

## ***Handmade Toy Development for Early Childhood Using Local Wisdom***

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### **Abstract**

This study was aimed to develop and produce toys from handmade materials for young children by the application of local wisdom. The participants consisted of young children in the kindergartens in Chachoengsao Province, Thailand. The selection was made by the purposive sampling from 10 schools, where each school selected 1 classroom, and each classroom selected 10 students. The constructed instrument used in this study was a quality assessment of the toys for young children, which was including observation and documentation. The results showed that the quality of toys for young children that made from local materials using a local wisdom was equivalent to 82.00/87.00, which was higher than the standard one (80/80). As a result of the implementation of toys by the participants, it was found that the young children gained more intelligence and creativity after learning with the toys, which had the statistical significant difference at the level of  $p = <0.01$ . These toys, which stimulated awareness of the conservation of local wisdom among the young children, might result in maintaining local wisdom and knowledge in the community to promote a new project business enterprise.

Keywords: Toys, young children, handmade toys

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## **Introduction**

It is considered that the children at 3 to 6 years of age are in the "period of opportunity to lay the foundation of human life." This is because it is the earliest phase of learning during their childhood due to the optimum growth stage of the brain cells. The development of the brain and learning are at its fastest speed. Therefore, the development of early childhood becomes the development of the human resources of the nation for the future.

In developed countries such as the, United States of America (USA), President Barack Obama (Barack Obama) stated the policy of the USA (State of the Union: SOU) firstly when he was elected into the presidency for the second term (Pattarawad, 2013). President Obama has referred to consistent results of many researches over many decades that investing in early childhood is an extremely worthwhile investment both for the future of the children and for the society and the economy of the country. If the rate of return on this investment in early childhood is one dollar in the present day, the country will yield returns as high as seven times in the future. These returns are in terms of increasing the chances of completing basic education of children, reducing the chance of school age pregnancy, and reducing the rate of crime in the future. These are but a cost that the state has to pay for the treatment and tackle the higher cost of building a system for prevention in children in the primary level (Early intervention).

According to the policy-level meeting of the Asia-Pacific region in the field of early childhood education and care (Asia-Pacific Regional Policy Forum on Early Childhood Care and Education) on 10th -12th September 2013 in Seoul, South Korea, the summary of the conference featured the issue of the investment in early childhood care and education for effective economic development and human development. The development will have to be developed to its full potential as a whole. This includes the quality of teachers, parents, care takers, and the children health as well as an environment that is conducive to learning. These affect the learning of the children and are worth the investment to solve the social problems that can possibly occur in the future. (Office of the Education Council of Thailand. 2014: 7-8)

In Thailand, every government focuses on improving the quality and standards of education at all levels by reforming the system of education in the Thai society. They reform the curriculum at all levels to support the global transformation and to become on a par with international standards, local standards and Thai culture. These include both international and domestic knowledge. Although Thailand has allocated the budget for education with more than 20 percent of the national budge, when considering the budget, it is evident that most of the government budget allocated to education was distributed to wages of the teachers rather than improving the quality of students. The percentage of the education budget, that is allocated to the textbooks and other learning materials, from the total national budget are presented as an overall description without the separation of the education levels (preschool, primary, junior, high school). It was found that in the year 2010-2012, these levels 6.86 percent, 6.19 and 5.96, were declining each year, respectively. The government has repeatedly recycled the use of books, school supplies, materials, journals and textbooks. Meanwhile, in the past year, the government has allocated from the central budget to purchase tablets for students in basic education (Office of the Education

Council of Thailand. 2014: 62-69), without including the early childhood education. This would provide that the budget allocated for education in Thailand is relatively high compared to other countries. Therefore, the investment for early childhood development, which is the basic foundation and the heart of national development, is not yet equal to the investment in other levels as they should. The overall goal of quality education in Thailand, considering the indications given, is carried out in a satisfied level.

From the major reasons given above, the researchers are interested in developing a set of toys for children from local knowledge to promote and support the family, school and community to provide the children with toys that are made from the wisdom of the district. This conserved wisdom passed down from the grandparents will be preserved and prevent from being lost as well as reduces the costs of households in purchasing the expensive toys for children. It can also become a series of products to generate income for the community. The researchers expect the development of the toy sets made from local wisdom for children will guide the parents, teachers and the general public to the early childhood development. This can become a guideline to save spending and increase the income for the family, school and community.

## **Methods**

This study is an experimental research.

### *Sample Size*

The sample population consisted of two groups. The first group included the contributors consisting of five elders who live in the province. The group provided local information. The second group consisted of the preschool children. Kindergarten level young children were selected by using the method of purposive sampling from 10 schools under the Chachoengsao Primary Education Office. One classroom was selected from each school and 10 students were selected from each classroom with a total of 100 students.

### *Variables*

1. Handmade toy sets for young children.
2. The results of the experiment including behavioral observation and learning of young children.
3. Satisfaction of family, school and community on the toy sets for children made from local wisdom.

### *Materials*

1. Handmade toy sets made from the local wisdom for children that the researchers developed called “the coconut grater.”
2. The quality assessment of handmade toys for young children by the application of local wisdom.
3. Playing behavior in young children observation survey.

### *Experimental Period*

The children were observed while playing the toys 30 minutes per day, 4 days per week, in total of 16 weeks. The behavioral survey was used to evaluate the behaviors of the children.

## Results

*Behavioral observation and assessment of the children.*

Table 1. The comparison of the playing behavior and learning of young children before and after the experiment.

Behaviors and learning of young children	K	Before			After		
		M	SD	Performance	M	SD	Performance
Sample Size (n=100)							
Playing in groups	5	16.84	4.75	Teachers' suggestions	28.74	3.06	Enjoying playing by themselves
Waiting period for the toys	5	17.13	4.29	Teachers' suggestions	28.26	3.61	Enjoying playing by themselves
Sharing of the toys	5	17.75	4.15	Teachers' suggestions	29.05	3.19	Enjoying playing by themselves
The use of intelligence and creativity	5	13.58	3.82	Playing by themselves	22.00	2.32	Enjoying playing by themselves
Total	20	65.30	14.63	Partially needed suggestions	108.05	10.39	Enjoying playing by themselves

K= Numbers of Questions, M=Mean, SD=Standard Deviation

The playing behavior and learning of young children after the children were given the toy sets "the coconut grater," showed that the children were enjoying playing with the toys by themselves (Table 1). The mean of 108.05 was shown after the children received the toys. Furthermore, the playing behaviors in children encouraged them to play in group, disciplined them to be patient, learned to share, and used their intelligence and creativity while they were playing.

*Opinions of the teachers, parents, and the community to the toy sets*

After the interviews with the teachers, their opinions were analyzed. Table 2 showed the analysis of the overall satisfaction of the teachers, parents, and the community members involved in the experiment towards the effects of the toy sets on the behaviors and learning of the children. The opinions noted that the toy sets were appropriate for the young children in the age period. The wooden blocks of the toys could be held easily and created the opportunity for the children to develop imaginations and creativities. The toys are light weighted and could be easily made.

Table 2. The satisfaction of the teachers, parents, and the community members involved in the experiment for the toy sets.

Questions	5	4	3	2	1	$\bar{X}$	S.D.	Interpretations
1	7	2	1	0	0	4.60	.69	Very satisfied
2	6	3	1	0	0	4.50	.70	Very satisfied
3	3	6	1	0	0	4.20	.63	Satisfied
4	6	3	1	0	0	4.50	.70	Very satisfied
5	8	2	0	0	0	4.80	.42	Very satisfied
6	7	3	0	0	0	4.70	.48	Very satisfied
7	5	4	1	0	0	4.40	.69	Satisfied
8	4	5	1	0	0	4.40	.69	Satisfied
9	5	4	1	0	0	4.40	.69	Satisfied
10	6	4	0	0	0	4.60	.51	Very satisfied
Total						4.51	2.42	Very satisfied

## Discussions

The result showed that the toys for young children that are made from local materials using local wisdom are able to support the better development of different aspects in the children. Especially, the toys that are produced from a wood should be small, lightweight, have smooth surface and natural color or other appropriate colors can be applied. The adults should allow the children to independently select the toys by themselves and let them play freely and creatively while stimulate them to use their capacity to play to their fullest. As a result, all the aspects of the children are developed because while playing, they have freedom, think freely, can make a decision, and are confident. Each time they play, the children can develop to their fullest. These handmade toys made from the local wisdom are able to respond to the need of the young children.

There are four aspects of the benefits the young children received from applying these toys. Firstly, in terms of cognitive development, when the children are playing with the toy sets, the children will be able to learn about the numbers, size, shape, characteristic, and about to sort from the largest to the smallest blocks. They are also able to arrange the blocks into different kinds of sorting depending on their imagination. This enables them to use their creativity to their fullest. Secondly, the toy sets can assist in children growth as they can sit, stand, or walk around while playing the toys as they are able to move freely. This helps develop the postures to their bodies. Lastly, the emotional and social developments can be ignited by the playing. The children are able to play with friends and share their enjoyment. In addition, the children are free to play. They learn to listen, be patient, take turn to play, and accept others' opinions while participating in the group play.

The playing of the children is one of the most important phases of their lives. The children enjoy the opportunity to observe, participate in the activity, try the trials and errors, and stimulate the creative thinking, problem solving and self discovery. The playing is influential and have a positive impact on growth of the children on their physical, emotional, mental, social, and intellectual developments. The children are

able to use their senses and perception. While playing, they can feel relaxed and able to express themselves. They also learn to sympathize with the feelings of others. The playing is the one of the ways the children can experience the learning environment and examine the well-being of others. These encourage them to build relationships with their playmates. Therefore, the parents or the caretakers should stay close to procure or build toys for children to play. The children can even participate in the making of the toys to build their psychomotor skills. The toys can be made of wood or other materials that can be obtained locally. This would save the cost of the toys and lessen the burden of the parents to spend more on toys.

### **Conclusion**

As a result, the implementation of handmade toys showed that the young children gained more intelligence and creativity after learning with the toys, which has the statistical significant difference at the level of  $p = <0.01$ . These toys stimulated the awareness in the conservation of local wisdom among the young children, which might result in maintaining local wisdom and knowledge in the community to promote a new project business enterprise.

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