

# Development of Ludo Game for Elementary School Students 'Motion Material

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**Abstract** -The purpose of this study is to produce a product in the form of a game module that contains ludo games with text-based media for elementary school children, so that it can complement existing learning at this time. This research was conducted at several Private Primary Schools in Medan Johor District, with the number of small groups in this study being students of Class II SD W.R. Supratman 2 and Sriwijaya Elementary School with a total of 12 students who have the characteristics of the age range of 8-9 years. Subjects in a large group in this study were SD W.R. Supratman Medan with a total of 24 students each school. This research uses the Research & Development (R & D) development model. The final result of this development research is to produce a product in the form of a game module that contains ludo games with text-based media for elementary school children. The conclusion of this development research can complement existing learning at this time, namely that in learning students can be more effective, meaning that it is completeness in increasing effectiveness or convenience for students in mastering locomotor basic motion material, efficiency, meaning that it is the completeness of learning aids, wherein minimal cost and time so that maximum results can be obtained in mastering locomotor basic motion material, interesting, meaning that it is a completeness of learning that has an attraction so that students can be motivated to use it.

**Keywords:** *R&D Development, Locomotor Basic Motion, Ludo Game*

## I. INTRODUCTION

Physical Education, Sports and Health Education which is held in elementary schools, refers to the existing curriculum. The scope of material for physical education, sports and health in elementary schools includes: games and sports, development activities, gymnastics activities, rhythmic activities, water activities, education outside the classroom and health. Achievement of learning objectives Physical Education, Sports and Health in primary schools should consider the learning objectives, student abilities, methods,

materials, facilities and infrastructure, learning activities and student enjoyment. The elements mentioned above must be considered, so that the learning process can run well and successfully, so that the expected goals will be achieved Physical Education Objectives in elementary schools is to spur physical, mental, social and emotional growth and development in harmony in an effort to shape and develop basic movement skills, instill values, attitudes and familiarize a healthy life. Physical Education Objectives according to Syarifuddin (1992: 5): spur development and system activities: blood circulation, digestion, breathing, and innervation, spur physical growth such as increasing height and weight, instilling the values of discipline, sportsmanship and tolerance, increasing skills doing physical activities and having a positive attitude towards the importance of doing physical activities, instilling a penchant for doing physical activities basic abilities and skills. In addition, the objectives related to the above are also set out in the competency standard 1. especially in the lower classes or grades 1-3.

From the results of the field survey in Medan City Private Elementary School, Sampoerna Elementary School and Medan Immanuel Elementary School, the development of locomotor basic mobility is still not well developed. This can be seen when the teacher invites children to do tiptoe in a straight line, running back and forth, zigzagging and jumping, many children still have difficulty in maintaining the position of their feet when walking on tiptoes, in changing the direction or position of his body regularly as well experience difficulty.

There are children who have not been able to hold their balance to the finish line, and henceforth, just walk normally. There are also children who are still wrong in making a jumping motion, that is when jumping there are children who are still resting on one leg (jumping). This was also reinforced by interviews conducted by researchers with the accompanying teacher who stated that in reality the child was

still lacking in the development of locomotor basic motion abilities, especially roads, running, jumping, there were children who had not managed to make 10 jumps past objects and were only able to jump 5 objects, in aspects balance there are children who are unable to hold balance for 20 seconds while walking on tiptoe and are only able to balance for 10 seconds while walking, there are children when running zigzags along 10 meters have not been able to pass obstacles until finished, and only able to cross obstacles up to half of it ( 5 meters)

From the survey results it is known that other factors that also affect the development of locomotor basic motion are the lack of parental support for children in outdoor activities, some parents also forbid children because they worry if their child falls or is injured, so that children become less free to make movements , and the development of locomotor basic mobility has not been well stimulated. Parents are not the only cause of problems with gross motor development in children. Children do not want to take part in physical activities offered by teachers also become obstacles that must begin to look for a solution

Motion learning is part of general learning (Sugianto, 1993: 271). Part of learning, learning motion has a specific purpose. The goal is to master a variety of movement skills and develop them so that the skills of the motion that can be mastered can be done to complete the tasks of moving to achieve certain targets.

Motion learning (motor learning) is the study of skills to acquire and perfect movement, according to Heri Rahyubi (2012: 208) Motion learning is strongly influenced by various forms of training, experience and human learning situations. To be able to do this requires the attention of attention (attention) and concentration of attention or concentration. In connection with the foregoing, Schmidt (in Slamet Riyadi, 2000: 3) asserts that learning motion is a series of training associations or experiences that can change the ability of motion towards the performance of certain motion skills. In learning motion, what is learned is certain patterns of motion, for example sports movements. Students try to know or understand a movement and then try to make or realize the concept of the movement in the form of body movements by activating the body's movement system. Meanwhile, the level of motion skills acquired by students is influenced by several factors; 1) individual factors of student subjects, 2) learning process factors and 3) learning situation factors. Individual factors of students in learning motion will refer to the differences in their potential. Differences in the potential for movement abilities possessed by these students will fundamentally affect the level of motion skills they master.

Fundamental basic motion (fundamental basic movement) according to Harrow (1972: 51) is an inherent pattern of motion that forms the basis for complex movement skills, which include (1) locomotor motion; (2) non locomotor motion; and (3) manipulative movements.

Every human being born is equipped with movement skills, so that in carrying out its activities requires movement. Activities automatically require a power that supports a variety of activities so that movement can occur. According Husdarta (2000: 20), basic movement skills are skills that students normally do to improve the quality of life. Basic motion skills are divided into three categories: locomotor, non locomotor, and manipulative.

According to Seafeldt and Barbur (in Novi, 2016: 24), play activity is a spontaneous activity in children that connects it with adult activities and the environment including imagination, children's appearance by using all feelings, hands or the whole body. Playing according to Hurlock (in Novi, 2016: 24) is every activity carried out for the pleasure it causes, without considering the final outcome. In other words, play is done voluntarily without coercion from others. Playing is an activity that has no other rules, except those set by the players themselves and there is no intended outcome in external reality.

Playing or playing is colored by the atmosphere of paidia but in the game (game), the elements of life stand out (Agung, 2017: 78). The formal game is a competitive interaction and aims to achieve a predetermined goal. He has an endpoint called game people. According to Calhoun (in Agung, 2017: 78) the game is a play activity that has clear rules, specific objectives, elements of competition and a sequence of actions that are essentially repeated each time the game.

Playing according to etymology is a verb while the game is a noun. Playing and playing are two terms that are often used interchangeably, in which someone who plays it plays a game and the game is something that is played. Children play means children work on a game, while the game is something that is subject to play. Which in the book theory of play according to Huizinga is play done with pleasure (Matakup, 1993: 1). Play is a part of human life, especially for children, because the characteristic of children is to play for the whole day. Throughout the world and even in remote areas children are always playing from the level of primitive culture to the level of modern culture.

Ludo game is something that was developed to give effect to the basic locomotor motion material. Ludo games are adopted from Ludo games like the snake ladder game or monopoly, it's just that Ludo games are more on motion concept games. This game is carried out in a box that has been arranged where there are 4 posts, and to go to the post consists

of lines that have been determined. Students must shuffle ludo to determine running, walking, crawling, squatting or jogging. So there are 5 steps to get to the post. Number 1 on ludo is running, number 2 crawls, lift 3 squatting road, number 4 goes, and number 5 jongging, while number 6 just stay still. Each of the 5 stages is done on the basis of a dice number, and the duration is determined to be 8 seconds. For example, students get the number 1 meaning they must run for 8 seconds as far as possible. And in the 4 posts there are games starting from catching ball catches to the ball, the second post put the ball into the ring, the third post is a game of jumping over the rope then reaching for the balloon that is hung, then at the fourth post the game takes coins in flour then the coins are brought to the finish line.

Based on the stages of development revealed by Piaget, elementary school children are at a concrete operational stage. At this stage, the child's ability to think logically is increasingly developed. As long as the object that is the source of thinking is a real or concrete object.

Characteristics of elementary school age children are not only that. According to Santrock (2010: 227) the characteristics of elementary school age children are: (1) enjoy playing; (2) likes to move; (3) enjoy working in groups; and (4) like to feel or do something directly. The first characteristic that is happy to play. Elementary school students especially those who are still in the lower classes generally still like to play. Therefore, elementary school teachers are required to develop learning models that contain games, especially for low grade students. The second characteristic is the pleasure of moving. Elementary school students are different from adults who can sit and be quiet listening to lectures for hours. They are very active and can only sit quietly for about 30 minutes. Therefore, the teacher should design a learning model that causes children to actively move or move.

The third characteristic is the pleasure working in groups. Therefore, the teacher needs to form students into several small groups consisting of 3 to 5 students to complete the task in groups. By hanging out in groups, students can learn to socialize, learn how to work in groups, learn to be loyal to friends and learn to obey the rules in the group.

The last characteristic of elementary school students is that they enjoy feeling or doing something directly. Based on Piaget's cognitive development stage as previously described, elementary school students are at a concrete operational stage. They try to connect concepts that have previously been mastered with concepts that have just been learned. A concept will also be quickly mastered by children if they are directly involved through the practice of what the teacher teaches.

Therefore, teachers should design learning models that involve children directly in the learning process.

Elementary school children are generally between 6-13 years old. In connection with the fondness for games, the age level of elementary school education is divided into three groups, Soedjadi (1979: 89):

1. The first education age group is between 6 to 8 years
2. Secondary age group between 8 to 10 years
3. Third age education group between 10 to 12 years

Research and development (R&D) in education is a process that is used to develop and certify education products. The steps in this process are generally known as the R&D cycle, which consists of: an assessment of the results of previous studies relating to the validity of the components of the product to be developed, developing it into a product, testing of the product designed, and reviewing and correcting the product based on trial results. That is an indication that the product of findings from the development activities carried out has objectivity.

The Borg & Gall development model (1983: 776) contains a systematic guide to the steps taken by the researcher so that the product he designs has a feasibility standard. Thus, what is needed in this development is a reference about the product procedure to be developed. The development research procedure basically consists of two main objectives, namely: (a) developing the product, and (b) testing the effectiveness of the product in achieving its objectives. The first objective is called a developer function while the second objective is called validation. Thus, the concept of development research is more precisely interpreted as a development effort which is at the same time accompanied by validation efforts.

## II. RESEARCH METHODS

Research and development of ludo games is applied to the locomotor basic motion material in elementary school children, specifically there are several objectives including:

1. To obtain in-depth information about the process of implementing basic motion learning in elementary schools.
2. Develop and apply ludo games to the locomotor basic motion material of elementary school students.
3. Obtain empirical data about the effectiveness, efficiency and attractiveness of the development of Ludo games in locomotor basic motion learning.

This research was conducted in several private elementary schools in Medan Johor District. The research treatment was carried out by adjusting school schedules or school hours. The

time of this research to be carried out for one month is in the range between December 2019.

Development Research Steps and Steps Activity step :

- 1 a) Initial data collection (preliminary study)
  - b) Preparation of research proposals (Literature study)
  - c) Needs analysis
- 2 Drafts Game Ludo
  - 3 Product production in the form of game modules

### III. DATA ANALYSIS TECHNIQUE

Data analysis techniques used in this research development are using descriptive analysis techniques in the form of percentages. In data processing, the percentage obtained by the formula are:

$$NP = n / (N) \times 100$$

$$NP = \text{Value in}\%$$

$$N = \text{Value obtained.}$$

$$N = \text{Sum of all values} / \text{sum of all data.}$$

From the results obtained, the percentage is then classified to obtain data conclusions. The classification will be presented as a percentage.

Percentage Classification Percentage of Classification Criteria:

0 - 20% Not Good Not Eligible

20.1-40% Poorly Poor

40.1-70% Good Enough Good Enough

70.1-90% Good Eligible

90.1-100% Very Good Very Worthy

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