



# Improving learning outcomes of locomotor activities through games cats using *Kodular* applications

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Info article	Abstract
<p><b>Filed in:</b> 2024-08-11  <b>Accepted:</b> 2024-09-29  <b>Published:</b> 2024-10-30</p> <p><b>Keyword:</b>            Locomotor, Games, Applications</p>	<p><i>An increase in basic motion occurs in childhood. As we enter adolescence, our ability to use our motor skills as needed allows us to master increasingly complex movements. The development of motor mastery occurs in line with physical growth, in the early days and the formation of basic movement patterns. Kodular application is a visual mobile application development platform that is easy to use for beginners. The Kodular application is an easy-to-use visual mobile application development platform. This application can help integrate play activities and technology to increase locomotor movement activities in grade V students of SDN Ibu Dewi 5. The results of the implementation of activities and the results of reflection carried out during the process took place in cycle I and cycle II in developing gross motor skills through traditional cat games had a good effect on improving ability. This is proven by the results obtained that show an increase during the activity process, initially achieving a completion percentage of 63.33%. to a percentage of completeness of 96.66%.</i></p>

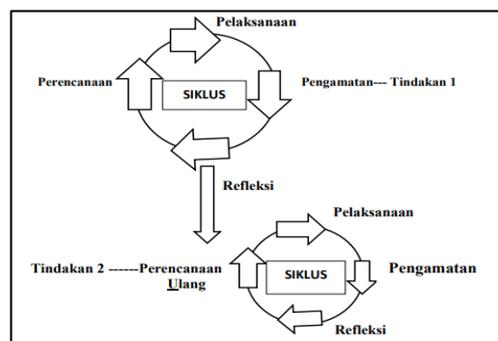
## 1. INTRODUCTION

Locomotor activity is a movement characterized by displacement, such as walking, running, jumping, and rolling. This movement usually makes children feel happy to do it, because in general children will be more interested in doing. (Activity et al., n.d.). Physical activity is any movement of the body that requires

energy. Exercise is a deliberate and structured physical activity that involves repetitive body movements and is aimed at improving physical fitness. (Pratama, 2016). Locomotor motion is the movement of the whole body through a certain room or distance such as walking, running, jumping and so on, (li et al., 2013). Basically, the basic movements of humans are walking, running, jumping and throwing. This basic form of movement has been owned by elementary school students. One of the technologies that can be used to integrate play activities with technology is the Kodular application. Kodular applications can help users to create interactive and engaging applications with features such as sensors, databases, and others. (Kodular, 2022). This application allows users to create mobile applications without having to master complex programming languages. Play can help children achieve complete development, both physically, intellectually, socially, emotionally and morally. Cat games do not only channel the energy they have through the activities they do. There are several benefits obtained for children through this game, namely, to train speed, alertness and physical endurance.)

## 2. METHOD

The method used in this study is the Classroom Action Research research method. The description of PTK developed by Subroto.



**Figure 1** Classroom Action Research Flow

## Population

Population according to Sugiyono (2018, 117) is a generalized area (a group) consisting of objects or subjects that have certain qualities and characteristics that are determined by the researcher to be studied and then drawn conclusions. From the explanation above, it can be concluded that the research population includes everything that will be used as the subject/object of research to be researched, and the population in this study is the students of SDN Ibu Dewi 5 Class V.

## Sample

According to Sugiyono (2018, 81) the sample is part of the number and characteristics possessed by the population, the sample taken from the population must be representative or representative of the population being studied. Meanwhile, according to Arikunto (2019, 109) the sample is a part or representative of the population to be studied. It can be concluded that the sample is a partial or representative representative of the population to be studied. Therefore, the sample that will be used in this study is 30 students of class V Sdn Ibu Dewi 5.

## Research Instruments

Instruments are tools used to collect data during research. According to Arikunto, "Research instruments are tools or facilities used by researchers in collecting data so that their work is easier and the results are better, in the sense that it is more careful, complete, and systematic so that it is easier to process". In this study, the tools used to collect data are:

### 1. Kodular Application

The Kodular application is an easy-to-use visual mobile application development platform. This application can help integrate play activities and technology to improve children's locomotor movement activities. Here are the steps to use the

kodular application:

- a. Click on the application that has been downloaded on the mobile phone



Figure 2 Game App Display

- b. After clicking, the application display will look like this



Figure 3 Initial Display After Entering the Application

- c. After clicking play, the application will look like this and in each list of games there is a brief explanation, rules and videos to make it easier to understand



Figure 4 List of Games in the Kaulinan application

d. After that, choose a traditional sport that you want to learn, for example cats



**Deskripsi**

Permainan kucing-kucingan adalah permainan tradisional yang berasal dari masyarakat Jawa sejak tahun 1913. Dalam permainan ini, dua orang dipilih sebagai kucing dan tikus, sementara pemain lain membentuk lingkaran dan berperan sebagai tikus yang harus melarikan diri dari kejaran sang kucing. Aturan permainan melarang tikus yang sedang jongkok ditangkap, kecuali jika mereka dibantu oleh teman. Jika tikus tertangkap, mereka akan bergantian menjadi kucing selanjutnya.

**Cara Bermain**

1. Pahami alur permainan.
2. Tentukan peserta yang menjadi kucing.
3. Pilih area bermain.

**Vidio Youtube**



Figure 5 Display of contents of the Ucing ucingan Menu

2. Observation sheet

The observations made in this study are before conducting the research and during the research. Before conducting the research, the researcher observed learning in the classroom and observation during the study, namely by observing students while doing the tests given by the researcher.

The results of the observation before the study were the location of SDN Ibu Dewi 5, groups of learning from different levels as in the table below

An observation sheet is a list of activities that may arise and will be observed. The observation sheet used was in the form of Test of Gross Motor Development–2 (TGMD-2) adopted from Dale A Ulrich. The TGMD-2 has a total of 12 skill test items, namely 6 locomotor skill tests and 6 object-control skill tests. However, in this study, only 5 locomotive skill tests were used, namely jumping, catching, walking, running, going up and down stairs.

Data Collection

Research data is collected and compiled through data collection techniques which include data sources, data types, and data collection techniques.

- a. Data source: the data in this study is grade V students of SDN Ibu Dewi 5
- b. Type of data: the type of data obtained is qualitative data consisting of learning outcomes, learning plans, and observation results on the implementation of learning.
- c. Data collection technique: learning outcome data is taken by giving tests to students, through cat games, this learning situation is carried out at the time the action is taken using an observation sheet.

#### Research Procedure

Research Procedure The research procedure to collect data uses the following steps:

1. Determine the sample from the population.
2. Conduct the 2nd Gross Motor Development Test pretest. This initial test aims to see the basic motor skills of elementary school children before being given treatment for both the experimental group and the control group. The instrument used in this test is the 2nd Test Gross Motor Development developed by Ulrich (2000). The procedure for conducting the test is explained on the instrument side.
3. Conducting experiments on traditional cat-cat sports. This program is carried out for 2 weeks, 1 week consists of three meetings (Monday, Tuesday, Wednesday). Each day lasts 120 minutes with the stages that have been specified in the guidelines of this program.
4. Melakukan posttest tes Test Gross Motor Development 2nd.
5. After the data is collected, then the data is analyzed and summed up, then it is seen whether the difference is complete or incomplete.

#### Data Analysis

According to Sugiyono (2016, 207) "Data analysis is an activity after data from all respondents or other data sources is collected". The data from the research results were processed and analyzed to test the research hypothesis. The purpose of data analysis is to simplify data into a form that can be understood and

interpreted. Data analysis in this study uses qualitative for qualitative analysis, which is an interaction method consisting of data presentation and conclusion. The results of these observations were analyzed using qualitative descriptive techniques that were described in words or sentences and separated by categories to obtain conclusions. using the formula:

$$P = \frac{F}{N} \times 100\%$$

In this class action research, it is said to be successful if there is an increase from cycles I, II, the success of children in learning locomotor movements through traditional cat-cat games is 53.33% (16 children) out of a total of 30 children in class V Sdn Ibu Dewi 5. The following is a table of interval intervals for locomotor movements and intervals for children's success in learning locomotor movements through traditional cat games.

**Table 1** Interval of assessment category Locomotor movement

It	Interval	Interpretation of Assessment
1	5	Excellent
2	4	Good
3	3	Enough
4	2	Less
5	1	Very Less

**Table 2** Child Success Criterias Interval

It	Interval	Interpretation of Assessment
1	90-100	Excellent
2	81-89	Good
3	70-80	Enough
4	61-69	Less
5	<60	Very Less

Equations and formulas should be punctuated in the same way as plain text but with a space before punctuation.

### **3. RESULTS AND DISCUSSION**

From the results of observations made to grade V students, an overview of gross motor skills was obtained before the research was carried out. Activities that take place to improve children's gross motor skills are still in the form of activities in the school environment so that the aspects of speed, agility and balance of children have not been maximized. The observation results are described as follows:

**Table 3** Results of learning completeness in cycle I

<b>Completeness</b>	<b>Percent (%)</b>
Complete	63.33%
Not Finished	36.67%
Sum	100%

From the results in the table, each child obtained a different score even though the researcher gave the same time, namely each respondent had a time of 120 minutes. The values obtained by the sample of 30 people in the data are Mean = 75.9, Standard Deviation = 4,877, Mak value. = 83 and Min. Value = 67, with a completion percentage of 63.33%

**Table 4** Results of learning completeness in cycle II

<b>Completeness</b>	<b>Percent (%)</b>
Complete	96.66%
Not Finished	3.34%
Sum	100%

From the results in the table, each child obtained a different score even though the researcher gave the same time, namely each respondent had a time of 120 minutes. The values obtained by the sample of 30 people in the data are Mean = 81.0, Standard Deviation = 4,414, Mak value. = 90 and Min. = 74, with a percentage of 96.66%.

Table 5. Results of the completeness of the value of each cycle

Completeness	Cycle I	Cycle II
Complete	63.33%	96.66%
Not Finished	36.67%	3.4%
Sum	100%	100%

Diagram 1 Average value per cycle

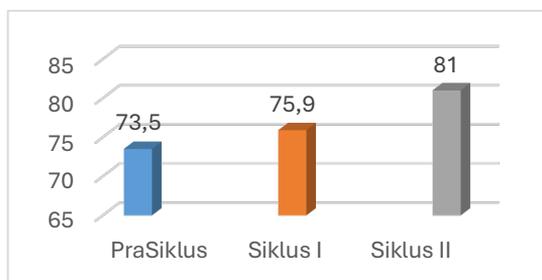
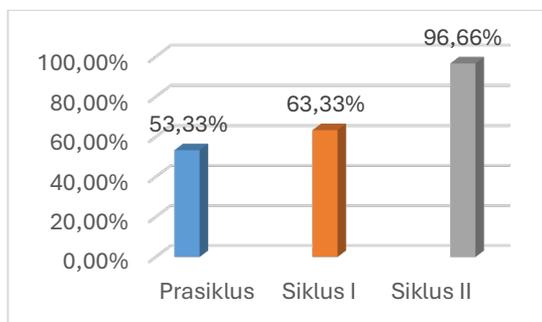


Diagram 2 Completeness value of each cycle



The diagram above shows an increase in student learning outcomes. This data was obtained from the analysis of the evaluation results of each cycle. From the analysis, there is an increase in student learning outcomes of 33.33%.

#### **4. CONCLUSION**

This class action research was carried out at SDN Ibu Dewi 5 to improve gross motor skills through traditional cat games using codular applications, for 2 weeks with 3 meetings (Monday, Tuesday, Wednesday). The results of the implementation of activities and the results of reflection carried out during the process took place in cycle I and cycle II in developing gross motor skills through traditional cat-cat games had a good effect on improving gross motor skills in grade V at SDN Ibu Dewi 5. This is proven by the results obtained that show an increase during the activity process initially reaching a completion percentage of 63.33%. to a percentage of completeness of 96.66%.

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