Volume 6 Issue 6 (2022) Pages 6766-6776
Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini
ISSN: 2549-8959 (Online) 2356-1327 (Print)

Educational Computer Game and Their Implications on Early Children's Language Skill

Eti Nurhayati[1]✉, Inayah El Fitri[1] , Durtam[1], Jazariyah[1]
Pendidikan Islam Anak Usia Dini, Institut Agama Islam Negeri Syekh Nurjati Cirebon, Indonesia(1)
DOI: 10.31004/obsesi.v6i6.3488

Abstract
Language is an important comunication tool for everyone, including for early childhood. With language, early childhood can express feelings, thoughts, share experiences and knowledge, and socialize. Therefore language skills need to be developed, especially tor early childhood. This research aims to determine the language development of early childhood through educational computer games at school, how the effect of educational computer games on the language skills for early childhood. This study is a pre-experimental method with the one group pretest-posttest design. The results showed that 56 % of early childhood language skills are influenced by educational computer games, while the remaining 44 % were influenced by other factors that were not the focus of this study, then there is a significant positive effect on language skills based on the educational computer games coefficient value (X) on language skills (Y) of 0.730 which indicates the direction of positive influence and based on the t-test, the results of t_{count} = 11.179 > 2.039 = t_{table}. Based on the results of the analysis, it can be concluded that there is an influence of educational computer games on early childhood language skills.

Keywords: *educational computer games; language skills; early childhood*

✉ Corresponding author :
Email Address : etinoorhayatie09@gmail.com (Cirebon, Indonesia)
Received 14 August 2022, Accepted 12 November 2022, Published 24 November 2022

Introduction
Early Childhood Education (ECE) is an education that organized to foster child growth and development in increasing potential in the form of knowledge, skills, and values. The National Education System Law explains: "Early Childhood Education is a coaching effort carried out through the provision of educational stimuli to assist physical and spiritual growth and development so that children have readiness to enter further education levels" (Law No. 20 of 2003 article 1 verse 14). ECE focuses on physical growth and development, emotional social intelligence, and realizing children's right to learn. Learning activities are carried out in pleasant conditions, allowing children to be motivated and enthusiastic to learn (Aprinawati, 2017).

Early childhood (EC) is a period of "the golden age", namely the golden age of life, because it is undergoing rapid development and is important for the next life. At this time the growth and development in various aspects is experiencing a rapid period (Pratiwi, 2017). Early is a period in which learning begins to develop significantly and permanently (Zahroh & Aulina, 2021). Therefore there are many things that can be studied in the life of early children.

DOI: 10.31004/obsesi.v6i6.3488

Various studies has explained about the educational games, such as the study from Ramya and Madhumati, the finding shows that listening skills are better acquired through apps more than that other of language skills (Gangaiamaran & Pasupathi, 2017). Other study exlplain that children who played a game performed better on number line estimation and reading competence (Vanbecelaere et al., 2020), moreover the study about educational games related language skills by Haris & Isyanti resulted that educational games media are feasible and can improve early children's languange skills (Haris & Isyanti, 2021).

One of study explain when child is 0-2 years old, hundreds of billions of neurons have not been connected to the brain network, then through stimulation or stimulation from the environment, brain network connections will be formed and stronger. When you are a baby, by interacting intimately with parents, family, and the environment that gives love and introduces the world around them to the child, that is when they are forming a network of neuronal connections called synapses. If this synapse is used frequently and repeatedly in everyday life, it will strengthen and stick to the child's brain. If rarely stimulated, the synapses will weaken and eventually disappear from the child's brain (Khadijah, 2016). When a child is 2-3 years old, the connections between different parts of the brain continue to expand and the myelination process continues. All the parts that have been connected in the connection network begin to work as a unified whole.

Early childhood is very important to provide the right stimulation that can optimize aspects of child development. The Government Regulation number 137 concerning the National Standards for Early Childhood Education, applies six aspects of development, including: cognitive, social, emotional behavior, independence, religious moral values, and language. Basically all aspects of child development must be considered, but this study will focus specifically on language development.

Language have an important role in human life because it is a means of human communication in life, as Febriansyah argues, "Language is a communication tool for everyone, including children, where children can develop their social skills through language in a social environment. (Febriansyah, 2017). With language, children can express their thoughts, share experiences and knowledge, and establish relationships with others. Language serves to convey ideas, thoughts, feelings, and information to others, both orally and in writing. Spoken language is often heard by listeners whose meaning is biased, as well as written language if someone reads the meaning is often biased, due to improper oral or written communication skills (Mailani et al., 2022).

Language skills are very important to be developed because humans cannot be separated from language in social life. Children's language development is still focused on themselves before gaining experience and adapting to the environment (Haryani, 2020; Kurniati, 2017). Language skills of children aged 4 years old begin to be able to use sentences correctly, develop quickly, master 90% of phonemes and syntax correctly, are able to participate in conversations, understand other people's speech, and can respond to these conversations. The acquisition of a child's language is the greatest and most amazing human achievement. Language is a window to the world.

Language development is one of the basic abilities possessed by children, which is divided into several stages according to age and characteristics (Arnianti, 2019). As they get older, their speaking skills will develop. Language development for children includes four aspects, namely: listening, speaking, reading, and writing. Based on Permendiknas No. 58 of 2009, language development for early childhood is divided into three aspects, namely: receiving language, expressing language, and literacy. **First**, the aspect of receiving language. Children can listen to other people's words, understand commands, and understand the rules of the game. The indicator in this aspect is action. **Second**, the aspect of expressing language appears in the form of speaking and writing. **Third**, the literacy aspect, starting to learn to read and write early (Christianti, 2013).

DOI: 10.31004/obsesi.v6i6.3488

The language learning in Indonesia is Indonesian and foreign languages. Even though you live in Indonesia, you have many mother tongues in it. The ability to master foreign languages, especially English is needed, because it is an international language. Children need to be taught English from an early age, in addition to Indonesian. This is in line with research by Arumsari et al. which states that early mastery of foreign languages has advantages in terms of intellectual flexibility, better academic achievement, and broader social skills. Children tend to have readiness when entering contexts related to multiculturalism, so that when they grow up they have the potential to become more accomplished. Language and culture will develop if children learn foreign languages from an early age, because children have sensitivity to foreign languages and cultures (Arumsari et al., 2017).

The development of science and technology today brings great changes to humans. Digital technology has become a basic need (primary) for humans. Digital media has metamorphosed in cyberspace (Anshori, 2019). Along with the rapid progress of science and technology, the field of information has progressed quite rapidly, which affects human daily activities, including in the field of education. The world of education has implemented technological sophistication in computer-based learning activities. The use of computer media has become a necessity that provides opportunities to obtain and enrich children's knowledge directly, can improving language skills, thinking critically and positively, helping to know the environment, fostering motivation and increase attention to learning (Nurhafizah, 2018). The teacher's role in the learning process is expected to increase children's learning motivation, such as improving language skills which is carried out with fun strategies for children. Learning media as a means to concrete learning materials, stimulating students to learn, is an instructional component that includes information, equipment, and background techniques, or technological backgrounds (Guslinda & Kurnia, 2018). The popular learning media today are computers, and one of them is educational computer games (Arsyad, 2014).

Currently, early childhood is faced with digital media based on English, so we need a strategy so that early childhood English skills develop more optimal(Na'imah, 2022). Therefore, it is important that children are given proper stimulation from an early age but not forced ability in children because the child's ability will be different from other children but. What needs to be considered is to provide stimulation with painstaking, and as often as possible so that it can stick to the child's brain then the child is able to practice by itself because it is used to being done at home, and at home (Na'imah, 2022). Educational computer games have an important role in developing children's play activities independently, which are specifically designed to teach a particular lesson, develop concepts, understanding, and guide them in learning. Playing is an activity that gives satisfaction to oneself and by playing can understand life (Hasanah, 2019). From these activities, children acquire new vocabulary to develop their language skills.

Based on this defintion, researchers have designed the media namely Educational Computer Games (ECG) which is a game application that can delight children in the form of educational activities, making it possible to provide insight into new experiences for children. children in the learning process, especially to develop children's language. Students are invited to play while learning (Hijriati, 2017). According to Aminah, ECG is a learning media that makes children play while learning. Children feel unburdened in mastering the material, because they feel they are playing what they like every day, so that the material can be absorbed by the child's own will (Aminah, 2018).

ECG that has been compiled in this study uses computer media through a power point application which contains: pictures, names of animals, fruits, and others using Indonesian and English, according to the learning theme. In this ECG learning media, children are required to learn how to operate a computer, to master Indonesian and English, so that in this media there are three competencies that are provided to children at once, namely: understanding the concept of subject matter, skills in using computers, and language skills. It is undeniable that early childhood is quickly proficient in using this technology, can access games, videos,

DOI: 10.31004/obsesi.v6i6.3488

pictures, and communicate with parents using technology. The purpose of developing ECG is to increase children's enthusiasm for learning.

ECG is useful for improving language skills, thinking, getting along with the environment, developing personality, bringing closer relationships between children and educators and parents. The impact of ECG trains children's concentration, teaches faster and more effectively, increases understanding and memory, makes the learning process fun, arouses children's emotions, improves communication skills, and increases children's sense of socialization (Febriani et al., 2020).

Based on the results of initial observations conducted at PAUD Nurul Hikmah in Kota Cirebon, it is known that children's language skills are classified as "low or underdeveloped", even though English learning subjects have been applied as local content, but learning outcomes have not been maximized, due to monotonous learning methods, namely the delivery of material only by pronouncing it, then the child follows the instructions from the teacher. This is indicated by the inactivity of the child, the child cannot catch the words, in the end they do not pay attention to the teacher, and the child easily forgets what the teacher says. There is no media that supports children's learning. Based on this background, this study will try out learning media with educational computer games that aim to improve early childhood language skills.

Methodology

This research is classified as a "Pre-Experimental" type of research using the "One Group Pretest and Posttest" design (figure 1), which uses a sample of 1 group of respondents as an experiment, by conducting a pretest before being given ECG treatment and posttest after being given ECG treatment. The sampling technique uses Nonprobability Sampling (Badriah, 2012; Sugiyono, 2016) as many as 33 students at Islamic Kindergarten Nurul Hikmah in Cirebon Regency.

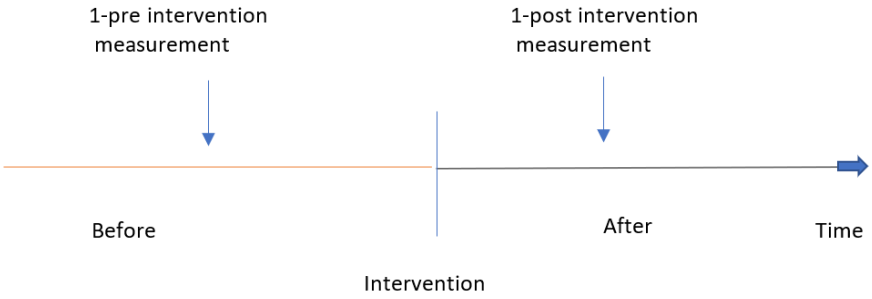

Figure 1. One-group Pre test-Pos test Design

The data collection technique used a check list and a rating scale. The scoring criteria are guided by the scoring rubric and documentation. There are three major parts of the test carried out in the study, namely: (1) Instrument test, (2) Prerequisite test, (3) Hypothesis test. **The first part, instrument test**. The instrument test consists of three stages, namely: (1) Testing the content validity of the instrument based on expert judgment; (2) Test the validity and reliability of the instrument, tested on a number of respondents outside the research respondents. Test the validity of the instrument items using the correlation test, and the reliability test using the Alpha Cronbach formula. **The second part, the prerequisite test**. The research data prerequisite test consists of three stages: (1) Normality test, (2) Homogeneity test, (3) Linearity test. **The third part, hypothesis testing**. The research hypothesis test using simple linear regression statistical analysis. All of the quantitative data tests were processed using the help of SPSS version 25.

DOI: 10.31004/obsesi.v6i6.3488

Results and discussion

Based on data processing by testing in three major parts as mentioned above, it can be explained as follows:

The first part is the instrument test: (1) The instrument is declared "**appropriate**" to be used based on expert judgment. (2) All instrument items are declared "valid", because all indicators are above the value of 0.344. All instrument items were declared "**reliable**" based on the reliability test using the Cronbach's Alpha formula with a value of 0.970, which means (0.970 > 0.6).

The second part, prerequisite test: (1) Normality test. The data is declared normally distributed using One Sample Kolmogrov-Smirnov which produces asymp. Sig (2-tailed) the pre-test score was 0.007 (0.007>0.05), while the post-test score was 0.012 (0.012 > 0.05), can be seen in the table 1.

Table 1. Normality Test

One-Sample Kolmogorov-Smirnov Test			
		Educative games	Kemampuan bahasa
N		33	33
Normal Parameters[a,b]	Mean	18.27	37.79
	Std. Deviation	4.404	4.299
Most Extreme Differences	Absolute	0.182	0.174
	Positive	0.182	0.174
	Negative	-0.149	-0.133
Test Statistic		0.182	0.174
Asymp. Sig. (2-tailed)		0.007[c]	0.012[c]
a. Test distribution is Normal.			
b. Calculated from data.			
c. Lilliefors Significance Correction.			

(2) Homogeneity test. The data is declared to have a homogeneous variant based on the output of Homogeneity of Variances using the Levene Test which shows the Based on Mean of 0.837 (0.837 > 0.05). (3) Linearity test. The data has a linear relationship with a deviation from linearity value of 0.842 (0.842 > 0.05), according to table 2.

Table 2. Homogeneity Test

Test of Homogenity of Variances					
		Levene Statistic	**df1**	**df2**	**Sig.**
Variabel	Based on Mean	0.043	1	64	0.837
	Based on Median	0.027	1	64	0.870
	Based on Median and with adjusted df	0.027	1	63.338	0.870
	Based on trimmed mean	0.039	1	64	0.844

(3) Linearity test. The data has a linear relationship with a deviation from linearity value of 0.842 (0.842 > 0.05) according to table 3.

The third part, hypothesis testing. The results of the ANOVA show that the score f_{count} = 0.39668 f_{table} = 0.416, so the null hypothesis (H0) is rejected and (Ha) is accepted. Thus it can be concluded, "**ECG has an effect on early childhood language skills**", as can be seen in the following table 4 and 5.

Based on the data results, these two variables have a strong relationship level or are strongly correlated according to the correlation coefficient criteria with the correlation value for the X variable 0.748 and the Y variable 0.748 can be seen in the following table 6.

DOI: 10.31004/obsesi.v6i6.3488

Table 3. Linearity Test

ANOVA Table							
			Sum of Squares	Df	Mean Square	F	Sig.
Language skill ECG	Between Groups	(Combined)	376.553	10	37.655	3.854	0.004
		Linearity	330.559	1	330.559	33.831	0.000
		Deviation from Linearity	45.995	9	5.111	0.523	0.842
	Within Groups		214.962	22	9.771		
	Total		591.515	32			

Table 4. The Significance of ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	330.559	1	330.559	39.268	0.000[b]
	Residual	260.957	31	8.418		
	Total	591.515	32			

a. Dependent Variable: language skills
b. Predictors: (Constant), *ECG*

Table 5. Correlation Test

		educative games	kemampuan bahasa
ECG	Pearson Correlation	1	0.748**
	Sig. (2-tailed)		0.000
	N	33	33
Language skills	Pearson Correlation	0.748**	1
	Sig. (2-tailed)	0.000	
	N	33	33

**. Correlation is significant at the 0.01 level (2-tailed).

Table 6. Regression Coefficients

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	24.451	2.187		11.179	0.000
	ECG	0.730	0.116	0.748	6.266	0.000

a. Dependent Variable: Language skills

The results of the simple regression coefficient show that the constant coefficient value is 24.451, the coefficient of variable (X) is 0.730, so that the regression for the Y variable is 24.451 and the X variable is 0.730, which indicates the direction of positive influence which means that for every 1% addition of the ECG value, the value of language skills increased by 0.730.

In addition, based on the results of the data, the two variables have a strong relationship level or are strongly correlated according to the correlation coefficient criteria with a correlation value for the X variable of 0.748 and the Y variable of 0.748, so that the correlation coefficient R squared (0.748 x 0.748 = 0.559) which shows how good is the regression model formed by the interaction of the independent and dependent variables, which is stated in the coefficient of determination of 55.9 %, as can be seen in the following table 7.

Thus, it can be interpreted that the independent variable X has a contribution effect of 55.9 (rounded 56%) to the Y variable, while the remaining 44.1 (rounded 44%) is influenced by other factors. Based on the t-test with a confidence level = 95% or (α) = 0.05 with degrees of

DOI: 10.31004/obsesi.v6i6.3488

freedom (df) = n-k-1 = 31, the t table is 2.039. The results of statistical testing showed that ECG (variable X) obtained the value of t_{count} = 11,179 > 2,039 = t_{table}, and Sig. = 0.000 < 5%. Thus, it is concluded that Ho is rejected, then **ECG (variable X) has a significant effect on early childhood language skills (variable Y).**

Table 7. Summary Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.748[a]	0.559	0.545	2.901
a. Predictors: (Constant): ECG				

ECG was conducted 3 times, as well as the pretest and posttest. Previously, children were given instructions on how to play step by step to get to know the game using a laptop. After that, the children were asked one by one to try the game. When doing ECG treatment, there are children who are easy to adapt and able to play ECG, there are also some children who are still not familiar with clicking symbols on the computer. After playing ECG, the children seemed enthusiastic and wanted to try the game again, both those who were proficient and those who still stuttered. The benefits of this game train language skills in understanding, expressing, and literacy, training children's memory, and concentration. This indicates that language teaching will be more effective and enjoyable by using ECG media. From the research results, it is known that the ECG variable is included in the strong category. It is undeniable that digital games have become an inseparable aspect of the lives of children and adolescents (Muhajarah & Rachmawati, 2019).

The use of ECG in English can help children increase English vocabulary, attract children's interest in learning, increase children's interaction in learning, and make the introduction of English vocabulary more effective. However, the use of ECG in English requires attention to the material, time, ability level, and uniqueness of the child. This can be done by introducing the child to the English vocabulary that is closest to the child's life in the ECG, so that the child remains interested and easy to remember. ECG in English, needs to consider the uniqueness, language development, and mastery of children's English vocabulary. The results obtained in this study are in line with the results of previous researchers who stated that the use of educational games as learning media was able to increase students' knowledge and be able to change learning patterns to be more fun (Fithri & Setiawan, 2017). Another study also mentions that ECG is to facilitate reading skills by designing using a smartphone. According **to** Huda et al., The teachers need to make strategies to develop English from an early age so that children do not lose playing time and do not burden the child's brain. Children are given good stimulation in the right way. According to Pangastuti et al, that language learning starts from vocabulary, and fruits as well as the alphabet and numbers, and Siregar,and Tarigan, said that, Creative teachers can teach English to early childhood assisted by media and educational game tools as support (Na'imah, 2022).

According to research by Tri Widyahening and Faila Sufa, (2022), Bingo Game is very effective learning media to be used in improving mastery. Because these bingo games have a positive impact and can increase their (Tri Widyahening & Sufa, 2021). English vocabulary and pronunciation mastery and bingo games have been widely used in research English vocabulary for early childhood.ECG is feasible to use in facilitating reading skills (Febriani et al., 2020). Further research states that ECG to develop English vocabulary in children needs to pay attention to the peculiarities, language development, and early childhood language acquisition theory (Firdaus & Muryanti, 2020). ECG obtained "good" and "very good" qualifications in interactive multimedia in the language aspect, where ECG is a solution to problems in online learning, because this media is flexible and can make learning more varied (Dewi & Agung, 2021). In the last study, it was stated that the application of language games had a positive and significant influence on the ability to speak English (Trisnadewi & Purnama

DOI: 10.31004/obsesi.v6i6.3488

Lestari, 2018). Based on the results of research supported by the results of previous studies, it can be said that ECG media is very feasible to be used in the learning process. Based on the exposure to the data obtained from the study, it can be concluded that ECG has a significant effect on children's language skills.

Briefly, the results of this study can be expained, among others: **The first**, language skills in using ECG desciptively based on descriptive analysis can be seen in the table 8.

Table 8. Language Skills

Statistic	*Pretest 1*	*Pretest 2*	*Pretest 3*	*Posttest 1*	*Posttest 2*	*Posttest 3*
Total Sampel	33	33	33	33	33	33
Minimum Scores	1	1	1	1	2	3
Maximum Scores	2	2	3	3	4	4
Mean	1.31	1.44	1.66	1.92	2.41	3.44
Median	1	1	2	2	2	3
Modus	1	1	2	2	2	3
Varians	0.22	0.25	0.36	0.39	0.34	0.68
Standard Deviation	0.50	0.50	0.60	0.62	0.58	0.50

Based on these results, it is known that the minimum pretest value is 1 and the maximum pretest value is 3, while the minimum and maximum posttest scores of students are 3 and 4, then based on the results of the average score (mean) of the pretest and posttest of 1.66 <3, 44. Thus it can be concluded that the average value of the posttest score is greater than the pretest. This means that there is an influence of ECG on early childhood language skills.

The second, based on the expert's assessment of the application, it is concluded that ECG is suitable for use in learning to improve early childhood language skills.The application of ECG in improving children language skills by operating computers: (1) On the first screen there are words "Welcome" and "Come play with us", then the child clicks the "Start" button to start the game (figure 2).

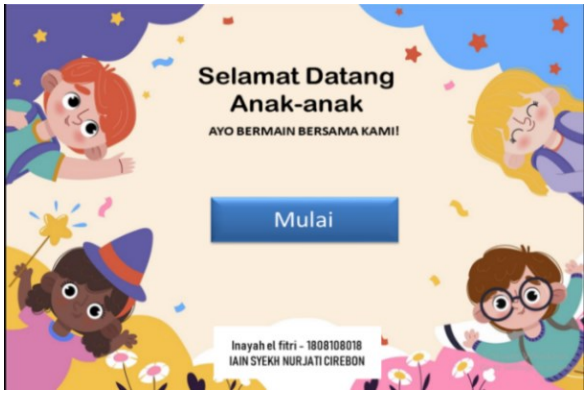

Figure 2. Start Screen Display

Figure 3. Family number Screen Display

(2) The screen contains pictures for examples of family members, where before playing the teacher explains the pictures of the members. After the child understands, the child clicks the next symbol/button (figure 2). (3) The screen there are 3 pictures or 2 pictures where one of them has the correct picture. The way the child clicks on the image is according to the questions on the screen such as "Which one is Mother?" then on the screen there are 3 pictures, namely Baby, Mother and Sister. Then the child clicks on the correct answer (figure 4). (4) If

DOI: 10.31004/obsesi.v6i6.3488

the child clicks on the Baby or Sister image, then on the screen there is a sad emoticon and a bomb sound which means the answer is wrong (figure 5).

Figure 4. Educational games Screen Display

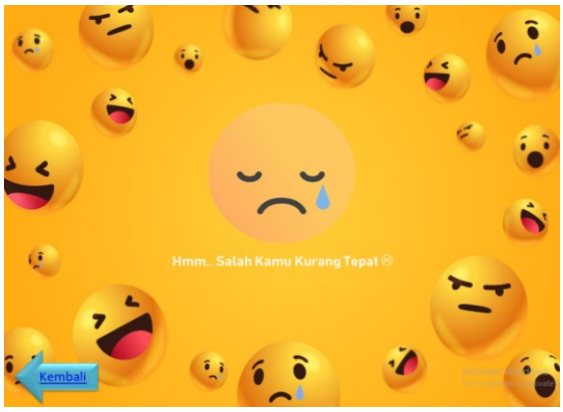

Figure 5. Emoticon response display for incorrect answer

(5) If the child clicks on the picture of Mother, the screen will have a thumbs-up emoticon and the sound of applause, which means the answer is correct (figure 6). (6) If the game is finished there is a screen at the end that says "hurray finished" (figure 6).

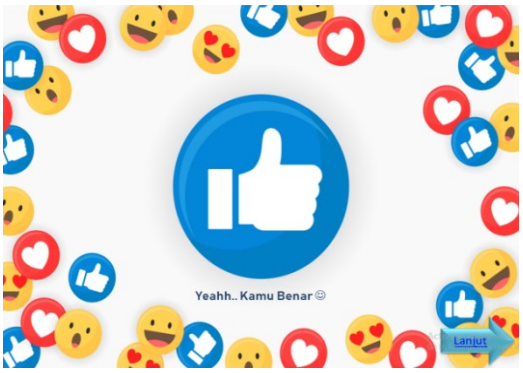

Figure 6. emoticon response display for correct answer

Figure 7. End game Display

The third, based on the results of the analysis, the score f_{count} = 0.39367 > f_{table} = 0.416 at a significance level of 0.05, so the null hypothesis (H0) is rejected. Thus it can be concluded that, "there is an influence of ECG on early childhood language skills". While the R square table obtained 0.559, which means that the influence of ECG on language skills is 56%, while the remaining 44% is influenced by other factors not discussed in this study. This is proven at the last analysis stage through the t-$_{test}$, the result is t $_{count}$ = 11,179 > 2,039 = t $_{table}$, then (H0) is rejected and (Ha) is accepted. Thus it can be concluded that, "ECG has a significant effect on early childhood language skills".

Conclusions

This study result that the aplication of ECG is suitable to improve early childhood language skills and the implications of ECG on early childhood language skills is shown by the average pretest score of 1.66 and the post-test average score of 3.44 (1.66 < 3.44). It can be concluded that the posttest average score is greater than the pretest average score. While the R square table obtained 0.559, which means that the influence of ECG on language skills is

DOI: 10.31004/obsesi.v6i6.3488

56%, while the remaining 44% is influenced by other factors not discussed in this study. This is proven at the last analysis stage through the t-test, the result is $t_{count} = 11,179 > 2,039 = t_{table}$, then (H0) is rejected and (Ha) is accepted. Thus it can be concluded, " ECG has a significant effect on early childhood language skills".

Acknowledgement

We gratefully acknowlegde the school principal who gives permit to this study.

References

Aminah, S. (2018). Rancang Bangun Aplikasi Education Game Pembelajaran Bahasa Inggris Berbasis Multimedia Pada SMP Negeri 8 Pagaralam. *Jurnal Ilmiah Betrik*, *9*(01), 1–15. https://doi.org/10.36050/betrik.v9i01.26

Anshori, S. (2019). Pemanfaatan Teknologi Informasi Dan Komunikasi Sebagai Media Pembelajaran. *Civic-Culture: Jurnal Ilmu Pendidikan PKn dan Sosial Budaya*, *2*(1), 88–100. https://doi.org/10.26858/pir.v2i2.10002

Aprinawati, I. (2017). Penggunaan Media Gambar Seri Untuk Meningkatkan Kemampuan Berbicara Anak Usia Dini. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, *1*(1), 72. https://doi.org/10.31004/obsesi.v1i1.33

Arnianti. (2019). Teori perkembangan Bahasa. *Perkembangan Kendiri*, *1*(1), 1–15.

Arumsari, A. D., Arifin, B., & Rusnalasari, Z. D. (2017). Pembelajaran Bahasa Inggris pada Anak Usia Dini di Kec Sukolilo Surabaya. *Jurnal PG-PAUD Trunojoyo : Jurnal Pendidikan dan Pembelajaran Anak Usia Dini*, *4*(2), 133. https://doi.org/10.21107/jpgpaud.v4i2.3575

Christianti, M. (2013). Pengembangan Bahasa Untuk Anak Usia Dini. *Journal of Chemical Information and Modeling*, *53*(9), 1689–1699.

Dewi, N. P. A. P., & Agung, A. A. G. (2021). Game Education Berbasis Multimedia Interaktif pada Aspek Bahasa Anak Usia Dini. *Jurnal Pendidikan Anak Usia Dini Undiksha*, *9*(2), 149. https://doi.org/10.23887/paud.v9i2.35439

Febriani, A. S., Mulyana, E. H., & Rahman, T. (2020). Pengembangan Educative Game Berbasis Aplikasi Android Untuk Memfasilitasi Keterampilan Membaca Anak Usia 5-6 Tahun. *Jurnal Paud Agapedia*, *2*(2), 187–196. https://doi.org/10.17509/jpa.v2i2.24544

Febriansyah, A. (2017). Tinjauan Atas Proses Penyusunan Laporan Keuangan Pada Young Enterpreneur Academy Indonesia Bandung. *Jurnal Riset Akuntansi*, *8*(2). https://doi.org/10.34010/jra.v8i2.525

Firdaus, M., & Muryanti, E. (2020). Games edukasi bahasa inggris untuk pengembangan kosakata bahasa inggris pada anak usia dini. *Jurnal Pendidikan Tambusai*, *4*(2), 1216–1227. https://jptam.org/index.php/jptam/article/view/588

Fithri, D. L., & Setiawan, D. A. (2017). Analisa Dan Perancangan Game Edukasi Sebagai Motivasi Belajar Untuk Anak Usia Dini. *Simetris: Jurnal Teknik Mesin, Elektro dan Ilmu Komputer*, *8*(1), 225–230. https://doi.org/10.24176/simet.v8i1.959

Gangaiamaran, R., & Pasupathi, M. (2017). Review on use of mobile apps for language learning. *International Journal of Applied Engineering Research*, *12*(21), 11242–11251. https://www.ripublication.com/ijaer17/ijaerv12n21_102.pdf

Guslinda, & Kurnia, R. (2018). *Media Pembelajaran Anak Usia Dini*. Media Pembelajaran.

Haris, I., & Isyanti, S. (2021). Pengembangan Game Edukatif Dalam Meningkatkan Kemampuan Keaksaraan Anak Usia Dini. *Jurnal Asghar*, *1*(1), 82–93. https://doi.org/10.28918/asghar.v1i1.4190

Hasanah, U. (2019). Penggunaan Alat Permainan Edukatif (Ape) Pada Taman Kanak-Kanak Se-Kota Metro. *AWLADY : Jurnal Pendidikan Anak*, *5*(1), 20. https://doi.org/10.24235/awlady.v5i1.3831

Hijriati. (2017). Peranan Dan Manfaat Ape Untuk Mendukung Kreativitas Anak Usia Dini. *Bunayya : Jurnal Pendidikan Anak*, *III*(2), 59–69.

DOI: 10.31004/obsesi.v6i6.3488

https://doi.org/10.22373/bunayya.v3i2.1699

Khadijah. (2016). *Pengembangan Kognitif Anak Usia Dini Teori dan Pengembangannya*. Perdana Publishing.

Heryani, K. (2020). Perkembangan Bahasa Anak Usia Dini. A*ktualita: Jurnal Penelitian Sosial Keagamaan,* 10(1), 75-94. http://www.ejournal.an-nadwah.ac.id/index.php/aktualita/article/view/163

Kurniati, E. (2017). Perkembangan Bahasa Pada Anak dalam Psikologi Serta Implikasinya dalam Pembelajaran. *Jurnal Ilmiah Universitas Batanghari Jambi*, *17*(3), 47–56. http://ji.unbari.ac.id/index.php/ilmiah/article/view/401

Mailani, O., Nuraeni, I., Syakila, S. A., & Lazuardi, J. (2022). Bahasa Sebagai Alat Komunikasi Dalam Kehidupan Manusia. *Kampret Journal*, *1*(1), 1–10. https://doi.org/10.35335/kampret.v1i1.8

Muhajarah, K., & Rachmawati, F. (2019). Game Edukasi berbasis Android: Urgensi Penggunaan, Pengembangan dan Penguji Kelayakan. *Justek : Jurnal Sains dan Teknologi*, *2*(2), 29. https://doi.org/10.31764/justek.v2i2.3733

Na'imah, N. (2022). Urgensi Bahasa Inggris Dikembangkan Sejak Anak Usia Dini. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, *6*(4), 2564–2572. https://doi.org/10.31004/obsesi.v6i4.1916

Nurhafizah. (2018). Jurnal Pendidikan : Early Childhood Nurhafizah Pendidikan merupakan proses. *Jurnal Pendidkan*, *2*(2), 1–10. https://doi.org/10.35568/earlychildhood.v2i2b.288

Pratiwi, W. (2017). Konsep Bermain Pada Anak Usia Dini. *Manajemen Pendidikan Islam*, *5*, 106–117. https://journal.iaingorontalo.ac.id/index.php/tjmpi/article/view/395

Trisnadewi, K., & Purnama Lestari, E. A. (2018). Pengaruh Language Games Terhadap Kemampuan Berbicara Bahasa Inggris. *KULTURISTIK: Jurnal Bahasa dan Budaya*, *2*(1), 66. https://doi.org/10.22225/kulturistik.2.1.674

Tri Widyahening, C. E., & Sufa, F. F. (2021). Pembelajaran Kosa Kata Bahasa Inggris dengan Media Bingo Game bagi Anak Usia Dini. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, *6*(3), 1135–1145. https://doi.org/10.31004/obsesi.v6i3.1638

Vanbecelaere, S., Van den Berghe, K., Cornillie, F., Sasanguie, D., Reynvoet, B., & Depaepe, F. (2020). The effects of two digital educational games on cognitive and non-cognitive math and reading outcomes. *Computers & Education*, *143*. https://doi.org/10.1016/j.compedu.2019.103680

Zahroh, V. F., & Aulina, C. N. (2021). The Effect of Kaneta Media Implementation on the Early Reading Ability of Children. *AWLADY : Jurnal Pendidikan Anak*, *7*(2), 187. https://doi.org/10.24235/awlady.v7i2.7941