The Effects of Playing Method on the Activities of Children Aged 4-5 Years Old in TK Mutiara Bangsa Surabaya

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Article History:
Submitted: November 2017
Approved: November 2017
Published: September 2018

Keywords:
Playing Method, Learning Activeness, Children aged 4-5 years old

Abstract
This research aimed to examine the effects of playing method on the activeness of learning during the learning process, the reciprocal questions between early childhood and teachers. The research was conducted in the neighborhood of TK Mutiara Bangsa Surabaya with a population of 36 children and a sample of 20 children aged 4-5 years old. The sample technique was carried out through purposive sampling based on considerations that were already known by the researcher and the characteristics of the children that were known beforehand. The data collection of this research used the observation test instrument which was analyzed using statistical analysis with 2 designs: Pre-test and post-test without the comparison/control group. The results of this research indicated that learning activeness after treatment or treatment with playing method, there was an effect of learning activeness with an average score of $9.50000$. Also, based on the results of the $t$-test testing, it was known that the value of $-26.456$ with a significance of $0.000 (p < 0.05)$ which means that there was a very significant effect between the method of playing on the learning activeness children aged 4-5 years old in TK Mutiara Bangsa Surabaya. There was a positive effect between playing method on learning activities of children aged 4-5 years old. Playing is the part of the child's soul without any compulsion. The active child does anything because of great curiosity, information, experience experimenting from playing and the teacher as facilitator. Through playing, it will be easier to optimize all aspects of child's development, creating the next generation who are ready for changing times. Playground can be used for early childhood learning.

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DOI: http://dx.doi.org/10.24269/jin.v3n2.2018.pp107-115
INTRODUCTION
The expansion of education starting to be encouraged for pre-school education has come for its time to become one of the education development programs. Various researches also conclude that the development obtained at an early age greatly influences the development of children at a later stage and increases work productivity in their adult years.

Starting from the results of research conducted by Samis, 2010, about the results of learning mathematics through construction playing techniques that can increase. The results of subsequent studies from Indrayanti, 2013, concerning active playing affect the mastery of early mathematical concepts in children, and children who have low creativity will be better if given constructive games.

The principle of learning in pre-school children in kindergarten at the age of 4-6 years old is playing while learning or learning through playing. In this case, of course the playing activities are intended in the form of playing activities that provide stimulation to children who are adapted to the stage of development that is owned by the children.

Learning should be fun, children will not distinguish between working and playing. They will not be interested in separating playing and learning. All learning activities will be received enthusiastically provided they enjoy what they do. Through the game, children learn about the world. However, they don't always know how to organize or direct their game. That is why children need participation, assistance, and support from the teacher when in school or the role of parents and the environment when outside of school.

This research needs to be done because the facts in the field indicated that during the process of teaching and learning activities take place, the students of TK Mutiara Bangsa Surabaya aged 4-5 years old/Group A were less active in carrying out activities given by the teacher. Children liked to make noise inside class and to disturb friends, not dare to express ideas and answer teacher's questions. The total number of kindergarten students (A) (aged 4-5 years) was 36 students. Kindergarten
group A is divided into two classes, A1 is 20 students and A2 is 16 students. In class A1, it was known that children who actively participated in learning activities and responded well and wanted to ask questions and issued ideas from the teacher were only 6 students even less.

Starting from the background above, the formulation of the problem can be written as follows: "Does the method of playing affect the activeness of children's learning?"

LITERATURE REVIEW

Basic Concepts of Playing Method as mentioned in the outlines of the kindergarten learning program according to the Ministry of Education and Culture in Moeslichatoen (2004: 3) mentions the purpose of the kindergarten learning activities program is to help lay the foundation towards the development of attitudes, knowledge, skills, and creativity needed by students in adjusting to their environment and for further growth and development.

The action hypothesis in this research is that there is a playing method effect on the learning activeness of children aged 4-5 years old in TK Mutiara Bangsa Surabaya. The following is the definition of playing for Kindergarten Children. For children, playing according to Semiawan (2008: 18) is a serious activity, but exciting, various jobs are realized. This means that the activity is chosen by the children, because it is fun not to get prizes and praise but it is one of the main tools for growth training, where the children try themselves not only in their fantasy but also actively real. If the children play freely, according to their own will and speed, then they train their abilities.

Playing according to Buzan (2011: 147) is a natural gift for children that is useful to develop and realize our unlimited abilities through the most serious, important, fun, and valuable activities of all human activities. The playing world is very important according to Cahyo (2011: 12), so the way of children’s learning is actually also through the game itself.

Froebel in Miller and Pound (2011: 58) reveals when children play, they will express their own ideas, feel comfortable, and find
ways to challenge themselves in a safe way, because they can move, get in and out from playing in accordance with their adventure. Children can make their own rules and are not bound by other rules.

Meanwhile, Santrock (2002: 272) suggests that playing is: a fun activity that is carried out for the benefit of the activity itself, such as by using a central approach, so that it is adjusted to the children's desires and age. This means that playing which creates a sense of comfort with fun activities and activeness for children will have a very good impact on achieving the goals of the activity.

METHOD
This research is a quantitative research. This research used a Quasi experimental design or Pre Experimental Design (Arikunto, 2006: 84), that is without the comparison/control group (before playing method and after playing method).

This research was carried out in TK Mutiara Bangsa, Rungkut District, Surabaya, East Java. The population in this research were children aged 4-5 years old Group A TK Mutiara Bangsa, District Rungkut, Surabaya with a total of 36 students.

The samples in this research were the A1 group which consisted of 20 children. The sampling technique used Purposive Samples/Non-Random Sampling (Notoatmodjo, 2005: 88) based on considerations, characteristics of the population that are already known.

The variables in this research include: a) the independent variable is the playing method; b) the dependent variable is the learning activity of children aged 4-5 years old in TK Mutiara Bangsa Surabaya.

Data collection methods used were test methods, observation, and documentation methods. In accordance with the formulation of the problem, the researcher used statistical analysis with the help of SPSS version 23 software. The data analysis techniques used in this research included:

1) To find out the average score/mean of each indicator (in the whole learning process, the children were directly involved in an activity towards behavior change, the children were actively involved in carrying out the tasks given by the
teacher, the children were diligent working during the learning process, children's activity was not limited to physical movements but also mental activity during learning activities take place, attitude was responsible for the activities carried out, pre-test and post-test using Descriptive Statistics. 2) To determine the value of the effects of each indicator of pre-test and post-test on the dependent variable (learning activeness) using the t test.

RESULT
The initial condition of the respondents from the pre-test results can be seen in the graph below:

![Figure 5.1 Children Learning Activity Aged 4-5 years old during initial conditions](image1)

Meanwhile, the condition of the respondents after being given the treatment, the results of the post-test can be seen in the graph below:

![Figure 5.2 Children's Learning Activity Aged 4-5 years old after given the Playing Method](image2)

After the treatment for 6 meetings, the results of the pre-test and post-test can be seen in the graph below:

Data Graph of Pre-Test and Post Test Results of Learning Activity

![Figure 5.3 The Results of Methods of Test and Observation of the Effects of Playing Method on Children's Learning Activity Aged 4-5 years old](image3)

In the table, it was also obtained the results that the average score/mean increase in the learning activeness of respondents was 0.904761905 with the standard deviation of 0.09028203. The highest score of learning activity improvement was 0.888888889 and the lowest was 0.5. In order to know a clearer picture on each indicator of learning activity
which includes: children aged 4-5 years old are directly involved, children aged 4-5 years old are actively involved, and children aged 4-5 years old are diligently working, and children aged 4-5 years old are responsible can be seen from the following table.

1) Determining the average scores of pre-test and post-test of all indicators of learning activity of children aged 4-5 years old.

Table 1 Descriptive Statistics

<table>
<thead>
<tr>
<th>Indicator</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activeness</td>
<td>20</td>
<td>1.00</td>
<td>3.00</td>
<td>2.050</td>
<td>0.68833</td>
<td>0.471</td>
</tr>
<tr>
<td>Activeness</td>
<td>20</td>
<td>3.00</td>
<td>5.00</td>
<td>4.150</td>
<td>0.74516</td>
<td>0.555</td>
</tr>
<tr>
<td>Mentally active</td>
<td>20</td>
<td>1.00</td>
<td>3.00</td>
<td>1.850</td>
<td>0.74516</td>
<td>0.555</td>
</tr>
<tr>
<td>Mentally active</td>
<td>20</td>
<td>3.00</td>
<td>5.00</td>
<td>4.800</td>
<td>0.83351</td>
<td>0.695</td>
</tr>
<tr>
<td>Actively involved</td>
<td>20</td>
<td>3.00</td>
<td>5.00</td>
<td>4.000</td>
<td>0.64889</td>
<td>0.421</td>
</tr>
<tr>
<td>Actively involved</td>
<td>20</td>
<td>3.00</td>
<td>5.00</td>
<td>4.750</td>
<td>0.55012</td>
<td>0.304</td>
</tr>
<tr>
<td>Mentally active and mentally active</td>
<td>20</td>
<td>3.00</td>
<td>5.00</td>
<td>4.350</td>
<td>0.80314</td>
<td>0.642</td>
</tr>
<tr>
<td>Mentally active and mentally active</td>
<td>20</td>
<td>3.00</td>
<td>5.00</td>
<td>3.700</td>
<td>0.80314</td>
<td>0.642</td>
</tr>
<tr>
<td>Mentally active and mentally active</td>
<td>20</td>
<td>1.00</td>
<td>4.00</td>
<td>2.450</td>
<td>0.88704</td>
<td>0.787</td>
</tr>
<tr>
<td>Mentally active and mentally active</td>
<td>20</td>
<td>3.00</td>
<td>5.00</td>
<td>4.150</td>
<td>0.74516</td>
<td>0.555</td>
</tr>
<tr>
<td>Mentally active and mentally active</td>
<td>20</td>
<td>9.00</td>
<td>10.00</td>
<td>10.500</td>
<td>2.13985</td>
<td>4.579</td>
</tr>
<tr>
<td>Actively involved</td>
<td>20</td>
<td>17.00</td>
<td>24.00</td>
<td>20.000</td>
<td>1.96666</td>
<td>3.789</td>
</tr>
</tbody>
</table>

1) Statistical Test Results

Statistical testing in this research was used to test whether the playing method affecting the learning activity of children aged 4-5 years old. How to determine whether the research hypothesis is accepted or rejected such as:

a) If the significance of the t test is greater than 0.05 (p>0.05), and therefore there is no effect of the use of playing method affecting the activity of learning.

b) If the significance of the t test is smaller or equal to 0.05 (p <0.05), and therefore the influence of the playing method affects the activity of learning.

Table 2 The Effect Tests on Learning Activity Variables

<table>
<thead>
<tr>
<th>Pair Differences</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>95% Confidence Interval of the Difference</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre Activeness Post Learning Activity</td>
<td>0.50000</td>
<td>0.00000</td>
<td>0.00000</td>
<td>-0.21929</td>
<td>0.48844</td>
<td>26.838</td>
<td>10</td>
</tr>
</tbody>
</table>

The test results indicated that learning activeness after being treated with playing method, the average score /mean of learning activeness obtained a score of -9.50000.

The results of the t-test testing obtained the value of -26.456 with a very significant level of 0.000 (p <0.05). With this result, there was an effect of the playing method in increasing the learning activeness of children aged 4-5 years old. Thus, the research hypothesis was accepted.

Table 3 Effect Test on Indicators of Learning Activity Variables

<table>
<thead>
<tr>
<th>Pair Differences</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>95% Confidence Interval of the Difference</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre Activeness Post Learning Activity</td>
<td>0.50000</td>
<td>0.00000</td>
<td>0.00000</td>
<td>-0.21929</td>
<td>0.48844</td>
<td>26.838</td>
<td>10</td>
</tr>
</tbody>
</table>

The results of the t test indicated that all learning activeness indicators started from being directly involved
in getting a value of -16.998; actively involved of -22.132, diligently working of -11.917, physically & mentally active of -9.448, and responsible for of -11.831 with a very significant level of 0.000 (p <0.05). Therefore, all indicators of learning activity increase between before and after being given the playing method.

**DISCUSSION**

From the data collected and the results of the data calculation, it indicated that in the learning activeness after the treatment with the playing method, there were the effects of learning activeness with an average score/mean of -9.50000. As well, based on the results of the t-test testing, it was obtained the value of -26.456 with a significance of 0.000 (p <0.05) meaning that there was a very significant effect between the method of playing on the learning activity of children aged 4-5 years old in TK Mutiara Bangsa Surabaya.

The conclusion indicated that the proposed problem statements have been answered. There was a positive effect between the method of playing on the learning activities of children aged 4-5 years old in TK Mutiara Bangsa. The effects of the playing method on the active learning of children aged 4-5 years old in TK Mutiara Bangsa Surabaya, playing contains various meanings in the lives of children in their daily lives, according to Froebel's theory in Miller and Pound (2011), that playing is a means to learn and add information to early childhood. In the atmosphere of playing, children's attention to the lesson can be greater. There is no coercion and it arises from the child, and in line with Santrock’s opinion (2002), by using a central approach adjusted to the wishes and age of the children, the game creating a sense of comfort with fun activities and activeness for children will have a very good impact.

As a result of the learning activeness of children, there will be interaction and communication from various directions, and assisted by creating a pleasant environment of the teacher. Therefore, the lessons given through the playing will be more interesting and pleasing to the children so that the results will be better. Not only limited to pleasing children's hearts, through playing children can also explore all their
experiences, get information, imagine, love to work together, take responsibility, and pour all the creativities they have.

CONCLUSION

There was an effect of the playing method on the learning activities of children aged 4-5 years old in TK Mutiara Bangsa Surabaya. From the test results, it showed that of all indicators of learning activeness, the post-test was higher in the pre-test with a significant level of 0.000 (p < 0.05). Learning activeness was different between before and after the playing method was given. There was a change after the playing method was given.

RECOMMENDATION

The playing method used in this research provides some input for attention, and therefore the researcher suggests:

1. The method of playing is right to stimulate all aspects of early childhood development, including aspects of language, cognitive, motoric, emotional social and art to be more optimal.

2. The heart and soul of the children are playing, from playing the children get information, experience, can explore and experiment according to the children’s desire without any coercion from the adult/teacher.

3. The teacher should change the old approach centered more on the teacher’s willingness, with a method of playing that is child-centered. Creativity, innovation of teachers as facilitators both as providers of Educational Game Tools (APE) or media, or whether learning while playing does not have to be in the classroom, even the playground pages can be used for early childhood learning.

REFERENCES


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