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The Influence of Audio Visual Learning Media to Improve Physical Skills of Children Aged 5-6 Years in Mekar Jaya Kindergarten, Semarang City

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Audio visual media; Physical skills; Early childhood

Abstract

The purpose of this study was to determine the effect of using audio-visual learning media on the physical skills of children aged 5-6 years at TK Mekar Jaya Semarang. The type of research used is a quantitative approach with experimental research methods and One Group Pretest Posttest research design. The population is all of early childhood in TK Mekar Jaya there are 50 children, and the sample is TK B aged 5-6 years, totaling 30 children. Data collection techniques using observation instrument sheets. This research used a data analysis technique paired sample t-test with descriptive analysis and normality test using Kolmogorov-Smirnov. The results obtained during the pretest on 22 children were in a good category with a percent- age of 73.33% and 8 children in the less category with a percentage of 26.67%. After being treated in the posttest there was an increase in physical skills, 12 children were in the good category with a percentage of 40%, while 18 children were in the very good category with a percentage of 60%. The mean value of the pretest was 135.83, and the posttest was 151.00, an increase of 15.17. Testing the hypothesis using the Paired Sample T-Test showed that the value of ttable = 2.042 while tcount

= -24.695. H0 is rejected and H1 is accepted if (tcount>ttable) or (tcount<-ttable) then, (24.695>2.042) or (-24.695<-2.042) a significance value = 0.000 is obtained.

0.000 < 0.005 so that H1 is accepted and H0 is rejected. Based on these calculations, audio visual learning media influences physical skills in children aged 5-6 years in Mekar Jaya Kindergarten, Semarang City.

How to cite

INTRODUCTION

Dictionary of Education (in Istigomah, 2020: 1) reveals that education is a process when an individual develops attitudes, abilities and also other forms of behavior in the community envi-ronment in which he lives and grows, as a form of the social process when an individual gets a controlled and selected environment as in educa- tional institutions so that they can optimize the development of social skills and individual abili- ties they acquire. Education for early childhood is the most essential thing given to children. Educa- tion is considered a conscious and planned effort to create an atmosphere and learning process that is expected to maximally stimulate all students potential. These various potentials include self- control, religious spiritual, noble character, intel-ligence, skills and personality. (Tanu, 2019:20).

The golden age or golden period experienced by a child is a period when the child is experiencing great development both in personality, cognitive, social and psychomotor, providing stimulus or stimuli needs to be given by parents, teachers and the child's closest environment to help optimize growth and also its development so that it can grow and develop as expected. The Directorate of Technical Personnel (Diktentis Diklusepa in Raihana, 2018:21-22) growth and development are different. Growth is a change in size, shape, or limb, such as an increase in body weight, height, head circumference, and other growths commonly known as body growth. Growth can be easily observed by weighing or measuring height. Continuous and regular monitoring of child growth and development. Development is a mental change that occurs gradually over a cer-tain period, from simple abilities to more difficult skills such as intelligence, attitude, behavior, and so on. Each child has different growth and deve-lopment phases, from one individual to another, some are fast, and some are slow.

In early childhood education institutions, providing stimulation to children is inseparable from using media as a tool in the learning process. According to Nurfadhillah (2021: 245), Learning media is not only intended as a means to make learning more enjoyable but also helps children to understand something abstract to become more concrete. Also added by Gerlach & Ely (in Nurfadhilah, 2021:245), the advantages of media are: First, it has fixative abilities, meaning it can capture, store, and display an object or event again. With this capability, objects or events can be recorded, drawn, photographed, and filmed, then they can be stored, and when needed,

can be shown and observed again as the original incident. Second, have manipulative abilities. This means that the media can display events or objects again with various kinds of changes (manipulation) as needed, such as changing the speed, size, color, and the presentation can also be repeated. Third, it has distributive capabilities, meaning that the media can reach all students in a large number simultaneously

Sanjaya (in Nurdiyanti, 2019: 646-647) added that there are various kinds of learning media according to their nature, including auditive media, which can only heard or media that only has proper elements, such as radio, sound recordings.; visual media, namely media that can only be seen, and does not contain sound elements. Included in this media are photos, slide films, transparencies, paintings, drawings and various forms of printed materials such as visual media.

; audio visual media, which is a type of media that contains sound elements, also contains image elements that can be seen, such as various sizes of films, video recordings, sound slides, and so on. The ability of this media is considered more exciting and complete because it contains both elements of the first and second types of media.

The development of the era of technolo-gy and information as it is today provides many conveniences for life and also changes human lifestyles in terms of socializing, studying, working, and means of entertainment. An example of this technological advancement can be seen in the growing development of cell phones. Even to play a game, children prefer to play via gadgets, smartphones that rely on the internet network to play online games. Playing online games like this requires children to sit for a long time, focus in one direction at the screen, and be agile in moving their fingers. This causes children to lack in phy-sical activity. Even though at that age, it is hoped that children will be able to do more physical ac-tivities and socialize with other people and their environment. Abduljabar (in Ramdanis, 2021:3) states that physical activity is a variety of body movements resulting from muscle contractions and bone movements that require energy. According to Mahmud (2019: 86), children with good gross motor skills will also have good mental development. This is because children can adapt to the surrounding environment. This, of course, will increase the child's self-confidence and by helping to stimulate gross motor skills, it will also help to balance the performance of the left and right hemispheres of the brain in children.

According to Decaprio (in Saputra 2021: 28-29), The strategy for developing gross motor

skills is the first stage, imitation. Children imitate all motor skills or movements that are exempli-fied and correctly, even though the model that children do is still global and imperfect. The second stage of manipulation (use of concepts). Educators give directions, and children follow the instructions. The third stage is accuracy. At this stage, the teacher must pay close attention to every attitude and motor action carried out by the child in proportion. The fourth stage of articu- lation. Articulation means chaining, this stage is the teacher's effort to emphasize the coordination of a series of motor activities or motor skills by making the correct sequence and achieving the expected results. The fifth stage is naturalization. Experience is the highest ability in motor learning. At this stage, it requires educators to make all the motor skills that are taught become habits for children or natural skills in children.

Safitri (in Hardasari 2020: 35) states that gross motor skills are body movements that use large muscles or most or all parts of the body, which are affected by a child's maturity. Gross motor development is significant in early child-hood. It is needed by kindergarten children who have a lot of energy to move all parts of the body also, large muscles play a significant role in their gross motor activities. Gross motor skills are clo-sely related to movement. Early childhood also has to train movements to be coordinated and de-velop as expected.

In line with that, Lerner & Kline (in Muriyan, 2019:16) stated that gross motor skills also involve the ability of the large muscles in the arms, neck and legs, running, walking, jumping and catching are part of gross motor skills. To sti- mulate it, parents and teachers need to provide strong encouragement and a safe environment without obstacles for children to grow and deve- lop. According to Yudanto (in Purnami, 2020: 3), children need experience in basic skills, which include (locomotor, non-locomotor and manipulative movements in learning motor skills. Pesce (in Schmidt et al. 2020: 2) revealed that apart from that, children who are trained in gross mo- tor skills will have a positive effect on their cog- nitive abilities. Physical activity can affect instant changes in cognitive function, physical activity includes several physical activity habits that are carried out and are proven to affect long-term changes.

Research shows that people who participate in physical activity have a lower risk of developing cardiovascular disease, cancer, and various other chronic diseases. Regular physical exercise can also increase bone density, reduce

fat storage, increase body mass index, and reduce the risk of damage to the musculoskeletal system. (Andrieieva in Larasati, 2019: 14-115. It was also added that physical activity is thought to stimulate trophic factors and neuronal growth, which inhibit cognitive function decline and dementia (Yaffe in Larasati, 2019: 115). It is known that physical activity can increase vascularization in the brain, increase dopamine levels, and mole-cular changes in Neotropic factors, which are useful as neuroprotective functions (Singh in Larasati, 2019: 115). According to Cotman (in Larasati, 2019: 115), Neurotrophic factors, espe-cially Brainderived neurotrophic factor (BDNF), can increase the resilience and growth of several types of neurons. Kirk also added (in Larasati, 2019: 115-116) when doing physical activity, the brain will be stimulated, thereby increasing the Brain Derived Neurotrophic Factor (BDNF) pro- tein, whose function is to keep nerve cells healthy. If the BDNF level is low, a person will experience senility.

Educational Institutions for Early Childhood are now proliferating, both organized by the government and private parties. Based on reference data from the Ministry of Education and Culture, Semarang, which is the capital city of Central Java Province, has recorded 818 early childhood education institutions spread across 16 districts. (reference.data.kemdikbud.go.id). One is in the gugus Cempaka, Pedurungan Kidul, Pedurungan, which consists of 8 early childhood educational institutions. One of them is TK Me-kar Jaya Semarang, which was also affected by the Covid-19 pandemic, which resulted in chan-ges in teaching and learning activities at school.

Based on the results of unstructured interviews conducted with school principals and class teachers on December 18, 2021, at TK Mekar Jaya Semarang City regarding children's physical activity before and after the pandemic, that be- fore the pandemic, the provision of learning to increase children's physical activity started more with activities gymnastics, healthy walks, drum band parades. After the pandemic, these activi- ties were rarely carried out by children, they were only freed to play freely in outdoor games and focused more on improving children's cognition so that children's physical activities, such as ba-lance, coordination, agility and flexibility, were not properly stimulated. This can be seen in some children who still have difficulty maintaining ba- lance, such as doing crank movements, walking on boardwalks, and on tiptoe and tiptoe. In addi-tion, the use of facilities such as LCD projectors is not maximized by teachers, so they are rarely

used in the learning process. Therefore, in this study, researchers will apply motion audio-visual media in the form of video as a learning medium to improve early childhood physical skills.

In line with that, audio-visual media was chosen for Brown's opinion (in Syamsuardi et al. 2020: 1395) that visual students tend to prefer reading and studying graphs, pictures and other graphic information while auditory learners pre- fer listening to lectures and recordings. However, most students who are successful use both audio and visual media.

In this study, researchers prepared three different videos and each video consisted of warm-up, core and cool-down activities. The video also contains various basic gross motor movements (locomotor movements such as walking, running, jumping, and jumping; non-locomotor movements such as warming up and balancing in place, and manipulative movements such as throwing and catching a ball) as well as animated images so that interesting and also adds enthusi- asm to children in learning as well as playing.

Sofyan (in Febrianingrum, 2021: 146). Characteristic of early childhood are playing, Which is a fun activity for children. Play is one of the main tools in practice for growth and develop- ment. When children play, many aspects of the development that are directly involved are growing. Piaget (in Hayati, 2021: 54) suggests that playing is a fun activity for someone, and usually this activity will constantly be repeated. Parten also added (in Hayati, 2021: 54) play activities are a means of socialization that is expected to provide opportunities for children to discover, ex- plore, be creative, express feelings and also learn in a fun way. Then by playing too, children will get to know themselves and the environment in which they live.

Video creation is made with the help of a green screen and the video editing application Kinemaster and VN, available on the Playstore Android smartphone. The videos results will later be displayed at TK Mekar Jaya Semarang with the help of laptops, LCD projectors and loudspeakers. Based on the description above, the researcher is interested in conducting research titled "The Influence of Audio Visual Learning Media to Improve Physical Skills in Children Aged 5-6 Years in Mekar Jaya Kindergarten, Semarang City".

RESEARCH METHODS

This study uses a type of research with a quantitative approach. According to Mukhid

(2021: 14), quantitative research is research that uses data in the form of numbers that are quantitative, to be able to predict population conditions or future trends. Quantitative research allows for generalizations of the results, quantified by statistical analysis. The type of research method is an experimental research method with a research design using "One Groups Pretest Posttest Design", namely a research design that contains a pretest before and after treatment.

The population taken in this study was all of early childhood in TK Mekar Jaya, totaling 50 children consisting of TK A 20 children and TK B 30 children. The sample of this research is children aged 5-6 years in TK Mekar Jaya, totaling 30 people, consisting of 13 boys and 17 girls. Data collection techniques using observation, interviews and documentation methods. Data validity technique with validity calculation using the product moment formula. The reliability test on the instrument uses the alpha cronbach formula. This study uses data analysis techniques paired sample t-test to compare the averages of two variables in one group.

RESULTS AND DISCUSSION

This section describes the research result on the physical skill abilities of children aged 5-6 years using audio-visual learning media.

Diagram 1. Pretest and Posttest Parameters Physical Skills for Children Aged 5-6 Years

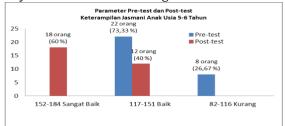


Table 1. Physical Skills Pretest Parameters for Children Aged 5-6 Years

No.	Interval Score	Category	Frequen- cy	Percen tage
1	152-184	Very good	0	0 %
2	117-151	Good	22	73.33 %
3	82-116	Less	8	26.67 %
4	46-81	Very less	0	0 %

The table above shows that the physical

skills of children aged 5-6 years during the pretest were in a good category with 22 children with a percentage of 73.33%, in the less category, the-re were 8 children with a percentage of 26.67%. In general, the percentage index for the physical skills of children aged 5-6 before being given tre- atment was in a good category, namely 73.33%.

Table 2. Posttest Parameters of Physical Skills for Children Aged 5-6 Years

	U			
No	Interval	Category	Frequ	Per-
	score		ency	c e n
				tage
1	152-184	Very good	18	60 %
2	117-151	Good	12	40 %
3	82-116	Less	0	0%
4	46-81	Very less	0	0%

The table above shows the physical skills of children aged 5-6 years in the posttest with very good criteria were 18 children with a percentage of 60%, and good criteria were 12 children with a rate of 40%. The percentage index in general for the physical skill ability parameters of children aged 5-6 years after being given treatment is in the very good category, namely as much as 60%.

Table 3. Calculation results of the Paired Sample T-Test

1636					
Paired Samples Test					
Paired Differences				_	
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test					

The hypothesis in this study are:

 H_0 : There is no effect of audio-visual learning media on physical skills in children aged 5-6 years at TK Mekar Jaya Semarang

 H_1 : Audio-visual learning media influen- ces physical skills in children aged 5-6 years at TK Mekar Jaya Semarang.

The acceptance criteria are as follows: T_{table} number of samples (N) for 30 respondents with a value of $\square = 0.05$ obtained $t_{table} = 2.042$. H_0 is rejected and H_1 is accepted if the probability value of sig 2 tailed < 0.005. Based on the results, it was found that the probability value of

sig 2 tailed was 0.000 <0.005, so H_0 was rejected and H_1 was accepted.

 $\rm H_{0}$ is rejected and $\rm H_{1}$ is accepted if $\rm (t_{count}>t_{table})$ or $\rm (t_{count}<-t_{table})$ whereas $\rm H_{0}$ is accepted and $\rm H_{1}$ is rejected if $\rm (-t_{table}\le t_{count}\le t_{table})$. It is known that the value of $\rm t_{table}=2.042$ while $\rm t_{count}=-24.695$. $\rm H_{0}$ is rejected and $\rm H_{1}$ is accepted if $\rm (t_{count}>t_{table})$ or $\rm (t_{count}<-t_{table})$ then to find out $\rm (24,695>2,042)$ or $\rm (-24,695<-2,042)$ with a significance = 0.000 so that $\rm H_{1}$ is accepted and $\rm H_{0}$ is rejected.

Based on these calculations, it means that there is an influence of audio-visual learning media on physical skills in children aged 5-6 years at TK Mekar Jaya Semarang. In addition to going through these calculations, the results of the average physical skills of children aged 5-6 years before and after the treatment are presented using audio visual learning media in the form of video.

Table 4. Average Results (Mean) of Hypothesis Testing

Paired Samples Statistics				
•		std.		
	std.	De-Error		
Means N	viation	Means		
Pair Pre-				
1 Fests t- 135.83 30 151.00 30	15,063	2,750		
151.00 30	13,704	2,502		
test				

In the table above, it can be seen that the average value (mean) of the pretest before being treated with audio-visual learning media in the form of the video was 135.83, and after being gi-ven the treatment (posttest), it became 151.00, an increase of 15.17. Based on the results of these calculations, it can be concluded that there are changes and improvements in the physical skills of children aged 5-6 years after being applied with the help of audio visual learning media in

the form of videos. Before giving treatment with audio visu- al learning media in the form of videos, researchers first measured the physical skill abilities of children aged 5-6 years at TK Mekar Jaya Semarang through a pretest. Based on the results of the pretest, it is known that 22 children fall into the good criteria, have a score interval of 117- 151 with a percentage of 73.33%, and there are 8 children who fall into the fewer criteria, have a score interval of 82-116 with a rate of 26.67%. In children who meet the fewer criteria, in the pre-test it is difficult to carry out movements that re-quire balance, flexibility, strength and coordinati- on, such as crossing the arms to the right and left, crank movements, bouncing and catching the

ball, twirling the ankles, moving knee raises, high knee jacks, elbows opened to the right and left, walk on tiptoe.

Many factors affect a child's motor skills, including three dominant factors that influence the child's development process, namely heredity, which is natural, environmental factors which are conditions that allow the process of development (nurture) to take place and the time factor is, the time of arrival of the sensitive period or maturity from someone. Another factor that influences in- dividual development is cultural change. Because personal development is formed to adapt to cul- tural standards and all ideals (Komalasari, 2018: 14-15)

After knowing the results of the pretest, the researcher gave the treatment using audio- visual learning media in the form of video to the children 12 times, and after that a posttest activity was carried out to measure whether there was an increase in physical skills in children before and after being given treatment. Based on the results of the posttest, it was found that there were 18 children included in the very good criteria having a score interval of 152-184 with a percentage of 60%, and there were 12 children included in the good criteria having a score interval of 117-151 with a rate of 40%.

Payne and Isaacs (in Aye, T., Kuramoto-Ahuja, et al., 2018:711) reported that motor development has a profound effect on social development, and physical and cognitive behavior. They report that knowledge of motor development can be helpful in diagnosing problems in individuals who may develop abnormally and is essential for helping individuals to improve their motor per-formance by engaging in activities appropriate to their development. In this study, there were several movements that were easy for most children to follow in the warm-up and cool-down activities, such as stretching the head, arms, and legs. This activity is not difficult for children, it's just that they need to focus on following the whole mo-vement.

In this regard, in line with what was stated by Sujiono (in Kristiana 2021: 15-16) regarding the main elements of gross motor learning, including; 1) strength, a person's ability to generate tension against a prisoner. 2) balance is classified into 2 types, dynamic and static. Dynamic balance is maintining the body so as not to fall while doing the movement. Static balance is the ability to maintain a specific body position, not to sway or collapse, 3) agility, is a person's ability to move quickly. 4) flexibility is the quality that allows a segment to move as much as possible according

to the possible range of motion. 5) movement coordination is an ability that includes two or more perceptual abilities of movement patterns.

6) accuracy, for kindergarten-aged children, for example, putting the ball into the basket. 7) endurance is the ability of a person's body to supply the oxygen needed to carry out an activity.

CONCLUSION

Based on testing the hypothesis with data analysis techniques using the Paired Sample T-Test with the help of the SPSS program, it was found that audio visual learning media influenced physical skills in children aged 5-6 years at TK Mekar Iava Semarang.

In the pretest, before being given treatment, there were 22 children with a percentage of 73.33% included in good criteria with a score interval range of 117-151, then the posttest value af- ter being given treatment, there were 12 children included in good criteria with a percentage of 40%. Based on the rate, the good criteria experienced a decrease in the percentage value. Howe- ver, at the fewer criteria at the time of the pretest, which originally had 8 children with a percenta- ge of 26.67% with an interval score of 82-116, changed at the time of the posttest to 0, meaning that no children were included in the fewer crite- ria. Then there was an increase in the very good criteria with a score interval of 152-184, which initially had a pretest frequency of 0, which me- ans there were no 18 children at the time of the posttest with a percentage reaching 60%.

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