

Influence of Kahoot! Games Against the Mastery of English Vocabulary for Children Aged 5-6 Years In Knowing Animals

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Abstract

Indonesia's English proficiency criteria are in the low category with a rating of 81 out of 111 countries. So learning English in Indonesia needs to be improved in order to produce human resources that can improve the country's economic conditions. This study aims to determine the effectiveness of educational games on English vocabulary mastery of children aged 5-6 years in recognizing various animals. The educational game used is Kahoot! Game. The study was conducted in group B KB TK Nasima. The type of research used is quantitative experiment with a one group pre test post test design. The population of this research is all children aged 5-6 years in the Nasima Kindergarten KB, which is 42 children. While the research subjects totaled 30 children with a distribution of 14 children in Kindergarten B1 and 16 children in Kindergarten B2. The independent variable in this study is the Kahoot! Game. Observation and data analysis techniques were carried out using quantitative descriptive. The results of this study indicate that there is a significant effect of using the Kahoot! on children's English vocabulary mastery in getting to know animals after treatment. At the pre-test stage, the average score of children's English mastery was 29.37 which was in the MB category (Beginning to Develop). Then after 12 treatments, a pre-test was carried out which showed an increase in the average value to 53.80 in the BSH (Developing According to Expectations) category with an increase in value of 24.43. The value of the paired sample t-test in this study was 0.000, which means it is less than 0.05 ($0.000 < 0.05$). The results concluded that the use of Kahoot! Game proven to be effective in improving the English language skills of children aged 5-6 years in getting to know animals in the Nasima Kindergarten KB.

How to cite

INTRODUCTION

The emergence of technology which is dominated by English as an international language to connect and transfer information to all corners of the world, has made mastering English an important requirement for today's millennial society. Even so, the Indonesian people are still ranked 81 out of 111 countries listed on the EF EPI (Education First English Proficiency Index) (2022). The criterion for Indonesian English proficiency lies in the low category. According to Johan Wilhemsson, EF Adults Indonesia Country Manager, a good command of English will be able to accelerate economic growth, especially in countries with a demographic dividend like Indonesia. So learning English in Indonesia needs to be improved in order to produce human resources that can improve the country's economic conditions.

In accordance with the assumption Darjowidjojo (Maili, 2018) said that a child will more easily accept learning a foreign language at an early age than when he is already experiencing puberty. Learning English in Indonesia has begun to be introduced at the PAUD (Early Childhood Education) level. This is proven by the many bilingual PAUD institutions and even international standards where English is often used in everyday learning. As in bilingual PAUD institutions in the city of Semarang, namely KB TK Nasima which is also of international standard. Based on the Nasima School website (2019), even in order to meet international standards, many parties are involved, such as The British Institute, which provides scheduled native speakers so they can play and study with the children there. As well as the University of Cambridge which educates teachers in KB TK Nasima to be able to provide learning in accordance with international classes. However, according to the initial observations that have been carried out, children in KB TK Nasima still need stimulation and innovation in learning English. Children still often run here and there when the teacher introduces English through spoken material using card learning media. But when using video learning media through the YouTube channel, children are enthusiastic and tend to be able to follow the lessons.

Introduction to English in early childhood begins with knowing vocabulary (Firdaus & Muryanti, 2020). The more children know vocabulary, the higher the child's ability to speak (Prasetyaningsih, 2013). English learning materials for early childhood, starting with an introduction to vocabulary (Widyahening & Sufa, 2022). Vo-

cabulary that is introduced to children can start with things around the child's life, such as fruit names, verbs, body parts, animal names, etc. Vocabulary is the most basic thing in learning English. Vocabulary is a vocabulary or collection of words in a language (Nurfadilah & Nurhastuti, 2018). Another opinion was expressed by Nunan in (Rohmah & Lilawati, 2019) that vocabulary is a collection of words that individuals know. The more children know vocabulary, the higher the child's ability to speak. Holidazia and Rodliyah (2020) say that vocabulary is important in learning English. This means that it will be easier for children to learn English if they know the meaning of the word. According to Purwanti (2020) in introducing or teaching English vocabulary to children, it is better to design it with innovative and diverse learning methods and media, so that children are interested in learn English vocabulary.

Learning media plays an important role in the process of teaching and learning activities (Bozzola et al., 2018). Learning media is a tool used when learning, so that students can understand the material clearly (Tafonao, 2018). Through learning media, material can be conveyed in an interesting way, close to students, and invites students to feel the material as an experience. The process of implementing teaching and learning activities becomes more optimal because of the presence of positive supporting aspects (Septikasari & Frasandy, 2018). The use of learning media is expected to stimulate children which can have a positive impact, such as more conducive learning activities, feedback between educators and students, and aspects of child development can achieve optimal results. In accordance with the words of Rasulullah SAW., Muslims are taught to educate their children according to their era (Madura, 2022). So, as a professional educator, it is hoped that he will be able to provide appropriate learning through learning media that is also in accordance with today's era, namely technology-based. In addition, educators must also pay attention to the characteristics possessed by early childhood. Early childhood has the characteristics of learning while playing and tends to like new things, and technology is an example of something new for young children (Zabatiero et al., 2018).

Current technological advances can make it easier for educators to create innovative learning media as a companion to the material being explained. Technology-based learning media that can invite children to play while learning, for example, is the Kahoot! game. According to

Hartanti (2019) Kahoot! is an educational game in the form of a quiz that is designed in an interesting way as can be given videos and pictures. Through this application, educators can design their own quizzes that will be given to students. In addition, the Kahoot! provides various types of questions, including multiple choice, true and false, essays, to puzzles.

Based on the background of the problem and the focus of the research above, the purpose of this research is to determine the effectiveness of using the Kahoot! on the mastery of English vocabulary for children aged 5-6 years in knowing animals in KB TK Nasima.

RESEARCH METHODS

This research was conducted to obtain a scientific truth, so quantitative research is needed. Quantitative research is a research method that uses numbers to analyze data that has been researched (Anshori & Iswati, 2019). This study uses a type of experimental quantitative research with the One Group Pre Test Post Test Design. According to Sugiyono in (Jurmanisak & Fitriani, 2020) the experimental method is a research method used to look for the effect of behavior on others under controlled conditions.

In a quantitative study of course there is a population and sample. According to Sugiyono in (Hermawan, 2019) population is a generalization area consisting of objects or subjects that have certain qualities and characteristics set by researchers to study and draw conclusions. The population in this study were all students aged 5-6 years in KB TK Nasima with 42 children. While the research sample is part of the number and characteristics possessed by the population. According to Sugiyono in (Dharma et al., 2020) the sample is part of the number and characteristics possessed by the population. Sampling in this study used a type of non-probability sampling technique, to be precise, this study used a purposive sampling technique. Sugiyono in (Fransiska & Ain, 2022) explains that purposive sampling is a sampling technique with certain considerations. The sample considerations in this study were students aged 5-6 years. The sample used in this study was 30 children in group B KB TK Nasima, which consisted of 14 children B1 Prabumulih and 16 children B2 Sungai Liat.

There are 3 data collection techniques in this study, namely observation, interviews, and documentation. Observations in this study were carried out through observation and through observation sheets which are referred to as re-

search instruments. The research instrument used has been tested for validity and reliability. The results of the instrument reliability test were calculated using IBM SPSS Statistics 22 with the Cronbach's Alpha test which showed a value of 0.900. So with these results the research instrument can be said to be reliable because it meets the requirements, namely $0.900 > \text{Cronbach's Alpha } 0.7$. Thus the research instrument can be used to collect valid data in the field. In this study using a checklist assessment form. The results obtained can be seen from the scores obtained. The following is a broad research instrument grid.

Table 1. Broad Research Instruments Lattice

Indikator	Statement
Reiterate English vocabulary	Child repeats land animal names in English
	The child repeats the name of the water animal in English
	Child repeats the name of the animal in the air in English
	The child repeats the name of the amphibian in English
	The child mentions 5 English words and their meanings
	Child mentions 5 English words and their meanings correctly
	The child recalls the English vocabulary from the activity of guessing animal sounds and movements

Say the name of the object shown in English	Children say the names of land animals in English according to the pictures shown
	Children say the names of aquatic animals in English according to the pictures shown
	Children say the names of animals in the air in English according to the pictures shown
	The child says the name of the amphibian in English according to the picture shown
Show some requested pictures	The child shows pictures according to the vocabulary of land animals in English
	Children show pictures according to the vocabulary of water animals in English
	Children show pictures according to the vocabulary of animals in the air in English
	The child shows pictures according to the amphibian animal vocabulary in English
	Children listen to the teacher's instructions from coloring pictures of land animals
	Children listen to the teacher's instructions from coloring pictures of aquatic animals
	Children listen to the teacher's instructions from coloring pictures of animals in the air
	Children listen to the teacher's instructions from coloring pictures of amphibian animals
	The child shows the correct picture of the wrong statement

(Source: Research Data 2022)

After the research was carried out, the researcher analyzed the data using Microsoft Excel and IBM SPSS Statistics 22. The researcher analyzed the data in the form of a descriptive test (pretest-posttest), tested the hypothesis with the Paired Sample T-test to find out whether there was an increase or not in mastery of language vocabulary. English for children aged 5-6 years in getting to know animals in the KB TK Nasima.

RESULTS AND DISCUSSION

The Nature of Early Childhood Language

Suhartono (Wahyundari, 2021) states that with the help of language, children grow from biological organisms to become individuals in groups. According to Suhartono in (Devianty, 2019) argues that language is a series of sounds that symbolize human thoughts, feelings, and attitudes. Children who are experiencing growth and development will communicate their needs, thoughts, and feelings through language with words that have unique meanings.

Early childhood is an individual figure who is in a golden age who is undergoing a process of rapid and fundamental development for the next life (Salsabila & Tarigan, 2021). The golden age is the period when children begin to be sensitive or sensitive to receive various stimulations. The sensitive period for each child is different, along with the rate of growth and development of the individual child. The sensitive period is the period of maturity of physical and psychological functions that are ready to respond to the stimulation provided by the environment. This period is also the period of laying the foundation for developing abilities.

According to Suhartono in (Yanuarsari et al., 2020) children's language is the language used by children to convey wishes, thoughts, hopes, requests, and others for their personal interests. So it can be concluded that language is a very important communication tool, because language is very important in early childhood, so every child must be given appropriate language stimulation in his learning.

Mastery of Children's English Vocabulary

Scott and Lisbeth H. Ytreberg in (Maryani & Arroyani, 2022) suggest that increasing the vocabulary of early childhood English vocabulary can be done by using learning media in the form of images consisting of a collection of vocabulary. Through these learning media children will find it easy to learn, understand, memorize, and even recite English vocabulary in their daily

activities.

Learning English for early childhood includes all language competencies in the form of listening, speaking, reading, and writing skills (Susfenti, 2022). These language skills are presented in an integrated manner, just like what happens in everyday children's lives. Flannel and Supartini in (Ariani & Ujianti, 2021) listening skills in early childhood are very important for children to interact with. In order to be involved in a communication, children must be able to understand and respond to what is said. Thus, listening skills need to be focused and developed from an early age because they are the initial basis for the development of other languages. Through listening activities, children will clearly acquire some of the vocabulary being studied. Children as young English learners have several instincts. One of them is the instinct to interact and speak which is the most important for learning English (Nurhasan, 2019).

Kahoot! Game App

The Kahoot! app! is a program that is used as a learning medium in the form of a game that can be accessed via the Kahoot! website or application. The Kahoot! website there are 2 namely for game makers and game players. The website for game makers can be accessed via <https://kahoot.com> while for game players can access via <https://kahoot.it>.

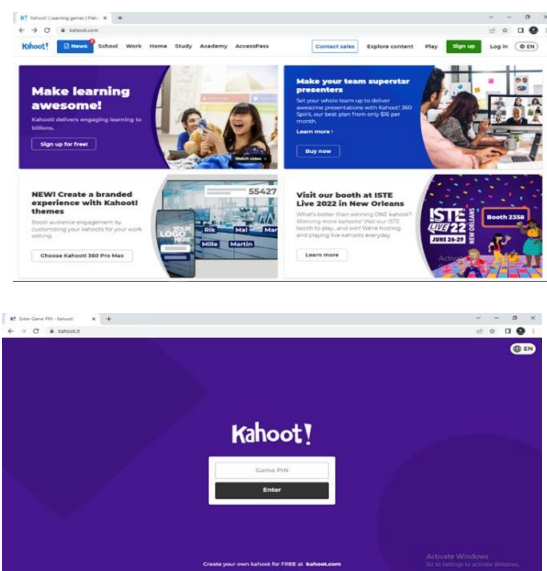


Figure 1. Web Kahoot! Games

The Kahoot! app can also be used through various display devices such as Skype or Google.

The design of the game is such that the players can enjoy the game. The gameplay is simple; all players connect using the game PIN shown on the common screen, and use the device to answer questions created by teachers, business leaders, or others.

Jannah and Pahlevi (2020) have several advantages of Kahoot! as a learning medium, namely the class atmosphere can be more fun, train children to use technology as a learning medium, can stimulate children's motor skills through the operation of the Kahoot! customize the device used so that it makes the user feel comfortable when using it, there are various backsound options that can be set by game makers for free, users can create their own types of quizzes to be given along with the material used, no need to download an application and can be opened via the web, and no need to register an account when going to play the game. Meanwhile, the lack of the Kahoot! Game not all teachers understand technological developments, school facilities are inadequate, meeting hours are limited in class, and not all teachers have time to prepare learning plans with Kahoot!.

There are several game applications that take the form of interactive quizzes such as Kahoot!, such as the Quizizz application. However, the Quizizz application does not provide free features when inputting videos and images, besides that the appearance cannot match the device used by the user. The display used by the Quizizz application is in the form of a portrait according to the cellphone screen, so when the user plays on a laptop the display will remain portrait and cannot be full like a landscape laptop screen so it is less comfortable when using it. In addition, there is the Educandy application, but its use is more suitable for elementary school children because they play with words and point the mouse too much, such as pulling cards into the correct stack, for kindergarten children this is still relatively difficult, so it is less effective when implemented in kindergarten. Furthermore, there is Wordwall, but this application has a primary target user for junior high school students, so the games available are not suitable for kindergarten children. The last application is Quizlet which is shaped like a quiz but is less attractive because its simple appearance is not accompanied by a theme that fits the characteristics of early childhood. So the game selection Kahoot! considered appropriate if applied when introducing learning to early childhood because it makes it easier for teachers and also children to use.

Table 2. Descriptive Analysis of Pretest and Posttest Data

Descriptive Statistics							
	N	Minimum	Maximum	Mean		Std. Devia- tion	Variance
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Pretest	30	20	40	29.37	1.082	5.928	35.137
Posttest	30	40	60	53.80	1.096	6.002	36.028
Valid N (list- wise)	30						

(Sumber: Data Penelitian 2022)

Research result

This research was conducted in group B KB TK Nasima with 30 children as research subjects. The research started on July 20 2022 and then continued on August 18 - September 16 2022. Then data analysis was carried out to find out the answers to the research hypotheses. The data were analyzed using descriptive analysis which aims to provide an overview of the data obtained, so that it can be seen the value of the child's English vocabulary mastery before (pre-test) and after (posttest) given 12 treatments (treatment) using the Kahoot! Game. The following is the result of a descriptive analysis of English vocabulary mastery for children aged 5-6 years in getting to know animals in KB TK Nasima.

The table 2. above shows that there are differences in the values of the pretest and posttest results of 30 respondents aged 5-6 years. Based on the table, it can be seen that there is an influence from using the Kahoot! on the mastery of English vocabulary. At the smallest (minimum) value, a value of 20 was obtained at the time of the pretest, then it increased when the pretest was carried out, namely it became 40. While the largest value (maximum) of the pretest data was obtained at 40 and an increase occurred at the time of the posttest, namely to 60. Then the average result (mean) from the pretest data, namely 29.37 which then experienced an increase in the results of the posttest data to 53.80.

There is an increase in this study can be seen through the results of the interval class. According to Andjarwati et al. (2021) interval class is categorization by creating classes based on groups of specified objects. The following is data on the results of the pretest and posttest categories of English vocabulary mastery for children aged 5-6 years in knowing animals in the KB TK Nasima.

Table 3. Pretest Data Results

Interval	Criteria	Frequency	Percentage
20-24	BB	8	27%
25-29	MB	8	27%
30-34	BSH	5	17%
35-40	BSB	9	29%
Total		30	100%

(Source: Research Data 2022)

Based on the table above, it is explained that the interval class for the pre test is divided into 4 criteria, namely BB, MB, BSH, and BSB. The BB criterion has a respondent frequency of 8 children or 27% of the total respondents. Furthermore, the MB criteria have a frequency of respondents as many as 8 children or 27% of the total respondents. Then for the BSH criteria, the respondent frequency is 5 children or 17% of the total respondents and the BSB criteria has a respondent frequency of 9 children or 30%. Based on these data, the number of children with the criteria of BB (Not Developing) and MB (Beginning to Develop) is more than BSH and BSB, therefore children's mastery of English needs to be improved again. The following are the results of the post-test data for children aged 5-6 years after using the Kahoot! Game.

Table 4. Posttest Results Data

Interval	Criteria	Frequency	Percentage
40-44	BB	3	10%
45-49	MB	6	20%
50-54	BSH	5	17%
55-60	BSB	16	53%
Total		30	100%

(Source: Research Data 2022)

Based on the table above, BB criteria has a frequency of 3 respondents or 10% of the total

Table 5. Paired Samples Test Results

Paired Samples Test									
Mean		Paired Differences				t	df	S i g .	
		Std. Deviation	Std. Error mean	95% Confidence Interval of the Difference				(2-tailed)	
				Lower	Upper				
Pair 1	Pretest - Posttest	-24.433	6.252	1.141	-26.768 -22.099	-21.407	29	.000	

(Source: Research Data 2022)

respondents. Furthermore, on the MB criteria, the frequency of respondents is 6 children or 20% of the total respondents. While the BSH criteria have a frequency of 5 children or 17% of the total respondents and the BSB criteria have a frequency of 16 respondents or 53%.

A hypothesis can be interpreted as a temporary answer to a research problem, until it is proven through the data collected (Arikunto, 2010). In this study, to find answers to the hypotheses, calculations were used via IBM SPSS 22 with the Paired Sample T-test. This was done to determine the null hypothesis (H_0) and the alternative hypothesis (H_a) in this study. The following are the results of the calculation of the Paired Sample T-test.

From the table 5. above the value of Sig. (2-tailed) is 0.000 which means it is smaller than the research Alpha value ($0.000 < 0.05$). Then H_0 is rejected and H_a is accepted, which means that there is a significant influence on the use of the Kahoot! on the mastery of English vocabulary for children aged 5-6 years in knowing animals in KB TK Nasima. The results of this study are supported by Prayitno's theory (Trisnadewi & Lestari, 2018) that the process of learning English with a game approach can improve children's English skills. In addition, Vygotsky (Dahniar, 2018) stated that children need to play because it is in playing that children first find knowledge in their social world which then becomes part of children's thinking and solving problems. Play should also be filled with lots of activities that make children understand the material being studied. Do not let children focus on the game alone but do not understand the material being studied.

In fact, all young children can master English if given appropriate stimulation according to their development. The theory of nativism explains that everyone can master any language if taught and introduced to that language (Firdaus & Muryanti, 2020). In accordance with this theory, early childhood is able to master English voca-

bulary if it is introduced and taught from an early age and of course it must be in accordance with the abilities of early childhood. If the child gets stimulation in learning English vocabulary according to his development, then the child will have a large vocabulary of English vocabulary so that he has good English skills.

CONCLUSION

The children's English vocabulary mastery in the KB TK Nasima before being given treatment was in the MB category (Beginning to Develop). Therefore, researchers provide stimulation through educational games, namely Kahoot! which attracts children to be enthusiastic about learning English. After the treatment was carried out 12 times, there were differences in the results from before. Children are getting used to and happy with the material they get through the Kahoot! game. This is reinforced by the results of the descriptive analysis that has been done by the author. The results of the descriptive analysis of the pretest and posttest of children's English vocabulary mastery had an average of 29.37 and 53.80, which means there was an increase of 24.43. In addition, the results of the paired sample t test data analysis using the IBM SPSS 22 application obtained a value of $0.000 < 0.05$ which indicates that there is a significant effect, so the research hypothesis reads "there is an effect of using the Kahoot Game! on the mastery of English vocabulary for children aged 5-6 years in knowing animals in the KB TK Nasima" has been proven from an increase in pre-test and post-test scores. So the hope after this is that parents can pay attention to the development and abilities of their children while prioritizing the quality of the school. Institutions are expected to continue to provide professional educational services to students. Meanwhile, future researchers can follow up on this research by providing new, more interesting innovations.

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