
The impact of Monkey Stories application on young learners' vocabulary acquisition

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ABSTRACT

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Vocabulary should be introduced from a young age so that children can master the target language. Digital games can help young learners learn a foreign language more effectively. This study aims to find the effectiveness of the Monkey Stories application on students' vocabulary acquisition. This study applied an experimental design with one pre-test and a post-test design. The sample used was the fourth-graders of Semambung I Elementary School, Sidoarjo, with 30 learners as the experimental class and 30 learners as the control class. The data was analyzed by using the SPSS 26 version. The result showed that the students in the experimental group outperformed the students in the control group. The mean score of the post-test of the experimental group was 8,633, while the mean score of the post-test of the control group was 5,3. This study has valuable implications for teachers to create engaging and creative vocabulary learning environments for young learners so that they are motivated to learn Vocabulary to help them master the target language.

1. INTRODUCTION

Language development is one part of child development. One of the most important components of language is vocabulary (Sitompul, 2020). As children get older, vocabulary development has an impact on their ability to read effectively and perform well at school, thus it is important to start learning vocabulary early to establish comprehension of word meanings (Neuman & Wright, 2014). Especially, in the golden age of children between the ages of 1-5 years is a time when children quickly absorb and master whatever things they catch in their daily lives (Rohmana & Senjana, 2022). The benefits of learning vocabulary from an early age include an improvement in intelligence and cognitive abilities, such as being capable of thinking critically, the ability to solve issues, and the capacity to pay careful attention when others are speaking. Additionally, it enhances their capacities for retaining information, focusing, and multitasking skills and fosters the growth of their creative abilities. Therefore, it is beneficial for young learners to learn vocabulary since their ability to memorize anything is higher than that of adults (Sitompul, 2020). Young learners refers to those who spent years in primary stage before transition to secondary stage (Rohmana & Rinda, 2019).

In addition to prior knowledge, pupils' development and capacity for taking in and remembering stimuli also play a role in their ability to learn (Piaget in Crossland, 2016). Piaget considered that children's capacity to create innovative theories for events was constrained by their preexisting cognitive frameworks.

Students nowadays acquire and learn vocabulary still in a manual method. A list of English words is written down and memorized one by one. Learning and memorizing this way can be boring and eventually make students unmotivated to learn (Fitria, 2022). In this case, the teachers have to find an engaging and creative way to teach vocabulary, so that the vocabulary learning process can accommodate young learners' characteristics that are always active, curious about new things, and easily get bored. Similarly, Ningsih (2023) also states that it is essential to identify appropriate techniques that meet students' learning needs to achieve the satisfactory teaching of English.

In the digital era, children are good at using technology. Teachers can apply learning methods that are appropriate for the current era. Teachers should introduce one type of digital development in the education sector, namely digital games, as a tool to support vocabulary learning in the classroom (Chiew Har Leong et al., 2019). The researchers suggested Monkey Stories as a form of digital game for young learners. Monkey Stories is a brand-new app that assists students in improving their English skills from the age of 2 - 10 years old, especially Listening, Pronunciation, Vocabulary, and Reading.

There is ample study about teachers' perspective of gamification. Digital gaming in the classroom has varying degrees of success (Wu, 2018). A recent comprehensive literature review revealed that game-based learning enabled learners to develop collaboration, boost learning motivation, and competitiveness, and offer enjoyment. It also assists learners in acquiring knowledge to achieve their learning goals (Umamah & Saukah, 2022). The growing relevance of digitalization in education was clearly stated by goals on how to use digital technology, how to promote critical thinking, and the impact of computers on society. Digital games also have side effects for students. It appears to be discouraging, because each instrument, has both positive and bad features. However, exposure to gaming appears to make teachers capable of detecting potential negative effects on young learners and proposing solutions to such concerns. The teacher claims to be more aware of what to avoid when using digital games for teaching, and the majority of them discuss strategies to balance the impacts of digital games with their students (Raptopoulou, 2020). However, the teacher plays the most important role, as they determine whether or not to implement digital-based learning in the classroom (Nieland et al., 2021). Teachers' perspectives on ICT and digital-based learning implementation in the classroom are significant knowledge caused by certain reasons, namely Teachers are interacting with other teachers' perspectives on the implementation of a new policy or method (Raptopoulou & Anastasia, 2015).

The previous literature has shown that teacher benefits from the use of digital games in their teaching and learning activities, however, there is a lack of research on the effectiveness of digital media, especially Monkey Stories as the media in learning Vocabulary. Therefore, the present study aims to know the effectiveness of the Monkey Stories on young learners' vocabulary acquisition.

2. METHOD

2.1. Research Design

This study applied an experimental design with one pre-test and a post-test design. 30 learners of fourth-graders of Semambung I Elementary School was involved as the experimental class and 30 learners as the control class.

Figure 1 shows the information about Pre-Test and Post-Test Control Group Design.

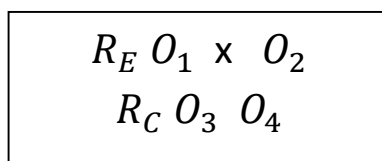


Figure 1. Pre-Test and Post-Test Control Group Design

X = The Treatment

R_E = Experimental Class

R_C = Control Class

O_1 = Pre-test using the Monkey Stories application

O_2 = Post-test using the Monkey Stories application

O_3 = Pre-test using the conventional method

O_4 = Post-test using conventional method

2.2. Participants

A population is a collection of items, units, or topics that are being studied. Populations can be made up of limited or infinite numbers of units (Bhatt & Krishna, 2020). The population of this study was 60 students from one of the public elementary schools in Sidoarjo, Indonesia. They were in their fourth grade. They were purposively chosen in this study, because based on the preliminary study, most of the students had low achievements in vocabulary and they had difficulty during English lessons, especially speaking. Moreover, the students were accustomed to using technology and the school provided a school laboratory equipped with Internet connection and tablets. Hence, the research could be carried out in this school.

2.3. The Procedure of Data Collection

To collect the data, the researchers collaborated with the teacher to employ the test. The researchers designed all of the tests. This study applied pre-tests and post-tests to know the students' vocabulary mastery. The researchers asked the teacher to divide the students into two groups, a group that treated using the Monkey Stories application and a group that treated using the conventional method. Before the Monkey Stories treatment, the researchers trained the teacher in using the application. The researchers also prepared the teaching scenarios for the teacher. In the teaching process of the experimental group, the teacher applied the Monkey Stories application. Students were given tablets with an Internet connection and they were installed with the Monkey Stories application via Play Store. For the first, they have to create an account and after they have finished, the students start to open the game. Inside the Monkey Stories application, there are a lot of themes. The researcher only used 5 themes in level G for the treatment in the experimental class that were; (1) Who I Want To Be, (2) Occupations, (3) I am Special, (4) Five Senses, and (5) If I Were a King. Meanwhile, in the control group, the researcher used a communicative approach, a communicative language teaching method, and for the techniques of teaching,

the teacher drilled the students certain vocabulary words every day around 8-10 vocabularies. The teacher pairs the students to memorize words and do exercises. The treatment of both groups was done six times. During the pre-test and post-test, both groups must perform story-telling with different topics in front of the class.

During the teacher did experimental teaching, the researchers acted as the non-participant observant. The researchers took notes and took some pictures during the teaching and learning process of both groups.

2.4. Data Analysis

The researchers performed statistical analysis using SPSS to examine the data. Researchers printed the test results and transcribed them in the form of a table. The researchers applied t-tests to examine whether there was any significant difference between the pre-test and post-test scores of Monkey Stories and the conventional method.

The formula is represented as follows;

$$t = \frac{M_x - M_y}{\sqrt{\left(\frac{\Sigma X^2 + \Sigma Y^2}{N_x + N_y - 2}\right)\left(\frac{1}{N_x} + \frac{1}{N_y}\right)}}$$

Figure 2. T-test Formula

Note:

M_x = Mean score of experiment class

M_y = Mean score of control class

Σ_x = Deviation of each score and X_1

Σ_y = Deviation of each score and Y_1

N = Subject of the sample

3. DISCUSSION AND RESULT

3.1. Result

This study aims to prove whether there was any significant impact of the Monkey Stories application on young learners' vocabulary mastery. The researcher found the difference scores between two classes taught by using the Monkey Stories application and one taught by using a conventional method. The data in this study included the pre-test score and the post-test score. The researchers presented the statistic T-test paired to analyze the data. There were some requirements for the conducting T-test paired. Data must be normally distributed and homogeneous so that the researcher can analyze normality and homogeneity to be able to use paired T-tests.

Table 1 below shows the pre-test and post-test results of the experimental group. It shows that there is significant different on the students' pre-test score and students' post-test score, with the different is 259. This is showed that after the treatment with Monkey Stories application, the students can perform better during story telling test as their vocabulary increasing. Students begin to be more confident and they utter their ideas more fluently.

Table 1. Pre-Test and Post-Test Experimental Group

No.	Name	Pre-test (X1)	Post-test (X2)
1	SEF	50	65
2	DMK	77	88
3	MSAN	45	55
4	THW	88	90
5	TLCB	46	60
6	AAM	88	90
7	AP	70	85
8	RGA	68	80
9	AAN	60	68
10	DFR	58	60
11	AAD	55	70
12	MASDP	77	80
13	MMA	66	77
14	SJPS	66	75
15	NMS	70	88
16	AQT	40	60
17	ASR	50	60
18	RWA	80	85
19	NAZ	88	90
20	AQL	75	85
21	NAZP	79	84
22	ZFR	55	72
23	ADP	50	60
24	CPR	89	90
25	MS	68	70
26	IFR	89	92
27	SA	88	90
28	MSA	88	95
29	MFR	78	85
30	IYN	45	56
Total		2046	2305

Meanwhile, table 2 is the result of the pre-test and post-test score of the conventional method group. It shows slight difference on the pre-test and post-test score of the students in the conventional method group, with the different is 159 points. This shows that the conventional method develops students' vocabulary. However, the students only showed a slight improvement, especially when doing the story telling test as they sometimes still have difficulty in uttering their ideas as their vocabulary mastery are not much. Their story telling often stop as they seek for the English words to express the story.

Table 2. Pre-Test and Post-Test Scores of Conventional Method Group

No.	Name	Pre-test (X1)	Post-test (X2)
1	SES	40	50
2	OFT	72	75
3	SWS	50	55
4	DDL	50	54
5	PAW	75	82
6	MMS	85	87
7	SA	77	80
8	FIN	68	75
9	MDW	60	60
10	DAC	45	55
11	NHP	65	75
12	MRN	89	89
13	PMG	66	70
14	IAK	60	70
15	MAP	50	60
16	ZTA	85	87
17	NRA	82	89
18	DBP	60	68
19	YEN	75	82
20	NFZ	75	77
21	SFR	70	75
22	AWH	55	66
23	ASW	50	54
24	RM	84	86
25	MAB	80	86
26	IZA	85	84
27	AMA	80	85
28	SR	80	78
29	SSH	75	85
30	SA	50	58
Total		2038	2197

Table 3 below shows the result of the T-test of both group and it shows that students in the experimental group that was treated using Monkey Stories application achieved higher scores than the conventional method group. This could be seen from the mean score of the experimental group is -8,6 and the mean score of the control group is -5.3. Furthermore, concerning the result of inferential statistical analysis, the standard deviation of experimental group is 5,543 and for the control group is 3,715. From those findings, the data obtained showed that the experimental achieved score better than the control group.

Table 3. The result of T-Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Experimental class	Pre_Eks - Post Eks	-8,633	5,543	1,012	-10,703	-6,564	8,531	29	,000
Control class	Pre_Kon - Post Kon	-5,300	3,715	,678	-6,687	-3,913	7,813	29	,000

Inferentially, the data showed that the score of Sig. (2-tailed) was 0,000 or 0,000 in degree of freedom was 29 which means the significance 2-tailed test was lower than the alpha value (α) which is 0,05 or ,05 (5%). It could be seen in the score of the t-calculate in experiment group is 8,531 which the score of t-table is 1,69913 which is based on the degree of freedom is 29. It shows that the t-calculate > t-table, where: 8,531 > 1,69913. Therefore, the null hypothesis was rejected and the alternative hypothesis was accepted. It means that there is significant impact of using Monkey Stories application on the fourth graders vocabulary mastery. Moreover, the use of Monkey Stories application as a strategy of teaching English vocabulary is also effective to help the teacher improves the students' story telling skills. Besides that, their way of expressing opinions and speaking when discussing with their friends is more often heard using English than Indonesian. Previously, they were dominant in Indonesian and chose to remain silent when expressing things in discussions or dialogues. They will use a low volume when speaking because they are afraid of being caught using Indonesian when discussing during English lessons. Then, in the presentation part they were more fluent in conveying the topics they presented with little pause in the choice of vocabulary they used. Previously, they gave up on thinking of appropriate vocabulary in English and ended up using Indonesian from the start of the presentation to the end.

Figure 3. T-Table of Degree of Freedom (df)

Pr	0.25	0.10	0.05	0.025	0.01	0.005	0.001
df	0.50	0.20	0.10	0.050	0.02	0.010	0.002
1	1.00000	3.07768	6.31375	12.70620	31.82052	63.65674	318.30884
2	0.81650	1.88562	2.91999	4.30265	6.96456	9.92484	22.32712
3	0.76489	1.63774	2.35336	3.18245	4.54070	5.84091	10.21453
4	0.74070	1.53321	2.13185	2.77645	3.74695	4.60409	7.17318
5	0.72669	1.47588	2.01505	2.57058	3.36493	4.03214	5.89343
6	0.71756	1.43976	1.94318	2.44691	3.14267	3.70743	5.20763
7	0.71114	1.41492	1.89458	2.36462	2.99795	3.49948	4.78529
8	0.70639	1.39682	1.85955	2.30600	2.89646	3.35539	4.50079
9	0.70272	1.38303	1.83311	2.26216	2.82144	3.24984	4.29681
10	0.69981	1.37218	1.81246	2.22814	2.76377	3.16927	4.14370
11	0.69745	1.36343	1.79588	2.20099	2.71808	3.10581	4.02470
12	0.69548	1.35622	1.78229	2.17881	2.68100	3.05454	3.92963
13	0.69383	1.35017	1.77093	2.16037	2.65031	3.01228	3.85198
14	0.69242	1.34503	1.76131	2.14479	2.62449	2.97684	3.78739
15	0.69120	1.34061	1.75305	2.13145	2.60248	2.94671	3.73283
16	0.69013	1.33676	1.74588	2.11991	2.58349	2.92078	3.68615
17	0.68920	1.33338	1.73961	2.10982	2.56693	2.89823	3.64577
18	0.68836	1.33039	1.73406	2.10092	2.55238	2.87844	3.61048
19	0.68762	1.32773	1.72913	2.09302	2.53948	2.86093	3.57940
20	0.68695	1.32534	1.72472	2.08596	2.52798	2.84534	3.55181
21	0.68635	1.32319	1.72074	2.07961	2.51765	2.83136	3.52715
22	0.68581	1.32124	1.71714	2.07387	2.50832	2.81876	3.50499
23	0.68531	1.31946	1.71387	2.06866	2.49987	2.80734	3.48496
24	0.68485	1.31784	1.71088	2.06390	2.49216	2.79694	3.46678
25	0.68443	1.31635	1.70814	2.05954	2.48511	2.78744	3.45019
26	0.68404	1.31497	1.70562	2.05553	2.47863	2.77871	3.43500
27	0.68368	1.31370	1.70329	2.05183	2.47266	2.77068	3.42103
28	0.68335	1.31253	1.70113	2.04841	2.46714	2.76326	3.40816
29	0.68304	1.31143	1.69913	2.04523	2.46202	2.75639	3.39624
30	0.68276	1.31042	1.69726	2.04227	2.45726	2.75000	3.38518

3.2. Discussion

Monkey Stories application is an effective strategy of teaching English vocabulary. This is because of the fun and enjoyable learning process during the application of Monkey Stories. The students feel as if they are not studying therefore their motivation in learning Vocabulary is increasing and this leads to the mastery of more vocabulary words. This finding agrees with Ucus (2015) that gamification learning make the students enjoy participating in the learning activities, and games are appropriate for all level of age as a teaching tool. In the same vein, Sudarmaji & Yusuf (2021) stated that digital game-based learning helps students easily understand English vocabulary and helps students avoid boredom during learning.

In the beginning, the students were shy, nervous, and afraid to utter their ideas but after several times of treatments using the Monkey Stories application, their confidence developed, and without being appointed by the teachers, they initiated themselves to come forward to do the tasks. This finding is in accordance with Tsai & Tsai (2018) revealed that using digital game-based learning creates a free stressful environment and supports learning effectively. Reinders & Wattana (2014) added that a fear of public speaking, embarrassment, and fear of making mistakes, being shy, and being less motivated in the classroom can be solved by applying digital game-based learning. Digital game-based learning encourages students to fully participate in learning and uplifts their motivation and enthusiasm for studying English, thus enhancing learning effectiveness (Tsai & Tsai, 2018).

During the discussion time, the students are more active. Before the treatment, the students spoke Bahasa Indonesia more during the discussion, even though the teachers had encouraged the students to use English more often by asking the students in English but they answered the teachers bilingually. The students had difficulty expressing their ideas because they had limited vocabulary, therefore they were less motivated to do the discussion. This complements All et al., (2015) finding that further dialogues boosted students' motivation and potentially enhanced vocabulary development. The students felt motivated to engage with a greater part of the game while providing their work more of their focus throughout the next dialogues that dealt with the digital game and the Digital Game Based Video Learning work.

Before the treatment, the students were not fluent in expressing their ideas during storytelling and they used to have short conversations, however after the Monkey Stories application was utilized, they can speak more fluently and their choice of words is developed more, instead of saying sad they said unhappy, handsome → good looking, caring → attentive, and smart → intelligent. These results are consistent with Azar's (2012) finding that students are driven to actively communicate with one another while playing games, which will help them speak more fluently and expand their vocabularies.

4. CONCLUSION

This study aims to know the effectiveness of Monkey Stories as an application for vocabulary learning that shows the significant comparison between learning vocabulary with the conventional method and using the Monkey Stories application. The following are the results of the study. First, Monkey Stories is an application for learning English with fun for 2 – 10-year-olds. They put it down of visual interest, audio, and there a lot of mini-games at the end of the stories. Second, this Monkey Stories application gives significant results to the vocabulary learning of the students. Before they use memorizing for vocabulary learning,

they can memorize some of the vocabulary by only using the Monkey Stories application. Finally, the students easily find new vocabulary and rich their vocabulary, confidence, and fluency for public speaking like presentation, discussion, and storytelling in front of the class.

This study provides some contributions, such as giving valuable data on the case of study that might be done to other researchers by their own case to find the effectiveness of the Monkey Stories application on their population and teachers' insights for beneficial methods for their students by this application. The findings of this study also contribute, especially to the parents and teachers worldwide to motivate their students or their children to learn English with other methods using the Monkey Stories application, so that they can feel fun and playful for this method in learning vocabulary.

This study is limited to the use of storytelling as the vocabulary test, however, it may provide better outcomes on the students' vocabulary skills if the kind of test is more variable. Therefore, further research is welcome to add more variations of tests in examining the effectiveness of other game-based learning.

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