results of this study can also be used outside of school. Parents can also train and develop their children's learning motivation from home.

CONCLUSION

The pretest results for the dragon game and flashcard intervention were inadequate, with even the highest score falling below the average of 75, resulting in a total average score of 41. However, posttest results showed an improvement in scores after the implementation of the flashcards and dragon game, with the highest score reaching 100 and the average score increasing to 77. A significant difference in students' vocabulary mastery before and after the intervention was demonstrated, as noted by a paired sample t-test with a significance value of 0.000, which is below the $\alpha = 0.05$ threshold. This led to the rejection of the null hypothesis (H_0) in favor of the alternative hypothesis (H_a), affirming that the combined use of flashcards and the dragon game effectively enhanced children's language proficiency.

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