The Effects of Learning Methods and Environmental Knowledge on Age 5-6 Naturalistic Intelligence (Experiment at AR – Ridho Nature Kindergaten Group B Tembalang Semarang)

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ABSTRACT

The purpose of this study is to see the impact of learning methods and environmental knowledge on the naturalistic intelligence of children aged 5-6 years. This research was carried out at Ar-Ridho Nature Kindergarten Semarang, with a total sample of 60 children.

This study used an experimental method. The results of this study are as follows: (1) The naturalist intelligence groups of children who were given hands-on method of learning was higher than in children given storytelling learning methods, (2) the children's naturalist intelligence group given hands-on method of learning and who have a sound knowledge of the environment was higher than in the group of children given storytelling learning methods. (3) The naturalist intelligence of the group of children given storytelling learning method that have a low environmental knowledge was higher than in the group of children who were given hands-on learning methods. (4) There was an interaction between learning method and environmentally sound knowledge to the naturalist intelligence of children aged 5-6 years.

Keyword : Learning Methode, Environmental Knowledge, Naturalistic Intelligence

I. INTRODUCTION

The world face, the state face and the Semarang city face today have undergone a huge change. Earth that was once friendly now beginning to get angry to the men. Human treatment makes the earth faces that used to be shady and convenient to enjoy life have changed completely. Many fine buildings adorning the city and magnificent estates had removed the soil and plant life and play center for children. Even the piles of garbage scatter everywhere, because of the lack of space and land to recycle the wastes due to human hands.

People are no longer concerned with the continuity of life for future generations to enjoy a healthy environment, safe, and comfortable life. As a result, they lose healthy living for their children that desperately needs a comfortable place to play.

Based on the Decree of the Minister of Education and Culture No. 008C/U/1975 , the Population and Environment Education (PKLH) is began to be implemented in elementary school (SD). There is essentially no environmental education aimed at preschoolers, but it is expected that children from an early age have been nurtured with environmental knowledge before entering primary education, so that environmental education will be able to foster a new attitude towards components such as water, air,

animals and plants. In addition, it is aimed to reach the objectives of environmental education that are "to bring the youth to understand the nature with great affection and respect for fellow creatures / creation of God".

Based on the Decree of the Minister of Education and Culture No. 008C/U/1975 determined that the Population and Environment Education (PKLH) began to be implemented in elementary school (SD). Basically environmental education is not geared for preschoolers, but is expected to have grown children from an early age with environmental knowledge before entering primary education, so that environmental education will be able to foster a new attitude towards components such as water, air, animals and plants. As well as environmental education goals are "to deliver the youth to understand the nature with great affection and respect for fellow creatures / creation of God".

It is important to provide a method of learning about the good and the bad, what should and what should not be done when one is in a shared living environment. Learning method provides not only moral ethics against fellow human beings, but also knowledge of the ethics of the environment. Related learning methods applied through habituation in children is meaningful. Through appropriate learning method on environmental knowledge children are able to love and preserve the environment with a vengeance. Children will always do good things for the environment, and be able to do something beneficial for the environment. This should be embedded not only for elementary schools but from an early age, especially in kindergarten.

Ar-Ridho Nature kindergarten is an educational institution that facilitates learning activities for children aged 4-6 years. It has a vision and mission that drive the growth and development of children by optimizing the child's environment as a learning resource. As a natural school, it puts nature as a means of learning and media. It should be a source of knowledge for children. This school is geographically located in an environment which is very good to be labeled as a natural school. However, the school is underutilizes the environment as a learning resource effectively. The children's concern about the environment is little, so that children have less sensitivity to environment. For example, they sometimes don't throw their leftover trash to to the garbage bin; they have to be reminded by the teacher, it should be the children's job to be naturally aware of doing this.

This is also evidenced by the lack of teachers' effort to improve pupils' naturalist intelligence related to the environment, such as providing bins in every corner of the school, providing space, place or land for farming, getting the pupils to keep unused items such as food wrappers or bottles or milk cartons that can be exploited in children's learning activities. In addition, it was shown by he lack of teachers to develop naturalist intelligence through appropriate learning method that links children with their surroundings, so that children naturalist intelligence cannot be developed optimally, and children lack knowledge of the environment.

A variety of learning methods associated with the environment can be adapted to the national education system, especially for early childhoods who are in kindergarten. Through the selection of appropriate learning methods, teachers can develop young naturalist intelligence and knowledge that foster the children to about their environment.

The learning method that can be customized with naturalist intelligence and children's environment knowledge in early childhood, particularly in kindergarten, among others are through direct practice methods and storytelling. Both methods are very attractive to children, because children love stories and are very pleased with direct observation or visits.

Through hands-on learning method and storytelling, it is expected that the knowledge

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will be able to be accepted and internalized by the children, so the naturalist intelligence and knowledge of the environment in children can developed optimally. These two methods of moral learning are expected to improve the children's knowledge of environment and increase children's naturalist intelligence in early childhood 5-6 years in kindergarten B.

A. Identification of the Problems

Based on the background of the problems described above, the problems can be identified as follows:

1. There are many early childhood education institutions, especially Ar-Ridho Nature kindergarten, only emphasize cognitive and language development of children in each learning activity.
2. Teachers' efforts to instil moral lessons related to environmental knowledge in children are insufficient.
3. Insufficient school facilities that can support moral learning and naturalist intelligence for children to improve their knowledge on environment.
4. Teachers' inability to associate learning with developing of teaching methods and knowledge of environment for children to be able to develop the naturalist intelligence in each learning activity.

B. Limitation of the Problems

Based on the identification of the above problems, the limitation of this study is learning methods and environmental knowledge of the naturalist intelligence on early childhood aged 5-6 years in kindergarten B (experiments at Ar-Ridho Nature Kindergaten, Tembalang Semarang).

The learning method is a method used by teachers, which in its function is a tool to achieve learning objectives. The learning method is more procedural, which contains certain stages. Storytelling is a way for teachers in providing learning materials to children through stories, either through books or pictorial media. While the method of direct practice is a way of teachers in providing learning material in the form of direct practice presented by the teacher after the teacher provides direction and guidance.

Naturalist intelligence is an ability and skills in observing patterns in nature and understand natural systems and man-made systems.

Environmental knowledge is an ability to remember material studied including that related to the environment. It also deals with behavior that emerged as the implementation of the knowledge gained in terms of hygiene, efficiently utilize the environment and manage and maintain the environment so it is comfortable and beautiful.

This study is limited to the method of learning through direct practice and storytelling in children who have a low and high knowledge of environment and through developing the naturalist intelligence in children aged 5-6 years in group B.

C. Formulation of the Problems

Based on the background, identification and limitations of the problems described above, the problems in this study can be formulated as follows:

1. Are there any differences in naturalist intelligence of children aged 5-6 years given storytelling learning methods with children given hands-on learning method?
2. Are there any differences in naturalist intelligence of children aged 5-6 years who have high environmental knowledge using storytelling and hands-on learning method?
3. Are there any differences in naturalist intelligence of children aged 5-6 years who have low environmental knowledge using storytelling and hands-on learning method?
4. Is there an interaction effect between storytelling and hands-on practice learning methods and environmental knowledge to

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the intelligence of children aged 5-6 years old?

II. Materials and Methods

1. Naturalist Intelligence

a. Intelligence

Intelligence is a combination of human traits including the ability to understand complex matters and interconnect all the processes involved in abstract thinking, the ability to find, adjust in the problem solving and the ability to acquire new capabilities (Conny R. Semiawan, 2002).

It is associated with brain structure and functioning of the right and left hemispheres. It is also in line with the opinion suggests that intelligence is the ability to think abstractly and to learn from experience. Intelligence is the ability to adapt to new situations, learn from the mistakes of the past and create a new mindset.

According to Stenberg (Good & Brophy, 1990) intelligence is adjusting to the new power tools to think according to the objective. Stenberg intelligence focuses on the ability to adjust (adjustment) of the problems encountered.

The human intelligence capabilities will include three components, namely: (1) compential intelligence is the ability to think, plan and monitor the cognitive process, (2) experiential the ability to formulate ideas new ideas in solving the problem, and (3) contextual intelligence is the ability to adapt in response to an opportunity / chance optimistically (Nerney,1998).

Intelligence is an act which is done efficiently. An activity is said to be efficient if it is fast, easy, and precise. Speed factor that is done quickly in response to a stimuli. Convenience factor is the ability to solve a problem with ease, while the accuracy factor is the ability to solve problems completely and appropriately (Whitering, 2002).

From the above opinions, it can be concluded that intelligence is a combination of human traits that include skills in thinking, planning, formulating new ideas in solving problems and the ability to adapt to face opportunities.

b. Naturalist Intelligence

According to Gardner (Thomas Amstrong, 2002) someone who has high naturalist intelligence is someone who demonstrate proficiency in the recognition and classification of many species of flora and fauna in the environment. Naturalist intelligence is the ability to recognize and classify plants, minerals and animals (Christison, 2002).

In the real world a naturalist have proficiency in gardening, working on a beautiful garden, raise animals and have more attention in saving the environment. A naturalist usually has demonstrated his talent since childhood. Ross, someone who has high naturalist intelligence is happily raise animals, can recognize and name the many types of plants, has an interest and a good knowledge of how the body works, can read the signs of the weather, have an understanding and interest in the issues global environment and the view that resource conservation and sustainable growth is a must (Ross, 2002).

People who have high naturalist intelligence will easily have a strong motivation to become an ecologist, botanist, zoologist or geologist. This is because a naturalist has a strong awareness and sensitivity to the natural environment (M. Anderson, 2002). Naturalist intelligence as the ability of individuals to distinguish the various components of nature and have a sensitivity to see the phenomena of nature. To measure the students' naturalist intelligence can be done by providing the scientific literature about the environment, then students are asked to make observations. Another way is to encourage students to learn the natural environment as well as explaining the various types of animals

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and plants found in the field. After that, the students are asked to associate one with the other components (Collegiate, 3(6). p.1, 2003).

Naturalist intelligence is related to an individual's ability to recognize plants, animals and other natural components such as clouds, mountains, ecosystems, and everything related to the natural environment. People who have high naturalist intelligence has the traits have the ability to recognize flora and fauna, can distinguish the various components of the natural environment, use his expertise in gardening, hiking, love the pure biological sciences, aspired to be a botanist, zoologist, biologist, conservation, like pets, can mention a variety of names of plants and flowers, love and learn more about the organs of the body, like cropping, as well as having attention to understand the environmental issues globally.

2. Environmental Knowledge

Knowledge is the impression in the minds of men as a result of the use of the five senses, which is different from the believe, superstitions and misinformation. This means that human knowledge is obtained by using the five senses to interact with the natural surrounding and social environment. Thus knowledge is the result of the human thinking process obtained from the natural environment and social life (Soekamto, 1982).

Science is knowledge which is arranged systematically by using the power of thought, knowledge can always be checked and scrutinized (controlled) with critical by any other person who wants to know. Stated, knowledge is defined as the ability to recall material ever studied including the ability to recall everything from the fact that very specific to the complex theories (Haryanto, 1997).

Environment are all things, conditions, circumstances, and influences contained in the space occupied and affect living things, including human life. Meanwhile, the environment is obtained in all circumstances of life and human behavior (Gottlieb, 1995).

Human environment consists of the natural environment, the built environment or man-made as well as the social environment. Natural environment consists of the physical components (a set of corporeal beings = a biota), biological component (a set of human beings = biota), as well as the interactions between these components. Humans are part of the biological environment. Natural environment also means that existing environmental in nature without obtaining or modified by human interference. Artificial or assisted living environment is a human environment formed by applying science, technology and art. The built environment is formed by the ability of humans which is higher than the ability of other biotic component. Humans have the ability to think, reason, organize and progress in developing science and technology and culture that shape it (Soeryani, 2002).

From the above discussion, environmental knowledge in this study is an ability to remember material studied previously which relates to the environment. It also deals with behavior that emerged as the implementation of the knowledge gained in terms of hygiene, environment efficiently utilize and manage and maintain the environment so comfortably and beautifully.

3. Methods of Learning

The existence of the method is very important in education, it is to facilitate the achievement of the desired objectives. Thus a teacher has absolute method of transferring knowledge to their students. Method is a procedure regularly and logically arranged and set out in a plan of action to achieve the goal. The elements of the method are procedures, systematic, logical, and well-planned activities that achieve the goal. State that the method is a systematic procedure in organizing an activity

to achieve a goal (Soekamto T and Son Winata U.S, 1997)

a. Story Telling

The story is a powerful vehicle to achieve children's understanding (verstehen) and children's appreciation and children's experience (penetrate into). Thus, through the story, there is an involvement of emotion, understanding and mental engagement in children. Exploring the excitement of the narrative material can enter the world of interest (center of interest) (Conny R. Semiawan, 2002). The story is very much beneficial for children's development. These benefits include: (1) Learning about the world, (2) establishment of positive traits like self-confidence, tolerance among fellow beings, (3) Cultivating curiosity, and (4) Learning to interact with people (Sawyer and Corner, 1991).

The story is a work of literature that can be described verbally to encourage children to communicate, fantasize or imagine, and can develop emotional intelligence, positive attitudes and behavior with the environment and develop cognition. The advantages and disadvantages of the method of storytelling, based on the above conclusions are: Pros: a) Develop the power of fantasy and imagination in children, b) Develop a child's cognitive ability , c) Sharpen the child's emotional intelligence, d) foster the interest in reading on , e) Develop concern for the environment and others, f) as a medium of learning . In addition to the weakness of storytelling include: a) the ability to hear the child is more widely used than visual; b) If the storytelling is too long, it will quickly make kids bored; c) Children are more likely to be active, teachers are to ask; d) For teachers who are less expressive storytelling, it will seem less appealing to children, and the story becomes meaningless.

b. Hands – on Learning

Hands-on learning or direct instruction is a learning method to learn the information or actions that are created by other people, but not to build knowledge for themselves. Through hands-on activities children are expected to gain experience through direct interaction with objects directly or real (Sudjiono, 2004).

Learning through hands-on learning will give you enormous experience. Children's ability to remember well about what they had learned, when children get hands-on experience, children not only hear, but also see directly involve in the learning process. Dale also developed the thought that each lesson provides a major influence in the process and considering this in a conical pyramid describing the learning experience (Edgar Dale in Sudjiono, 2004).

Dale also explained that the provision of learning methods using modeling, simulation, and direct practice will give you a lot of learning experiences for children. Children not only learn to find something, but they also have the ability to analyze what they had found. This ability only will they earn if they can interact directly with the environment.

Direct method is a method of hands-on learning experiences that develop children in a concrete, immediate and real, through this method all the child's ability can be developed not only in auditory and visual but also the physical ability to perform skilled motor tasks directly . The advantages and disadvantages of direct practice methods based on the above conclusions are: Pros: a) Making learning more concrete, b) children more easily understand what they learned concretely, c) The learning process becomes more interesting, d) Stimulating children's creativity by using the environment as a source of learning, e) students are stimulated to actively observe, adjust between theory and reality , and do it themselves; on the contrary, the weaknesses are: a) specifically require the skills of teachers to be able to practice what

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will be learned by the children , if not then the learning activities will not be effective, b) require facilities and costs quite a lot, and c) require preparation and profound planning and require a long time.

c. Characteristics of Children aged 5 – 6 years

Child is a very unique person different from each other. Children have traits or characteristics that are different from every age of development. At the age of 5-6 years children are those who have involved in the world's pre-school as a means to develop all the potential that exists within them. When they learn to know their world, there are things of concern to stimulate them. One is based on the characteristics possessed by children aged 5-6 years.

Prominent characteristic development related to this research is the cognitive characteristics of children aged 5-6 years. Piaget suggests that children aged 5-6 years are at Pre-Operational phase, this phase ranges from 2-7 years which includes children aged 5-6 years. This phase is the beginning of the period to build a child's ability to organize her thoughts in this knowledge. Therefore, the way children think is not stable yet well organized (Sudjiono, 2004).

At this age, children are able to classify objects according to the group. Piaget also said that the experience of studying children at this age will be more to come by the way of playing, experimenting with real objects, and through concrete observations. Children have the opportunity for creating and manipulating objects or ideas.

The way children build their knowledge at the age of 5-6 years is through social interactions and interactions of physical knowledge. Through social interaction, children learn something from other people, when researching or seeing something they will know about the object when notified by the other party. Through physical knowledge, ie knowing the physical properties of an object. This knowledge is obtained by exploring the physical world, through these activities children will learn about shapes, colors, flavors, and the changes that occur in the environment. The concept is derived from the children's understanding of the environment in which children interact directly.

In addition, at the age of 5-6 years children still think symbolically, the ability to think about objects and events abstractly. Children are able to describe an object that does not exist before them. Symbolic thinking skills couple with the development of language skills and the fantasy make the children have a new dimension in play. They can use their words to characterize an object and make a substitution of the object.

Based on the above opinions, it can be concluded that children aged 5-6 years have the ability to think preoperationally, where children still need a direct object and interact to build knowledge. At this stage also the ability of fantasy and imagination of the children is still growing so they have a new dimension in play. Cognitive development in line with the development of children's language, so that the development of their cognitive ability would also develop their language skills. Children's ability to learn about what's around them can be marked by the expression of words about what is or what is happening around them through words.

Research Method

The data collected through this study are tabulated in accordance with the purposes of data analysis. The data listed in the study are aimed to show an overview of the spread or distribution of data. It has been explained that this research is experimental research design using 2 x 2 factorial analysis.

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III. Results and Discussion

Based on the design of the description of the data that will be presented here, namely: (1) Children's naturalist intelligence who were given hands-on learning methods (A1). (2) Children's naturalist intelligence who were given in story telling method (A2). (3) Children the naturalist intelligence who have high environmental knowledge (B1). (4) Children naturalist intelligence who have low environmental knowledge (B2). (5) Children's naturalist intelligence who were given hands-on learning methods and has high environmental knowledge (A1B1). (6) Children naturalist intelligence who were given hands-on learning methods and have low environmental knowledge (A1B2). (7) Children's naturalist intelligence who were given storytelling method and have high environmental knowledge (A2B1) and (8) Children's naturalist intelligence who were given storytelling method and have low environmental knowledge (A2B2).

TABLE 1
Data Description

Learning Method / **Environmental Knowledge**	(A_1) Hands-On Learning Method	(A_2) Story telling Method	Σ Lines
High (B_1)	n = 15 $\Sigma_{A1B1} = 289$ $\Sigma_{A1B1}^2 = 5605$ $\bar{x} = 19,27$	n = 15 $\Sigma_{A2B1} = 244$ $\Sigma_{A2B1}^2 = 4018$ $\bar{x} = 16,27$	n = 30 $\Sigma_{B1} = 533$ $\Sigma_{B1}^2 = 9623$ $\bar{x} = 17,77$
Low (B_2)	n = 15 $\Sigma_{A1B2} = 240$ $\Sigma_{A1B2}^2 = 3948$ $\bar{x} = 16$	n = 15 $\Sigma_{A2B2} = 283$ $\Sigma_{A2B2}^2 = 5411$ $\bar{x} = 18,87$	n = 30 $\Sigma_{B2} = 523$ $\Sigma_{B2}^2 = 9659$ $\bar{x} = 17,43$
Σ Column	n = 30 $\Sigma_{A1} = 529$ $\Sigma_{A1}^2 = 9553$ $\bar{x} = 17,63$	n = 30 $\Sigma_{A2} = 527$ $\Sigma_{A2}^2 = 9429$ $\bar{x} = 17,67$	n = 60 $\Sigma = 1056$ $\Sigma = 18982$ $\bar{x} = 17,60$

Hypothesis testing is done based on the data obtained in the field. Results of data analysis using two way ANOVA. If there is interaction, then it is followed by Tukey's test in order to test hypotheses on the main effects of the two independent variables studied.

TABLE 2
Calculation Results of Two way ANOVA

Source of Variations	**db**	**JK**	**RJK**	**F_{hitung}**	**F_{tabel}**	
					0,05	0,01
Between Column	1	0,07	0,07	$0,015^{ns}$	4,00	7,08
Between Lines	1	1,67	1,67	$0,352^{ns}$	4,00	7,08
Interactions	1	129,06	129,06	27,228**	4,00	7,08
Between Groups	3	130,80	43,6	9,198**	2,78	4,16

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Source of Variations	db	JK	RJK	F_{hitung}	F_{tabel} 0,05	F_{tabel} 0,01
Within Groups	56	265,6				
Total	59	396,4				
Reduction Mean	1	18.5				
Correction		85,6				
Total	60	18.982				

** : Very Significant; ^{ns} : Non Significant

TABLE 3
Calculation Results of TUKEY Test

NO	Compared Groups	Absolute Price Differences (Q_h)	Critical Price (Q_t)	Remarks
1	$A_1B_1 – A_2B_1$	10,638	3,75	Significant
2	$A_1B_1 – A_1B_2$	11,596	3,75	Significant
3	$A_1B_2 – A_2B_2$	10,177	3,75	Significant
4	$A_2B_1 – A_2B_2$	9,219	3,75	Significant
5	$A_1 – A_2$	0,142	3,75	Non Significant
6	$B_1 – B_2$	1,206	3,75	Non Significant

Based on the results of the calculation of two-way ANOVA and follow-up test (TUKEY) above, then the hypothesis can be tested as follows:

1. Children taught using hands-on learning method are higher in naturalistic intelligence than that using storytelling learning methods.

The above ANOVA calculation shows that the F calculation = 0.07 which is smaller than the F table = 4.00 (0.07 <4.00), which means that H0 is accepted. Based on these results, we can conclude there is no significant difference in the child's naturalist intelligence scores to children given hands-on learning methods with children given storytelling learning methods.

2. Differences in children's naturalist intelligence scores on children who have high environmental knowledge. Children naturalist intelligence scores on children taught using hands-on learning methods is higher than those who were taught with storytelling learning method.

Based on the calculation of Tukey's test between groups of children taught using hands-on learning method with high environmental knowledge, the mean score is 19.27 and groups of children taught using storytelling teaching methods with high environmental knowledge, the mean score is 16.27. While the average of the square in (RKD) in two-way ANOVA is 4.74. Thus, the average value of group A1B1-A2B1 is 3 and price value of Qc is 10.638 with Qt = 3.75. Because Qh is bigger than Qt, thus H_0 is rejected. Therefore, we can conclude that there are differences in children's naturalist intelligence with high environmental knowledge on children taught using hands-on learning methods and children using storytelling.

Thus, the research hypothesis stated that there is a significant difference in a child's

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naturalist intelligence scores on children who have a high environmental knowledge is proved. That is, the score of children's naturalist intelligence on children taught by using hands-on learning methods is higher than those who were taught by using storytelling learning methods.

3. Differences in children naturalist intelligence score on children who have low environmental knowledge. Naturalist intelligence scores on children taught using hands-on learning methods is lower than those on children taught using storytelling method.

From the calculation of Tukey test it is shown that the average score of the groups of children taught using hands-on learning method with low environmental knowledge is 16 and the average score of the groups of children taught using storytelling learning methods with low environmental knowledge is 18.87. Moreover, the average of the square in (RKD) in two way ANOVA is 4.74. Thus, the difference of the group average value A1B2 - A2B2 is 2.87 and price value Qc is 10.177 with Qt is 3.75. Because Qc is bigger than Qt, therefore H0 is rejected. Based on this result, we can conclude that there is a difference between children naturalist intelligence with low environmental knowledge taught using hands-on learning methods and children naturalist intelligence with low environmental knowledge taught using storytelling learning methods.

Thus, the research hypothesis stated that there is a significant difference in children's naturalist intelligence scores with low environmental knowledge. Naturalist intelligence scores given to children taught using hands-on learning methods is lower than children taught using storytelling learning method is proven.

4. There is a significant interaction between teaching methods and children environmental knowledge on children's naturalist intelligence.

Two way ANOVA calculation results shows that the two that the F count is 27.228 and the F table is 4.00 (F count is bigger than F table). Thus, H0 is rejected. It means that there is a significant interaction between learning methods and children environmental knowledge and children's naturalist intelligence.

The discussion of the research results is based on descriptive data of children naturalist intelligence and the results of hypothesis testing as outlined above and the results of further research hypothesis testing are as follows:

1. First hypothesis

The study found that there are differences between groups of children naturalist intelligence taught using hands-on learning methods with groups of children taught using storytelling learning method. It is proven by two way ANOVA test that the F count = 9.198 is bigger that the F table = 4.16 which was significant.

This is because the hands-on learning methods provide opportunities for children to play an active role in doing the activities directly. the method emphasize the active role of the children so that they have an understanding of the environment and are able to make the classification of plants and animals and natural objects and have sensitivity to the nature and the environment. This methods have not been conducted in kindergarten Ar-Ridho. It just used the available source as learning, children active role in exploring the environment is not maximized.

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Learning method which emphasizes the active role of the children make the children easy to acquire knowledge which can be understood and last a long time so the children naturalist intelligence can be applied to everyday life better. Thus, hands-on learning method is more effective than storytelling learning method in improving children's naturalist intelligence.

2. Second Hypothesis

Research hypothesis which states that the children's naturalist intelligence groups who have high environmental knowledge taught using hands-on learning methods is higher than those of the groups taught using storytelling learning method is acceptable, this can be seen in the big mean scores of naturalist intelligence to target children having high knowledge of the environment taught using hands-on learning methods is significantly higher than the group of children who have high environmental knowledge taught using storytelling method.

In hands-on learning methods, after the teacher provides materials and demonstrates them, students are required to perform the material that has been seen to be able to solve a problem, this method can be effective if the children have high environmental knowledge and taught using appropriate learning methods, thus this will provide more meaningful understanding of the children's naturalist intelligence. Dale also explained that the provision of learning methods using modeling, simulation, and direct practice will give a lot of learning experiences for children. They not only learn to find something, but they also have the ability to analyze what they have found. This ability will only be learnt if children can interact directly with the environment.

The development of children's naturalist intelligence requires three combinations of knowledge, attitudes and skills in understanding and using skills when interacting with the environment.

3. Third Hypothesis

The third hypothesis which states that naturalist intelligence of children with low environmental knowledge taught using storytelling learning methods is higher than the group of children who taught using hands-on learning methods is acceptable. It can be seen in the high mean score of the group of children who have low naturalist intelligence and taught using storytelling learning methods. The score is significantly higher than the group of children who have low environment knowledge taught using storytelling learning method.

In the storytelling learning methods, the teacher's role is more active than children. This method does not require the children to be actively involved, they only interact with the story presented by the teacher. In addition, in this method the children's ability to listen is more than to see the visual, sometimes when the teacher is not expressive in telling the story, the children feel uninterested and bore the active. Therefore, children who have a low environmental knowledge and have low naturalisticc intelligence will fit best with storytelling method.

4. Fourth Hypothesis

The fourth hypothesis which stated that there was an interaction between learning method with environmental knowledge is proven, which is the F count = 27.228 is higher than the F table = 7.08. Thus teachers need to give suitable learning method to the children's naturalist intelligence.

Children who have high level of naturalist intelligence taught using hands-on learning methods shows higher naturalist intelligence than children who are taught using storytelling

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learning methods. In contrast, children who have low level of naturalist intelligence and taught using hands-on learning methods show lower naturalist intelligence than the children taught using storytelling learning methods. This suggests that the provision of learning methods can affect interactions in the learning activities. In addition, teachers in providing learning method should pay attention to the level of knowledge possessed by the children, in this study, the knowledge of the environment. Thus giving the appropriate method in accordance with the level of environmental knowledge will provide optimal development of the children's naturalist intelligence.

IV. Conclusion and Recommendation

This study examines the influence of learning methods to the level of children's naturalist intelligence of on children aged 5-6 years old. The learning methods are hands-on and storytelling.

Based on the results of testing hypotheses that have been described in the previous chapter can be it concluded as follows:

1. Naturalistic intelligence of children taught using hands-on learning method is higher than the children who taught using storytelling learning methods. From the figures it can be said that in order to improve the naturalist intelligence of children aged 5-6 years old teachers can use hands-on learning methods.
2. The children's naturalist intelligence groups who have high environmental knowledge taught using hands-on learning methods is higher than those of the groups taught using storytelling learning method. Thus, to improve the naturalist intelligence of children aged 5-6 years old who has a high level of naturalist intelligence therefore it is suggested that teachers use hands-on learning methods.
3. Naturalistic intelligence of children with low environmental knowledge taught using storytelling learning methods is higher than the group of children who taught using hands-on learning methods. Thus, it is recommended that teachers use storytelling method to improve the children's' naturalistic intelligence with low environmental knowledge.
4. There was an interaction between learning method with environmental knowledge on children's naturalistic intelligence. Therefore, it can be concluded that to increase children's naturalistic intelligence on children aged 5 – 6 years old, teachers are recommended to use hands-on and storytelling methods.

Implications

Based on the results of the study and the above discussion, it appears that the learning methods and environment knowledge give significant effects on naturalistic intelligence of children age 5 – 6 years. Thus, this study can be applied to planning and developing of learning methods that will be used to improve children 5 – 6 years of age of their naturalistic intelligence.

The findings prove that children taught using hands-on learning method gets higher naturalistic intelligence than those of children taught using storytelling learning methods. Therefore, teachers' role is very important to give appropriate learning method to improve children's naturalistic intelligence.

This study reveals that there is an interaction between learning method and environment knowledge to the improvement of children age 5 – 6 years naturalistic intelligence. The interaction gives some implications. First, teaching using the same method to all of the children without considering their knowledge of the environment is less favorable for them. The level of environment is different in each child.

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Children with high environmental knowledge will learn best when they are taught using hands-on learning method. Thus, giving inappropriate method of learning will not benefit one of the groups. Secondly, even though children's naturalistic intelligence has been considered, inappropriate use of learning method will give bad effect to children's naturalistic intelligence.

In conclusion, to give appropriate learning method, teachers need to consider the level of children's environment knowledge.

Recommendations

Based on the conclusions and implications of the research above, it can be put forward some suggestions on the findings of this study:

1. In an effort to improve the naturalistic intelligence of children aged 5-6 years, educators and kindergarten teachers should be able to make use of appropriate learning methods. Teachers should be able to develop a method of learning through a variety of activities and fun for children. In determining instructional methods to be used teacher should also know and pay attention to their children environmental knowledge.
2. Kindergarten managers should be able to give opportunities for teachers to develop learning methods so that the activities are various and fun.
3. Parents can give stimulation to their children to improve their environment knowledge through everyday activities like giving positive habits to know and to keep their environment, so that their development of their naturalistic intelligence is optimal.
4. People should give the children opportunities to enjoy the environment as a part of safe and comfortable place for them, thus they can explore the environment where they live and increase their knowledge on environment as well as their naturalistic intelligence.
5. Further early childhood researchers may develop further research by examining other factors that have not been studied on this research such as social economic factors of the family or age factors.

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