

THE EFFECT OF EDUCATIONAL PICTURE GUESSING GAMES WITH AUDIOVISUALS ON THE GROWTH AND DEVELOPMENT OF EARLY CHILHOOD AT KB SITI SAWIAH BAITUSSALAM IN PEKANBARU CITY

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Abstract

Abstract: Congestive Heart Failure (CHF) is a complex clinical syndrome that can cause structural or functional heart problems. This then affects the ventricles' ability to fill or pump enough blood to meet the body's metabolic needs. Heart failure can present with a variety of symptoms in patients, such as shortness of breath, fatigue, and chest pain. A non-pharmacological method for reducing shortness of breath is therapy using a handheld fan to circulate air to the area innervated by the second or third branch of the trigeminal nerve. **Objective:** This study aims to see the effectiveness of hand-held fans in reducing the frequency of shortness of breath in CHF patients. **Purpose:** This study aims to see the effectiveness of handheld fan to reduce the frequency of shortness of breath in CHF patients. **Method:** This study is a case study with a descriptive approach. The sample in this case study consists of two individuals, namely Mr. A aged 56 years experiencing shortness of breath, fatigue, chest pain, heavy breathing during activities. and Mr. R aged 56 years complaining of shortness of breath, fatigue, chest pain, heavy breathing during activities, there is swelling in the abdomen, both upper and lower extremities. **Results:** This study shows that there is a change in the frequency of breathing in Mr. A from a frequency of 25x / minute to 20x / minute and Mr. R from 23x / minute to 19x / minute. **Conclusion:** There is a change in the frequency of breathing before and after the administration of the handheld fan technique.

Keywords: Congestive Heart Failure, Hand Held Fan, Shortness Of Breath

INTRODUCTION

Early childhood development is a golden age, namely the age of 0-6 years, which has a significant impact on various aspects of development, including motor, physical, cognitive, language, speech, emotional, and social development in later stages. This growth and development period is a challenging time for children, so it is very important to pay attention to every factor that can influence and support their growth and development. Growth and development, although two distinct phenomena, are interrelated and influence each other (Mulyani & Mariyani, 2023).

Early childhood is a period of rapid and fundamental development. At this stage, children grow and develop quickly and are very vulnerable, covering various aspects of human life (Desi, 2022). Early childhood is a crucial phase, during which appropriate stimulation can help children achieve optimal development. At this stage, children's brain growth occurs very rapidly, so it is often referred to as the "golden age" (Riha Adatul'aisy et al., 2023).

The sensitive period in early childhood aged 3-4 years is the perfect time to provide stimulation, because at this stage, children have maximum potential to learn and develop various skills. Various functions, including language and speech, cognitive, motor, social, and emotional, develop rapidly during this period. Therefore, it is very important for parents, educators, and educational institutions to provide appropriate and supportive stimulation so that children can optimize their potential. At this age, enjoyable, interactive, and game-based learning experiences are crucial (Mulyani & Mariyani, 2023).

The process of child growth and development is greatly influenced by the environment and the stimulation they receive. This is the basis for differences in child development. Some children can develop their abilities in accordance with the appropriate developmental stages, while others may face some obstacles, and there are also those who experience problems in language and speech development (Riha Adatul'aisy et al., 2023).

According to data from the World Health Organization (WHO) in 2021, approximately 15 to 20% of preschool-aged children experience developmental disorders. In addition, UNICEF reported in 2020 that there were approximately 3 million children or 27.5% who experienced similar disorders. In Indonesia, it is estimated that around 8% of preschool-aged children experience developmental disorders, making it one of the countries with the third highest rate of growth and developmental disorders in Southeast Asia (Widyaningrum & Dkk, 2024).

One way to stimulate early childhood development is through the use of educational toys. Educational toys, often abbreviated as APE, include various types of games specifically designed to offer educational and learning experiences for players. These include various traditional and modern games accompanied by educational and teaching elements (Beno et al., 2022). One effective way to stimulate students' enthusiasm in the learning process is through games. Especially for early childhood, picture guessing games with audiovisual elements.

Picture guessing games provide information and various components that help children understand the types of activities that need to be done. Therefore, the results of the picture guessing game played by children are very important for assessing how accurately they select, determine, and say the picture that corresponds to the audiovisual element displayed, so that the category can be recognized well through the child's language and speaking ability (Widodo et al., 2023).

Based on a preliminary study conducted by researchers at KB Siti Sawiah Baitussalam in Pekanbaru City on March 10, 2025, using the interview method with Mrs. the administrator of KB Siti Sawiah Baitussalam in Pekanbaru City, Mrs. A, with questions regarding the use of Educational Play Equipment (APE) in the form of picture guessing games using audiovisual media at KB Siti Sawiah Baitussalam in Pekanbaru City and regarding the improvement in the growth and development of children at KB Siti Sawiyah Baitussalam in Pekanbaru City. Mrs. A stated that she has been using Educational Toys (APE) in the form of puzzle games as play tools for the children, but Mrs. A said that she has never conducted examinations or screenings of the children's growth and development. Mrs. A also stated that there has been no use of Educational Toys (APE) Guess the with audiovisual media as a means of stimulating play for the children.

Based on the results of the interview with Mrs. A, the administrator of the Siti Sawiah Baitussalam Daycare Center in Pekanbaru City, it can be concluded that the children at the Siti Sawiah Baitussalam Daycare Center in Pekanbaru City have been learning using Educational Educational Games (APE) in the form of Puzzle Games, but have never conducted an assessment of the children's growth and development. This situation is what prompted the researcher to observe, study, and understand whether the implementation of the Educational Game (APE) Guess the Picture with Audiovisuals can enhance the growth and development of children at KB Siti Sawiah Baitussalam in Pekanbaru.

Research by (Sumiyati et al., 2023) shows that name guessing games can significantly improve children's language skills, from 20% in the pre-cycle to 53% in cycle I, and 87% in cycle II. This improvement reflects the effectiveness of games in stimulating language development. In addition, this game also strengthens the social relationship between teachers

and children. The classroom atmosphere becomes more lively, interactive, and enjoyable during the learning process.

Research (Fitri et al., 2024) shows that picture guessing games can develop the cognitive abilities of children at Mekar Sari Muara Tuhup Kindergarten. Children are able to recognize letters, distinguish the sizes of shapes, and understand basic concepts better. Of the 13 children, 5 developed very well, 3 developed as expected, 3 began to develop, and 2 did not develop. These findings confirm the effectiveness of picture guessing media in supporting the cognitive aspects of early childhood.

The results of the study (Nadia et al., 2024) show that the use of audiovisual learning media provides a higher increase in children's gross motor skills compared to the control class. The Wilcoxon test confirms the significant effect of this media. This study was conducted on kindergarten children in group B2 aged 5–6 years at Al-Biruni Mandiri Jipang Kindergarten. These findings reinforce that audiovisual media is effective in stimulating the gross motor development of early childhood.

Picture puzzle games have been proven to improve children's cognitive development, particularly in problem-solving skills. Through the method of guessing pictures, children are trained to think logically and find solutions independently. This game encourages children to actively observe, analyze, and draw conclusions from the images presented. Thus, the cognitive abilities of early childhood can develop more optimally through a fun game approach (Dwiredy & Qalbi, 2021). Research conducted (Utami et al., 2023) shows that picture guessing games can improve the memory skills of 5-6 year old children at the Pembina 1 State Early Childhood Education Center in Bengkulu City. This can be seen from the improvement in children's memory in each cycle

RESEARCH METHOD

This research is quantitative, using an analytical research design. The method applied is Quasy Experimental with a one group pretest and posttest approach. The research was conducted from February to July 2025. The sample consisted of 48 early childhood children at KB Siti Sawiah Baitussalam in Pekanbaru City. Purposive sampling was used as the sampling technique. Data analysis used the Shapiro-Wilk normality test and the Wilcoxon Signed Rank Test because the data was not normally distributed.

RESEARCH RESULTS

Data analysis in this study was conducted to determine the effect of audiovisual-based educational guessing games on the growth and development of early childhood. The results obtained from the research activities carried out in June 2025 at KB Siti Sawiah Baitussalam in Pekanbaru City, with a sample size of 48 early childhood children, showed the following univariate and bivariate analyses:

Univariate Analysis
Table 1. Frequency Distribution of Respondents

Variable	Frequency	Percentantion (100%)
Age		
36 Months	10	20.8
37-47 Months	29	60.4
48 Months	9	18.8
Total	48	100.0
Gender		
Women	28	58.3
Men	20	41.7
Total	48	100.0

Source: Primary Data

Based on the data shown in Table 1, it can be seen that based on age, the majority were 37-47 months old, totaling 29 children (60.4%). Based on gender, the majority were female children, totaling 28 children (58.3%).

Table 2. Frequency of Pretest and Posttest Scores

Pretest			Posttest		
Value	Frequency	Percent	Value	Frequency	Percent
6	6	12.5	6	3	6.3
7	11	22.9	7	11	22.9
8	13	27.1	8	8	16.7
9	14	29.2	9	16	33.3
10	4	8.3	10	10	20.8
Total	48	100.0	Total	48	100.0

Source: Primary Data

The results in Table 2 show that the pretest results obtained from 48 respondents were as follows: 6 people (12.5%) scored 6, 13 people (27.1%) scored 7 by 11 people (22.9%), score 8 by 13 people (27.1%), score 9 by 14 people (29.2%), and score 10 by 4 people (8.3%). The scores obtained in the post-test showed an increase, namely 3 people (6.3%) scored 6, 11 people (22.9%) scored 7, 8 people (16.7%) scored 8, 16 people (33.3%) scored 9, and 10 people (20.8%) scored 10.

Table 3. Average Pretest and Posttest Scores

Variable	N	Mean	Mean Difference	Sd	Min	Max
Pretest	48	7.98	0,4176	1.176	6	10
Posttest	48	8.40		1.233	6	10

Source: Primary Data

Table 3 above shows that in the pretest there was a mean difference of 7.98 and in the posttest 8.40, with a mean difference of 0.4167. The standard deviation of the pretest was 1.176 and the posttest 1.233, with a minimum value of 6 and a maximum value of 10. The results of the analysis show that the posttest scores of the students in the experimental class were significantly higher than those in the control class.

Table 4. Assessment Categories in the Pretest

Category	Frequency	Percentantion
Deviation	5	10.4
Questionable	25	52.1
Age-appropriate	18	37.5
Total	48	100.0

Source: Primary Data

The results of the pretest given to respondents can be seen in Table 4, where the pretest on early childhood growth and development at KB Siti Sawiah Baitussalam Kota Pekanbaru according to the assessment categories shows that the majority of children are in the doubtful category, namely 25 children (52.1%).

Table 5. Assessment Categories in the Posttest

Category	Frequency	Percentantion
Deviation	3	6.3
Questionable	19	39.6
Age-appropriate	26	54.2
Total	48	100.0

Source: Primary Data

The results of the post-test administered after the intervention of providing picture guessing media with audiovisual aids can be seen in Table 5, showing an increase from the previous pre-test results. In the post-test, the majority of children were in the age-appropriate development category, namely 26 children (54.2%). Based on the data seen from the pretest and posttest results conducted on respondents with the same treatment, namely before and after being given audiovisual picture guessing education, there was a significant increase in scores from before the intervention was given to the respondents.

Bivariate Analysis

Bivariate analysis was conducted to determine the effect of audiovisual educational guessing games on the growth and development of early childhood at KB Siti Sawiah Baitussalam in Pekanbaru City. The following are the results of the tests obtained:

1. Normality Test

Table 6. Normality Test Results Shapiro-Wilk

	Statistic	Df	Sig.
Pretest	.912	48	.002
Posttest	.890	48	.000

Source: Primary Data

From Table 6, the normality test results can be seen in the Shapiro-Wilk column, which shows that the pretest and posttest data are not normally distributed because the significance value is <0.05 . Because the data are not normally distributed, the T-test cannot be performed. Therefore, a nonparametric test using the Wilcoxon signed rank test is performed.

2. Wilcoxon Test

Table 6. Wilcoxon Test Results

	Posttest Growth and Development	Pre-test	Growth and Development
Z		-3.879 ^b	
Asymp.Sig (2-tailed)		000.0	

Source: Primary Data

DISCUSSION

Descriptively, the pre-test and post-test results showed a numerically significant increase in developmental scores. The average score before the intervention indicated that the children's development was still in the doubtful category. After the picture guessing media intervention was administered, there was an increase in the average score to the age-appropriate development category. This increase reflects the effectiveness of the media in more than 75% of the total age-appropriate development items, according to the indicators from the Ministry of Health guidelines.

This audiovisual-based educational picture guessing game is designed as a fun learning tool that supports children's overall growth and development. Through a combination of visual images and sounds (audio), this game is able to attract children's attention, increase their focus, and strengthen their understanding of the material presented. Children are trained to recognize objects, understand the relationship between images and sounds, and express their thoughts verbally, which contributes to cognitive and language development. In addition, this activity also involves fine motor skills through interaction with the game media, and encourages social-emotional skills through cooperation and communication with peers. With an audiovisual approach, this game not only improves children's memory and imagination, but also creates an interactive and meaningful learning experience to support the four main aspects of child development. (Surya et al., 2021).

The findings of this study are in line with previous research conducted by (Utami et al., 2023), which showed that picture guessing games can improve the memory skills of 5-6 year old children at PAUD Negeri Pembina 1 in Bengkulu City. This can be seen from the improvement in children's memory in each cycle. It is also in line with the research by (Fitri et al., 2024), which shows that picture guessing games can develop the cognitive abilities of

children at Mekar Sari Muara Tuhup Kindergarten. Through picture guessing games, children are able to recognize letters ABCD, distinguish the largest and smallest shapes, and enhance their skills and knowledge about picture guessing games. Out of 13 children, 5 children developed very well (BSB), 3 children began to develop (MB), 2 children did not develop (BB), and 3 children developed as expected (BSH).

Based on the results of the study conducted (Lestari et al., 2021), the results of the data analysis conducted using the t-test show that the t-count = 9.742 is greater than the t-table (0.05) (dk=n1)=2.045, so H0 is rejected. Meanwhile, the sig. value is 0.000 < 0.025. It can be concluded that there is an effect of picture guessing media on speaking skills in third-grade students at SD Negeri 05 Mendo Barat. The results of research (Nadia et al., 2024) show that the use of audiovisual learning media provides a higher increase in children's gross motor skills compared to the control class. The Wilcoxon test confirmed the significant effect of this media. This study was conducted on kindergarten children in group B2 aged 5–6 years at Al Biruni Mandiri Jipang Kindergarten. These findings reinforce that audiovisual media is effective in stimulating the gross motor development of early childhood.

Overall, the findings from various studies show consistency that audiovisual-based educational guessing games have a positive and significant effect on improving early childhood development. Picture guessing media encourages children's active participation in the learning process because it involves interesting and enjoyable visual elements. Children do not just receive information passively, but are active in guessing, naming, and discussing the pictures they see. This strengthens the connection between perception and language production, which is important in the development of speaking skills.

Researchers assume that the consistent use of audiovisual picture guessing media is capable of providing effective stimuli in supporting early childhood development, particularly in the cognitive, language, fine motor, and social-emotional aspects. This assumption is based on the improvement in children's growth and development scores after intervention and the effectiveness of the media, which is capable of achieving more than 75% of the age-appropriate development indicators. This media not only presents learning that is interesting and enjoyable, but also allows children to be actively involved in the learning process, thereby strengthening their understanding of concepts through interactive multisensory experiences.

CONCLUSION

This study shows that audiovisual-based educational guessing games have a significant effect on improving the growth and development of early childhood at the Siti Sawiah Baitussalam Kindergarten in Pekanbaru City. This intervention has been proven effective in improving children's language and speech abilities, as well as encouraging cognitive, fine motor, and social-emotional development. The increase in the average developmental score from the doubtful category to the age-appropriate category confirms that interactive, enjoyable, and multisensory learning approaches can provide optimal stimulation for early childhood.

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