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## **EFFECTS OF OUTDOOR GAME ACTIVITIES ON ABILITY OF FINE MOTOR USAGE FOR EARLY CHILDHOOD**

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### **Abstract**

*The purpose of this research was to compare the ability of fine motor usage before and after learning with outdoor game activities for one group trial by pre-test and post-test. The samples were 20 early childhood for 4 - 5 years old in 8 weeks, 4 days each week and 30 minutes per day. The outdoor game activities were focused on using fingers to move with the device by doing activities outside the classroom. The research instruments were the outdoor game activities and Evaluations Development From. Analyze data by Mean, Standard Deviation and t-test by Dependent Sample. The results showed mean 18.60 and standard deviation 3.05 before having outdoor game activities while after having outdoor activity games showed mean 22.80 and standard deviation 2.84. The early childhood has the ability to use fine motor more than before implementing experiment at a significant level of 0.05 ( $t=17.00$ ,  $p<.05$ ).*

### **Keywords**

Outdoor Game Activities, Ability of Fine Motor Usage, Early Childhood

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## **1. Introduction**

It is crucial to develop children aged between 3-5 years old in all aspects. They need to be prepared and provided with good experience. People who involve in taking care of these children need to understand and have knowledge about early children development. Tanner (1978), as

cited in Kajornsil, S., & Suwanpan, A. (2009) noted that since gross motor develops first, followed by fine motor. Therefore, physical movement and activities play an important role in child development. Polyothin (2009) indicated that the nature of children need movement, especially the movement of muscles through exercises. The outdoor game activities are important for developing children's bodies. This results in improving their self-confidence and effective learning. As noted by Baker (1968, as cited in Praperdkit, 1996, p. 78), "children who are healthy usually do outdoor activities because they play and do activities happily and creatively".

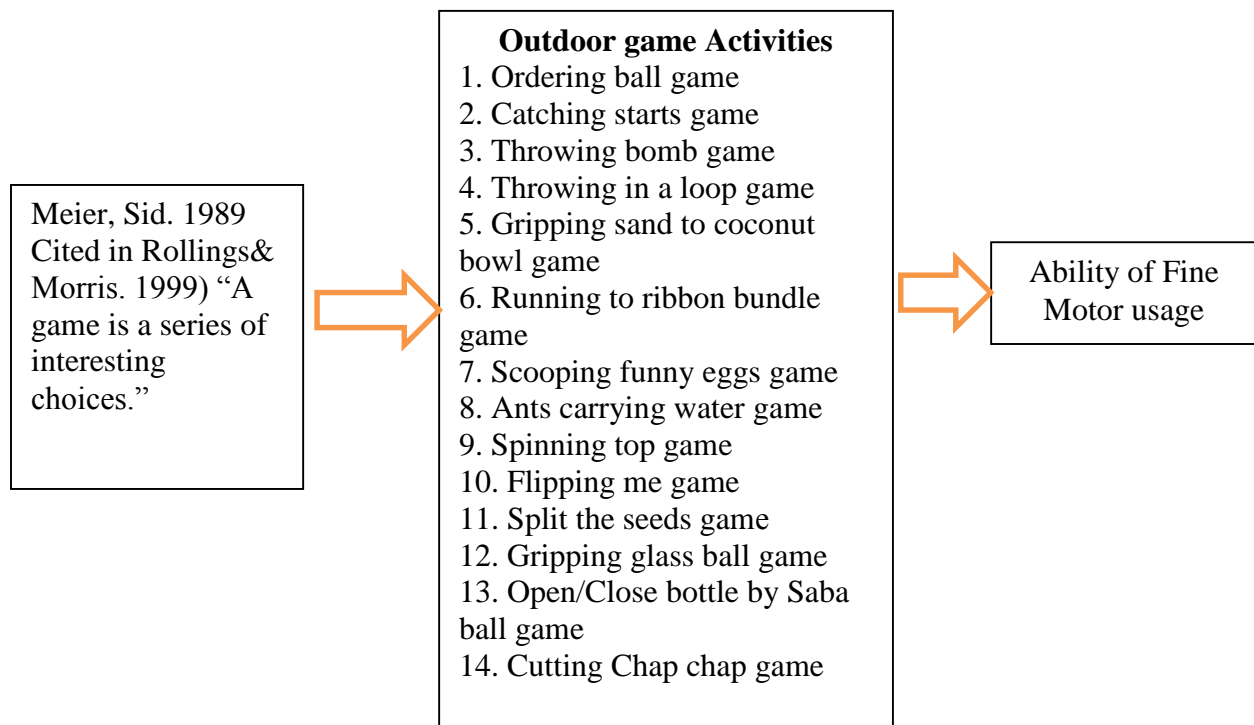
Early Childhood Education Curriculum aims to develop all children on physical, emotional, mental, social, and intellectual continuously to quality. They provide the experience to happy learning and appropriate age (Early Childhood Education Curriculum, 2018). Presently, the education system in Thailand focus on early childhood education that educators and involved persons who was to high interesting in early childhood education because in the past, teaching and learning focused on the transfer of knowledge, texts and test by neglecting to focus on children development in four aspects that are : physical, emotional, mental, social and intellectual. In addition most schools are not ready preparation all aspects to early childhood truly that the most schools choose to accelerate children to writing and reading only. The school effect does not allow the children in freedom and showing and force the children to write only. The result, children do not develop in fine motor. According to the results of the evaluation of nationwide for early childhood development in the academic year 2003 and in the academic year 2006, 2008, 2010 and 2014 found that children had the lowest level of physical developmental. (Office of the Basic Education Commission, 2017).

Observation of behavior during teaching and learning found that most children have problems with their musculatures development. Their musculatures are not active and they are not related to each other. Especially, fine motor was not strong to grasp objects, drawing, sculptures, cutting paper, cutting milk bags with scissors, etc. In addition, the Early Childhood Education Curriculum 2017 (2017) has determined in Strand 2: strong on fine motor and gross motor, use fluency and coordination. The ability to use fine motor is important and essential for daily living of early childhood and fine motor should be encouraged to use eyes muscle with hands because the coordination of children muscles need to use and prepare readily in their daily life. In addition, David said the outdoor activities observation that make the children being great attention when they play. They are happy and having fun (David Elkind; 2006). Meier, Sid.,

1989 stated that “A game is a series of interesting choices.” (cited in Rollings & Morris, 1999, This statement means the game is a set of interesting decisions when playing a game outside of the classroom, children are more interested in the skill and ability to use the finger by fine motor. Thus, this outdoor activities are a preparation for daily life and other activities.

In order to help early children to have the ability fine motor usage in the fingers, Researcher had organized outdoor games where children use the finger by fine motor to move with the devices for ready developing to use the musculatures in an effective way.

## 2. Conceptual Framework



**Figure 1:** *Conceptual Framework*

## 3. Research Objective

To compare the ability of fine motor usage before and after learning with outdoor game activities.

## 4. Research Question

What is the ability of fine motor usage before and after learning with outdoor game activities?

## **5. Scope of Study**

This research focused mainly on the development of ability of fine motor usage for early childhood students aged between 4-5 years old at Anubanphrae school. There were 14 outdoor game activities used to improve their fine motor usage in this research.

## **6. Research Methodology**

This research is a Quasi-experimental one group pretest–posttest design research.

### **6.1 Population and Samples**

Population: 108 early childhood student between the ages 4-5 years old at Anubanphrae School.

Sample: 20 children aged between 4-5 years old at Anubanphrae School in Phrae Office of Educational Service Area Zone 1

### **6.2 Scope of the Variable**

Independent variable: Outdoor game Activities

Dependent variable: Ability of Fine Motor usage

### **6.3 Research Instruments**

#### **6.3.1 Outdoor game activities**

#### **6.3.2 Valuation Development Form for early childhood to use fine motor**

## **7. Data Collection**

**7.1 Before Activities:** Observe the fine motor usage one by one and complete Evaluation Development Form for early childhood to use fine motor

**7.2 Do the Activities:** Children did the 14 outdoor game activities as follows:

1) Ordering ball game, 2) Catching starts game, 3) Throwing bomb game, 4) Gripping sand to coconut bowl game, 5) Running to ribbon bundle game, 6) Scooping funny eggs game, 7) Ants carrying water game, 8) Spinning top game, 9) Flipping me game, 10) Grab the seeds in the bottle game, 11) Gripping glass ball game, 12) Open/Close bottle by Saba ball game, 13) Clamping wooden chopsticks game, 14) Cutting Chap Chap game in 8 weeks 4 days each week and 30 minutes per day that the period of time is between 10.20-10.50 to class 2/4 of kindergarten.

**7.3 After Activities:** Researcher completed the Evaluation Development Form again.

## 8. Data Analysis

Bring the data from Evaluation Development Form for early childhood to use fine motor from pre-test and post-test to analyze by SPSS to find Mean, Standard Deviation and T-Test.

## 9. Result

**Table 1:** Mean, Standard Deviation, T-Test and level of significance of comparing test to pre-test and post-test of class 2/4 kindergarten in Phrae Kindergarten ( n = 20)

Test	$\bar{X}$	S.D.	d	S.D.d	T	Sig.(2- tailed)
Pre-Test	18.60	3.05	4.20	1.11	17.00*	0.0001
Post-Test	22.80	2.84				

The mean score of Pre-test and Post- test for the experiment of the ability of fine motor usage in outdoor activities were 18.60 and 22.80, respectively. It was found that the score from the posttest was higher than the pretest. It was statistically significant at .05.

## 10. Conclusion and Discussion

The purpose of this research is to study the development of the ability to use fine motor of early childhood outdoors and compare the ability of fine motor to early childhood for Pre-test and Post-test of outdoor game activities that the researcher design. The study found that after post-test, the ability to use fine motor of children were high before pre-test, according to the research hypothesis to show the outdoor games developed by the researcher can promote high fine motor development of early childhood. The discussion is as follows:

The result of analysis of outdoor game activities were designed by the researcher that the children loved and interested to movement by using fingers in the outdoor, such as squeezing, gripping, crumpling, throwing, moving, lifting, cutting can be evaluated from a set of outdoor games that there are Ordering ball game, Catching starts game, Throwing bomb game, Throwing in a loop game, Gripping sand to coconut bowl game, Running to ribbon bundle game, Scooping funny eggs game, Ants carrying water game, Spinning top game, Flipping me game, Split the seeds game, Gripping glass ball game, Open/Close bottle by Saba ball game, Cutting Chap Chap game with fine motor to give children for fun, rules, to play in group, and outside of the classroom. According to Boonsiri (2009) stated that outdoor activities mean the provision of

conditions for the child to move in the outdoor and indoor environment. They may play with equipment or games with rules of games, have the activities process to cooperate with children together and help each other in learning by dividing in group with different abilities to small group, work together and exchange their ideas together. Thus, outdoor game activities that were designed by the researcher to make children to develop fine motor and gross motor and make early childhood to know to play in group and respect rules happily and joyfully. According to Chatchapong (2006) stated that the development of fine motor was important and essential for daily life. In addition fine motor is one of the vital organs for children who are ready to do activities, such as wearing - removing zippers, brushing, wearing shoes, artwork as well as writing. The development of fine motor is considered that it is important thing for children who must make their activities in daily living with their hands and fingers to pick up many things and writing. Thus, outdoor activities will help promote the development of fine motor actively. Likewise, Tantiplachiwa (2008: 101) stated that the promotion of fine motor development was a development of finger muscle and the movement was the most important to children. In order to children need their hands to make the activities, such as writing, organizing, doing, gripping, sculpting, and decorating things. The results of this research show that outdoor games developed by the researcher can promote the development of early childhood for using high fine motor.

## **10. Suggestions for Further Study**

Study the outdoor game activities that it affects the development of fine motor in accordance with teaching style today and should be to study the games that can be applied in daily life.

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