INCREASING SCIENCE CAPACITY THROUGH NATURE CENTER SETTING (ACTION RESEARCH IN TK B AL HIKAM OF MALANG 2016)

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Abstrak
This study focuses on improving the ability of science students through nature center settings. Research subjects were 17 students (Group B) in Al Hikam Kindergarten of Malang. This study uses Kemmis & Taggart models with 1 cycle – 3 meetings. Quantitative data on learning outcomes indicate the progress of science abilities, and it’s analyzed using descriptive statistics. Research showed on the learning process of science through natural centers learning strategies showed 7 components of science process of observing, comparing, classifying, measuring, make simple conclusions, and prediction. Natural centers of learning strategies can improve the ability of science students from meeting 1 to 3 with an average of 2.60; 2.70; and 2.99 in the category of developing students and the percentage of completeness also increased from meeting to 1 to 3 with a value of 52.9%; 76.4% and 100%.

Keywords: Ability Science, Center of Natural

INTRODUCTION
The achievement level of the development group of the 5-≤6 years, on cognitive development, one of them are general knowledge and science. Knowledge of science, include the ability to classify objects, exploratory activity, cause and effect recognition, and solve simple problems. (Directorate Early Childhood Development, National Ministry of Education, 2011: 11)

Based on initial observations in July 2016 in TK B Al Hikam Malang, teachers implementing the learning process which does not vary and conventional. Teachers teach only using the expository method. That is, teachers dominate the teaching and learning activities and to make the learners passives. Teachers still dominant as a player. Meanwhile, students become spectators. So teachers active and passive learners. Expository learning paradigm that is remain strong in the teacher will become a habit and it’s difficult to change. The teacher habits have an impact on students, the students become spectators in the classroom, so they feel comfort with the condition of receiving and not used to give.

SCIENCE IN EARLY CHILDHOOD
Science learning experiences in pre-school had to be creative, interesting, and oriented to discovery. Children need the opportunity to experience, feel, researching, and finds some aspects of the object and discover the other aspects like the little scientist. The following describes an overview of of science to early childhood.

Characteristics of Early Childhood
Piaget's theory explains how people think, understand, and learn. Piaget believes that intelligence is a cognitive or mental processes that are used to acquire knowledge. Intelligence is knowing and involves the use of mental operation, which develops as a result of mental and physical actions surrounding environment. Active involvement is the basis of Piaget's theory which states that children develop intelligence through experience/practice directly in the physical environment. This practical experience is the basis for the brain's ability to think and learn. (Morrison, George, p. 69)

Activity test and try not only have to give pleasure, for children but also gives a better understanding of the properties owned by an object. Therefore, if the child is given the opportunity to experiment, try, and test a variety of learning resources, they will get an idea how to learn and also to appreciate how the other children learn. (Muslichatoen, 1998: p.9)
Science Learning in Early Childhood

Learning approach in kindergarten uses themes that can be connected to experienced studied by the children and can be used as a subject in the learning process. It will facilitate the learning process for the students because children experience is an actually happened, and the children feel valued.

Early childhood science learning as proposed Rosalin and Karen found that school through college should be viewed more as a verb than a noun. It is not so much a body of knowledge as it is a way of thinking and acting. Science is a way of trying to discover the nature of things. (Rosalin Charlesworth, 1990: p.48).

Jo Ann Brewer stated that science in early childhood education is encouraging children to explore their environments and reflect on their observations and discoveries. (Jo Ann Brewer, 2007: 386)

Science learning in early childhood include children's activities to explore the surroundings and reflect on their observations and discoveries. Spodek stated that science is a system of knowledge about the physical world. It includes ideas about processes, objects, and the relationship among them. In developing concepts, scientists involve them selves in the process of creating knowledge. (Bernard Spodek, 1991: 266)

Science learning in the natural centers settings give children the opportunity of hand movements or fine motor skills to explore their environment. Opinions Rebecca Isbell which stated that young children are active learners who touch, feel, experiment and create. The effective center is designed to relate to the world of active learners and planned to encourage their involvement. Young children are interested in the world in which they live; centers are a symbolic representation of their world. In this “center world” they can try out many ideas and rearrange happenings to fit their level of understanding. In this environment, they can build their confidence and begin to believe that they are capable learners. (Rebbecca Isbell, 1995: 17)

Rebebecca stated that an effective educational center designed to link the world with an active student involvement and plan their roles. Children are attracted to the the world they live. The education center is a symbol representation of their world. In the education center they can try a lot of ideas and map out the events to complete their degree in the understanding. In this center they can build confidence and starting to believe that they are children who are able to learn.

Concept Model Measures

This action research using Kemis dan Taggart working procedures in 2 cycles, each cycle has measures such as: (1) planning; (2) acting; (3) observation; (4) reflecting; and (5) re-planning as the basis for problem-solving strategies.

The use of working procedures Kemmis and Taggart model based on the reason that the scheme allows the helical more dynamically process of planning, action, observation, and reflection. The scheme is also compatible with the nature of early childhood learning that can be done repeatedly for the establishment of science learning in children.

RESULTS AND DISCUSSION

The observation of the learning process of science in kindergarten B Al Hikam the initial assessment is still rarely performed. This is due to the teachers give more priority to children quickly learn to read. Kids only learn what is being taught by teachers such as reading, writing, and drawing. It was also because of the demands of parents who want children should be able to read and write. Teachers just focus on subjects related to reading and writing. The parents demanded their children be able to read and write before entering elementary school (SD). To fulfill the wishes of parents, teachers rule out other subjects that should be developed such as math, art, and science. Whereas, in accordance with the development of children at this age, they should get
plenty of stimulation to explore their potential ability. Kids have different potencies, by stimulating science, it will be the basis for the development of them next.

In addition, based on the observations of researchers, the child's mastery of science was still lacking cause for less learning science is given by the teacher. Teachers classes just give abstract rote. Kids just memorize, but are unable to interact with the object in question. Children who are given an abstract object that render them unable to master the science well. The child is not taught to think critically whereas early childhood have a curiosity tremendously to the environment.

Based on observation, field notes and the results of the evaluation, the results obtained at the third meeting has been success, because the final value of the learning process of science subjects in classical studies have received an average rating of 2.99 in the growing category. The completeness classically already 100%. Based on that statement, the results obtained at the 3rd meeting meets the criteria of success.

CONCLUSION

Based on the pre-observation, there is an improvements in learning, for better motivate learners to be able to do science activities. How that is done, through a natural center settings activities include observing, comparing, classifying, measuring, make simple conclusions and predict.

Based on the findings and discussion, this study concludes as follows:

1. Learning science process through natural centers settings strategies, showed 7 components of science process in observing, comparing, classifying, measuring, make simple conclusions and predict.

2. The nature center learning strategies can improve the ability of science students from meeting to 1 to 3 with an average of 2.60; 2.70; and 2.99 in the category of learners thrive and completeness percentage also increased from meeting to meeting to 1 to 3 with a value of 52.9%; 76.4% and 100%

After a classroom action research can be concluded that the natural centers settings science can improve the ability of children. It can be seen from the results of studies showing that the natural centers settings can improve the ability of science in children at kindergarten B, it can be seen from the testing effectiveness:

a. Nature centers settings through the ability to observe, classify, summarize and communicate science can perform activities directly, where children are actively involved in the learning of science is not just a transfer of knowledge by the teacher to the learner but rather to construct knowledge through various activities of the process of science. Children also acquire learning experience more extensive and complete.

b. Nature center setting provide children the opportunity to learn about their environment and learn to solve problems. Children learn by carefully observing every object that will make the child can discover new things which they need to know.

c. Nature centers setting help the character formation of children, because children are familiarized doing science itself in the search for knowledge, develop and find ideas to communicate the findings thus indirectly establish the child's personality to be more careful, independent and critical thinking.

d. The results of studies that support this study is in Sukirman research, showing that children's creativity in drawing and playing the clay can be enhanced through the use of quality improvement learning model Beyond Centers and Circle Time.
SUGGESTIONS

Based on the conclusions and implications, suggestions on improving the ability of science through nature-based learning center settings are:

1. **To the Principal TK Al Hikam**
   Principal should be given the opportunity to follow the training of science organized by scientific institutions so that the ability of teachers will be increased. Schools should also provide for teachers as controlling their responsibilities so as to create a conducive relationship and motivate kindergarten teachers in improving professionalism.

2. **To Teachers**
   Teachers must be able to select appropriate learning approaches. The approach is a lot of learning that allows the child to be actively involved in the process of science, the contact with the object being studied. And provide an opportunity to explore the surroundings.

3. **To Parents**
   With honesty and openness, the school can explain to parents the importance of science learning for children so that parents do not require teachers to only teach reading and writing only. A support parents is expected that the program science learning in kindergarten is more optimal. Even parents can also facilitate the child to perform science activities together at home, so the ability of science more optimal child.

4. **To Early Childhood Education Practitioners**
   This study managed to get the data the importance of the process of science is applied in early childhood, especially TK B, because this may increase the ability of the science of children, especially the ability to observe, compare, classify, measure, and predict create a simple conclusion. This information can be input for the community and in particular the manager of TK in general.

5. **To Researchers**
   Future studies might explore science through the centers of natural ability and can make inputs for researchers to develop by applying the different learning.

REFERENCES


Morris, George, op cit., h. 69.


