

# Improving the Physical Motor Ability of Early Children with Educational Playmat Tools

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**Abstract.** Early childhood education is an education aimed at protecting children aged 0-8 years. Early childhood education is very important to do because in early childhood, as is well known, is the golden age or the golden age. The golden age period is a very important period because children are at a very extraordinary stage of growth and development, at this time it is necessary to provide good stimulation in order to maximize the golden age period in early childhood. Giving stimulation to early childhood can be in the form of stimulation on the development of religious and moral values, physical motor, cognitive, language, social emotional, and art. Physical-motor development in early childhood is the basis for the development of other aspects, if the physical-motor aspects in children are hampered it will affect other aspects of development. Physical motor development can be stimulated by various activities, one of which is playing. This is very interesting for children because playing activities are the most important activities in early childhood learning. Play activities can be carried out directly or with the help of educational aids (APE). This study aims to identify the physical-motor abilities of early childhood with educational playmat media conducted at RA Bani Malik, Ledug. Qualitative research using the type of field research (*field research*) is the type of research that researchers choose, the method of collection used is observation data, interviews and documentation. Based on the results of the research conducted by the author, it can be concluded that educational playmat media is an educational teaching tool that can be used to stimulate the physical-motor development of early childhood, this is because educational playmat media combines various kinds of physical motor movements, such as running, jumping, tiptoe , creeping, zig zagging and balancing on one foot.

**Keywords:** physical motor, educational playmat, early childhood.

## 1 Introduction

Early childhood is a child with an age range between 0-8 years optimally so that special treatment is needed from parents or educators so that at this time the development of children's self can work optimally. Aspects of development that form the basis of early childhood growth and development are divided into six aspects, namely: aspects of religious and moral values, physical-motor aspects, cognitive aspects, language aspects, social-emotional aspects, and artistic aspects. One of the developments that is closely related to early childhood is motor development, most of the activities of early childhood have motor elements or motion, both gross motoric and fine motoric.

However, motor development is not supported by providing good stimulus. Based on data from the United Nations Children's Fund (UNICEF) in 2011, growth and development disorders in early childhood, especially motor development disorders, reached 27.5% or around 3 million

children worldwide. This can be due to the provision of an inappropriate stimulus to optimize this development, for the provision of stimulus can be done using various kinds of media or educational aids that function to train and develop children's motor skills. One of the media that can be used to train and develop children's motor skills is educational playmat media, in educational playmat media there are various kinds of stimulation for children's gross motor skills, namely by combining various kinds of motor movements, such as running, jumping, tiptoeing, creeping, zigzagging zag and balance on one leg.

Researchers conducted a survey at RA Bani Malik in class B2 with an age range of 5-6 years, with a total of 26 students consisting of 14 male students and 12 female students. The survey was conducted by observing the use of educational playmat media in the morning at school. Before this activity is carried out, the teacher should already understand how far the physical and motor development of each child is so that the teacher can control when the child is playing, in addition to that, initial instructions from the teacher are carried out so that the child can use educational playmat media in the right way.

Based on the explanation above, it can be seen that providing stimulation for children's physical motor skills is very important to do from early childhood. Stimulation of motor-physical abilities can be done by teachers at school or by parents at home in the right way. This study aims to identify ways to improve the physical-motor abilities of early childhood with educational playmat media conducted at RA Bani Malik. The hypothesis proposed is that educational playmat media is effective in improving the physical motoric abilities of early childhood.

## **2 Method**

This research uses the *field research*, which is a research approach that uses data obtained directly from the field as an object studied. Field study research uses instruments consisting of data obtained and seen directly in the field where we conduct a research.[1]

The variables studied in this study consisted of two variables, namely the independent variable and the dependent variable. Improving the physical-motor abilities of early childhood is an independent variable, because this variable has an influence on other variables, as well as educational playmat media as the dependent variable because it is a variable that is subject to the influence of the independent variables.

This study uses data collection techniques in the form of observation, interviews and documentation. Observations were made at the educational institutions studied so that researchers could find out directly the existing conditions, observations in this study were carried out at RA Bani Malik. Interviews were conducted to obtain data verbally with related parties, namely the school principal and class teachers. Documentation was carried out to obtain physical research results such as the design of learning activities, learning media and photographs during learning activities. Furthermore, after obtaining accurate data, it is then analyzed using the Miles & Hubergam model which includes data reduction, data display or often referred to as data presentation and the final stage is drawing conclusions.

### 3 Results And Discussion

#### 3.1 Motor Physical Ability Motor

Movement or is a term used to describe the behavior of movements carried out by the human body. Motor control is usually used in the fields of psychology, physiology, neurophysiology and sports. The process of growth and development of a child's motor skills. Basically, the development of motor development is that it develops in line with the maturity of the child's nerves and muscles. Thus, every movement, no matter how simple, is the result of complex interaction patterns of various parts and systems in the body that are controlled by the brain.[2] This ability is trained from toddler to adult. So this ability does not grow and develop by itself but is trained and accustomed from an early age.[3]

According to Hurlock stated that early age is the ideal age for children to learn motor skills, because at this age: a child's body is more flexible, don't have many skills that will clash with the skills they just learned, dare to try something new, willing to repeat an action until the muscles are trained to do it effectively, have more time to learn to master skills. Stimulation of growth and development starts from an early age as a determinant of a child's future.[4]

There are 2 parts to children's motor skills, fine motor skills (*finemotor* skills) and gross motor skills (*gross*). Fine motor is the ability to control and organize small muscles such as fingers and hands. Meanwhile, gross motor is the ability to control and organize body movements by optimizing the large muscles. With regard to motor skills, according to Waharsono, he stated that in line with increasing body size and increasing physical abilities, the ability to move also increases. The characteristics of physical development that can be observed are as follows:

3.1.1 Large muscles develop quite rapidly in the last 2 years of childhood. This allows the child to make a variety of movements that are more flexible which can then be carried out with various basic movement skills. Several kinds of basic movements include: jumping, running, throwing, catching, and hitting develop simultaneously but with different development rhythms.

3.1.2 With the development of large muscles, there is also a fairly rapid development of strength, both in boys and girls.

3.1.3 The growth of the feet and hands is proportionately faster than the growth of other body parts, resulting in a greater increase in leverage in making movements involving the hands and feet.

3.1.4 There is an increase in movement coordination and body balance quite quickly.

3.1.5 Increased possibilities and opportunities for carrying out various kinds of physical movement activities can stimulate the development of recognition of basic concepts of objects, space, force, time and cause - effect.[2]

#### 3.2 Stimulates Children's Physical Motor

Development Motor development and motor skills in children aged Early childhood is closely related to functional coordination between the *neuromuscular system* (nerves and muscles). There are two kinds of main motor skills that are universal that must be mastered by every individual in infancy or childhood, namely walking (walking) and holding objects (*prehension*). Both types of motor skills are the basis for the development of more complex motor skills as they are known as *playing and working*. There are two main developmental principles that appear in all forms of children's motor skills, namely: Motoric development progresses from simple to complex and motoric development progresses from gross and global (*gross bodily actions*) to

subtle and specific but coordinated *movements*. [5]

Improving children's motor intelligence is very important, because it forms the basis for development the next aspect, and to achieve it can be done by stimulating children. This is because stimulation is considered to be able to cause a response that has an effect as motor training at a young age, which is in a period of rapid growth.

Some stimulation can be given to children according to their respective age levels. Ways to stimulate motor intelligence in infants, namely: Looking into the eyes, talking with expressive mimics, breastfeeding, tickling the body, narrating during activities, singing together, introducing various textures, inviting to go shopping, surprising, reading books, playing peek-a-boo, toys belonging to adults, playing with colors, stimulating to reach an object, playing funny faces, giving the opportunity to choose, change the scenery or environmental settings, ask how they are.

Stimulation that can be given to optimize the motor development of children who already have sufficient basic physical development at the age of 1-3 years, namely: Basic writing skills, sports skills, game movements, such as jumping, climb and run, simple lines to instill discipline and order habits, using worship movements.

Children's motor differences will vary in level for each individual. 4 year olds can easily use scissors while others may not be able to until they are five or six years old.

Many children's games are able to provide various kinds of stimulation. Here is one game that can provide various kinds of stimulation, namely ball games. Ball as APE media. Children aged 1-3 years, both boys and girls, generally like to play ball. This game provides many benefits. Children's motor stimulation when playing ball requires movement of the whole body, from foot movements to kick, hand movements to throw/grasp, and whole body movements when walking or running. These activities will train children's gross and fine motor skills. As well as influencing the physical growth of children. [6]

### **3.3 Educational**

Aids Educational aids are media or facilities that can stimulate a child's activity to learn something without him knowing it. APE is a learning aid that can optimize children's development that is designed according to the age and developmental level of the child. APE was created with the aim of facilitating the delivery and capture of teaching materials as well as motivating and stimulating users to explore in developing aspects of their own development through games. The world of children is the world of play, APE is designed to transfer knowledge with games. [7]

In addition, the next function of APE is to develop the physical aspects of children which stimulate children's physical growth, language development to train speaking, cognitive development to recognize sounds, color, shape. In the process of developing APE there are several conditions that must be considered, namely educational requirements, that the APE designed is intended for the educational process and contributes to the process and learning outcomes. Technical requirements related to the process of making APE related to material selection, material quality, color selection. Aesthetic requirements are related to the aesthetic elements of APE which function to stimulate children's motivation to use APE. APE is a game tool specifically designed for educational purposes, this is based on the following characteristics: can be used in various ways, for the same purposes and benefits, safe for children, children can play an optimal role and APE is constructive. [8]

Educational Teaching Aids (APE) are media that function to stimulate children's activities with

the aim of gaining knowledge by playing, so that children do not realize this. Technically, educational aids are designed based on an in-depth theoretical study of aspects of for children's development and also with the habits of children who learn by playing. APE can also be used to provide a stimulus to children's physical aspects, language aspects to practice speaking, cognitive aspects to process information. Important requirements that must be met in making APE are educational requirements, related to their designation in the educational process, technical requirements related to the process of making APE, material selection, material quality, and color selection. Aesthetic requirements are related to the aesthetic elements of APE which function to stimulate children's curiosity. So it can be concluded that APE is a media that has a dual function as a learning aid and also for playing according to the child's developmental level.[3]

### **3.4 Educational Playmat**

Media "Educational Playmat" media is a game media designed for the benefit of children's education and learning. This game is designed from flexi china material with a size of 3x4m which will be used as a learning medium that functions to improve gross motor skills from early childhood to elementary school age (4-12 years). The "Educational Playmat" media is media that can be used outside or indoors. In the "Educational Playmat" media there are several movement instructions to stimulate children's physical motor skills, especially gross motor skills, because in that media there are instructions that use the symbol of the soles of the feet to help children step.

The movements in the "educational playmat" media are the forward jump, the crank with one leg, the tiptoe, the creep, the side jump, the back jump. The motion of the front jump, side jump and back jump is symbolized by an image of two soles of the feet, the tiptoe is symbolized by an image of the two front soles of the feet, the engklek motion with one leg is symbolized by an image of one foot, the creeping motion is symbolized by the image of the soles of the feet and the palms of the hands. in a row position.

### **3.5 Educational Playmat Media to Stimulate Physical Motor Children**

Researchers conducted research at RA Bani Malik, at RA Bani Malik there were 5 classes which were divided into two for class A (age 4-5 years) and three classes for class B (age 5-6 years) . The researcher conducted special research in class B2 with a total of 26 students with 14 male students and 12 female students. The use of Educational Playmat media was carried out in the morning as a stepping stone before children carried out activities in class. The use of Educational Playmat media is an initiative of the Head of the Foundation and the Head of School because they see very active children playing in the front yard of the school before marching activities and learning activities in the room. media or educational props so that children can still learn even by playing.

The use of educational playmat media is carried out alternately between classes, every day there are two classes that have the opportunity to play with educational playmat media. Use of Playmat media is carried out with initial directions from the guiding teacher, so that children can know and be able to use the media in accordance with the existing rules of the game. the teacher still accompanies and it would be nice for the teacher to understand the level of physical and motor development of the child beforehand, so that when children play using the Educational Playmat media the teacher can find out which children still need guidance and which children

can do it independently only with directions from a distance.

So it can be concluded that Educational Playmat media can be used to stimulate the physical-motor development of early childhood. The physical-motor skills developed in the Educational Playmat media are jumping, jumping, balancing on one leg, creeping and tiptoeing.

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