
SECOND-HAND GOODS AS MEDIA INVOLVING THE CHARACTER OF ENVIRONMENTAL CARE AND INTRODUCING MATHEMATIC CONCEPTS IN EARLY CHILDHOOD

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Abstract

One of the characters that need to be taught to students early on that the character of environmental care. This is because the environmental problems that until now has not earned the right solution to solve it. By instilling character early on is expected to be one of the solutions in terms of human resources. In addition, one of the initial capital that needs to be held by early childhood is his understanding of the mathematical concepts as equip themselves to understand the other sciences in higher jejang. Both of these can be realized through a teaching media is to use second-hand goods. The use of second-hand goods as a teaching media can foster caring character of students to the environment and can be used as props in introducing the mathematical concepts to students that are tailored to the stage of early childhood cognitive development.

Keywords: The character of environmental care, The mathematical concept, Second-hand goods, The stage of early childhood cognitive development.

INTRODUCTION

The character education currently booming implemented in various levels of education. Character education the work is done to in still habits good so as to create a good behavior too (MONE, 2011). This is in accordance with the National Education function is to develop the skills and shape the character of the nation's and civilization dignity in order to achieve the nation (Law No. 20,2003)The formation of the child's character should be better if started at an early age. Therefore, it is necessary to instill good characters in children from an early age so that children are accustomed to having a positive character from the beginning. In addition, early childhood easier to accept the lessons they receive than teens who own selfish desires and taste. If children receive character education early on, automatically they will grow into a constantly guided by social and religious norms. This is in accordance with the said Solehuddin (1997) that preschool children in this regard early childhood has a primary function, namely (1) the function of the potential development, (2) a function of planting basics beliefs and faith, (3) the function of the establishment and habituation the expected behaviors, (4) the function of the development of basic knowledge and skills required, and (5) the function of the development of motivation and a positive learning attitude.

In general, children tend to still rely on the people around when they face a problem. If early

they are already equipped with a mature character education, the child will automatically be able to overcome the problems encountered without calling for help. Strong character foundation will make them confident, wise, and have mental stability when encountering problems.

One of the characters that need to be taught to children from an early age is the character of environmental care. This is because the environmental problems that until now has not earned the right solution to solve it. Environmental problems can be solved more easily if the human resources have the character of environmental care. Proper handling of environmental issues, one of which reduces the volume of waste that process into more useful goods. In addition to reducing the volume of waste, it also can improve the character of environmental care. This is consistent with the results of research and Pamelasari Widiyatmoko (2012) that the utilization of used materials available in the environment to be a more useful item by itself will grow and improve the behavior of environmental care. Characters care for the environment can also be developed in the learning process. One way is by using media that is made from recycled materials.

In addition to instilling the character concerned about the environment, the use of second-hand goods as a medium of learning in early childhood can also be used as a means of introducing mathematical

concepts in children. Math is very important for young children because it can help the child's cognitive development and achieve success at the next education level. Early childhood understanding of mathematical concepts will be equip themselves to understand the other sciences in higher level because in fact the basic science of mathematics is contained in the other sciences. According BA, Khasanah et al (2017) in of the treatment children must be adapted to the stage of development both in terms of educating and teaches a concept in children. Thus, in introducing the concept of mathematics must pay attention to the stage of cognitive development of children according to age.

DISCUSSION

Environmental Caring Character

Character is a good character and noble spirit of a person that is beneficial to him. Character does not develop by itself but is influenced by heredity and environmental factors so that the educational environment is important to implement character education for students. According Sudaryanti (2012) should be implemented character education since early childhood because at an early age proved decisive in the child's ability to develop its potential. While the school is one of the institutions responsible for the formation of character, because the contribution and role of the teacher here is very dominant. Character education is an important step for the development of a child, even a fundamental thing for the success of the development of the formation of the next character. Therefore, a teacher should not ignore the presence of early childhood for the sake of the future for the next generation. A teacher is required to understand the characteristics of early childhood, meaning importantly learning for young children, the purpose of early childhood learning, and learning activities for young children. Early childhood character formation can be done through regular activities, the activities programmed, spontaneous activity, and exemplary.

This is in line with what was said Kaimuddin (2014) that the character-based education is necessary and urgent in the national education system. Urgency in question, namely; 1) The educational institution is an organization that organized and effective way to produce the next generation of character. Generation of people make the nation prosperous character and dignity; 2) is a container nursery education institutions and the transformation of the noble values of national culture in building the personality and strengthen the integrity of identity learners. Educational institutions into the growth container patriotism, nationalism, and a strong sense of love as a son of the nation; 3)

educational institution is a place to educate the young generation noble and dignified.

Because of the importance of character education in the world of education, especially the planting of a character from an early age then one of the characters must-have children early are the characters care about the environment. This is because the environment is the nearest place for those who must be maintained cleanliness and conservation. According to Sari and Widiyatmoko (2014) that the character concerned about the environment can be developed in the learning process. Oneway is the use of media, so that learning becomes more meaningful. Meaningful learning will help students in improving their understanding against the material being studied. Media that can be used to infuse the character concerned about the environment is the use of the goods used as props in learning.

Department of Natural Resources (2011) states that the use of second-hand goods can explain to your child that excessive junk can affect the land, and introduced the practice of reuse or recycling of used goods as a means to help reduce the amount of waste generated, as well as helping children learn to sort various kinds of waste in the way they match each label/ type of waste for recycling. Sari and Widiyatmoko (2014) also added that the character concerned about the environment that could be implanted with the use of second-hand goods includes three indicators: (1) maintain the neatness of the class, (2) maintain the cleanliness class, and (3) to dispose of waste in place. The conclusions of the study results is through the use of second-hand goods as props in the learning environment to the students care about the characters began to appear.

Thus, the environmental caring characters that can be palated through the use of second-hand goods are (1) the willingness of children to maintain a healthy environment, (2) the willingness of children to maintain neatness where they studied, (3) the willingness of children to dispose of waste according to the place, and (4) the child's understanding of the waste that can be recycled. This is the reason for the use of a medium of learning for young children to use second-hand goods. The emergence of the character concerned about the environment from an early age students are expected to maintain the cleanliness and the environment they start early and will always be embedded until their adulthood. Thus, the waste problem in terms of human resources can be resolved.

Stage Early Childhood Cognitive Development

According to Rahman, T., et al (2017) Cognitive development is the development of the

intellect and a person's memory through active learning (*active learning*) as they explore the world through the five senses so that they can interact with their environment and be able to solve the problem that occur in everyday life so that it can continue to hold to his own life. While Piaget proposed a theory of cognitive development of children involving important processes that scheme, assimilation, accommodation, organization, and equilibration. In theory, cognitive development occurs in a sequence of four phases:

1. Phase sensorimotor: from birth to age 2 years (baby build an understanding of the world by coordinating sensory experience with the movement and getting an understanding of object permanence.
2. Pre-operational stage: age 2-7 years (kids understand the reality on the environment by using symbolic functions (symbols) or signs and intuitive thinking. disadvantage is egocentrism, animism, and centration. The characteristics of thinking is not systematic, inconsistent and illogical.
3. The operational phase of concrete: age 7-11 / 12 years (the child is mature enough to use logical reasoning or surgery, but only to physical objects that exist today. In this stage, the child has lost his tendency toward animism and artificialism.
4. formal operational stage: age 12 years and older (the child is able to use concrete operations to form more complex operations, a fundamental feature its development is hypothetical, abstract, deductive and inductive and logical and probability. (Ibda, 2015).

Category early childhood started to go on general education at the age of 2-7 years old where they enter the pre-operational stage. According to Mohd. Surya (2003), at this stage the child is able to understand the reality on the environment by using mark-mark and symbol. How to think of children at this in level is not systematic, inconsistent and illogical. It is characterized by traits: (1) *Transductive reasoning*, that the way of thinking that is not inductive or deductive but illogical; (2) The lack of clarity in relation sebabakibat, the child knows the relationship sebabakibat illogically; (3) *Animism*, ie assume that all objects are alive like himself; (4) *Artificialism*, namely the belief that everything in that neighborhood have souls like humans; (5) *perceptuallybound*, ie children judge things based on what is seen or heard; (6) *Mental experiment* is the child trying to do something to find answers to the problems they face;

(7) *centration*, the child focuses on something of the most interesting and ignoring other characteristics; (8) *Egocentrism*, the child sees the world according to the will of her surroundings.

When linked with mathematical skills in Permendikbud No. 137 of 2014, a mathematical abilities cognitive aspects include a. learning and problem solving, include a simple problem-solving skills in everyday life by way of a flexible and socially acceptable and applying knowledge or experience in a new context; b. logical thinking, covering a wide range of differences, classification, pattern, initiative, planning, and know causation; and c. symbolic thinking, including the ability to know, mentions, and use the concept of numbers, recognize letters, as well as to represent a variety of objects and imagination in the form of images.

Learning mathematics in early childhood should certainly pay attention to the stages of cognitive development of children who have been described above. According Novikasari (2016) of children at ages 3 to 6 years old can get to know mathematics through objects in the environment around them and at a level slightly above it through manipulative objects. Furthermore, children are able to give a representation of the objects. Suppose the teacher presents some candy wrappers and at the end of the process of playing the child is capable of providing a representation of "a pack of candy" ... "two packets of sweets" .. and so on. Thus thrift can be used to introduce mathematical concepts to students at the same time instill character to care about the environment.

Introduction of the concept of Mathematics in Early Childhood Using the Media Consignment

Mathematics is something related to the ideas/concepts abstract, whereas mathematics in early childhood is learning about mathematics concepts through play activities in daily life and scientific. The purpose of the introduction of mathematical concepts in early childhood is for children to know the basics of learning arithmetic / mathematics, so that in time the child will be better prepared to follow the mathematics learning in further education is more complex.

Referring NCTM (2000) standards for school mathematics covers five areas: number and number operations, algebra, geometry, measurement, and data analysis as well as opportunities. In early childhood may be a grouping algebra, patterns and relationships, operations with integers, exploration functions, and step-by-step process. According Khasanah, BA. et al (2017) game count in early childhood education can be implemented through the mastery of concepts, transition and symbols contained in all mathematics

lines, among others: the sequence of patterns, classification number, size, geometry, estimation, and statistics. Thereby introducing mathematical concepts can be through the method of play is to play a sequence of patterns, classification number, size, geometry, estimation, and statistics in which it can be supported by the use of media.

According to Hanafi and Sujarwo (2015) in early childhood education aimed at improving knowledge and skills. In learning to enhance the capabilities and skills of the child, the necessary supporting media. One of them is the use of media as a learning medium thrift. According to Laila and Sahari (2016), thrift is a thing that has already been used either once or more than once. Thus, thrift can be used as a supporting medium in order to introduce mathematical concepts in early childhood.

The use of media thrift to introduce the concept of mathematics in early childhood include:

1. Playing sequence of patterns
To introduce order patterns at an early age of teachers or parents can use media based on color and shape, for example sort pattern candy wrappers by color (red, yellow, green , red, yellow, ...) and sort pattern based forms used cardboard pieces (triangles, rectangles, circles, triangles, ...)
2. Playing classification number
To classification introduce the concept of numbers in early childhood, teacher or parent can using the media based on color, shape and size. For example, classifying the number of bags of candy by color, pieces of cardboard classify files based on its shape and classifying bottle by size.
3. Playing Size
For introduce the concept of size in early childhood teacher or parent can use bottles or boxes/ cans of milk with different sizes.
4. Playing Numbers
To introduce the concept of numbers in early childhood teacher or parent can use candy wrappers, bottles, and so on.
5. Play Geometry
To introduce the concept of geometry of numbers in early childhood teacher or parent can use a piece of cardboard used.
6. Playing Estimate (estimate)
To introduce the concept of estimation in early childhood teacher or parent can use the lid to cover the surface to estimate the area of cardboard boxes.
7. Playing Statistics
To introduce the concept of statistics in early childhood teacher or parent can use a glass

of mineral water marks were given a color as stone container that will have children according to their favorite color.

Thus, the use of second-hand goods as a medium of learning in introducing the mathematical concept includes all the content of mathematics, namely: number and number operations, algebra, geometry, measurement, and data analysis as well as opportunities.

CONCLUSION

1. Used goods can be used as a medium to instill character of environmental care in early childhood. Characters may include: (1) the willingness of children to maintain a healthy environment, (2) the willingness of children to maintain neatness where they studied, (3) the willingness of children to dispose of waste according to the place, and (4) the child's understanding of the waste that can be recycled.
2. Used items can be used as a medium to introduce mathematical concepts in early childhood. Mathematical concept may include: number and number operations, algebra, geometry, measurement, and data analysis as well as opportunities.
3. The use of media used goods as props in introducing mathematical concepts in early childhood should be adapted to the stage of cognitive development of children at an early age are at pre-operational stage where thrift can be used as a manipulative play that appeal to children.

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