

Improvement of Geographical Skills in Learners of Elementary School in DKI Jakarta Province Against Flood Disaster

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ABSTRACT

The purpose of this research is to develop a model of pre-existing learning by modifying the learning model that can improve the geographical skills of elementary school students in DKI Jakarta Province in facing the flood disaster that always hit Jakarta every year during the rainy season (Ruhimat, 2013). Learners will use a variety of learning strategies when faced with learning for problem solving often experienced (Recker & Pirolli, 2009). Proving by using the right model in a learning by looking at the characteristics of learners in this intake as well as educate the learning becomes meaningful. Geographical intelligence is the ability of high-level thinking in the spatial aspects of the territory that characterize the place and character where learners live or live so that learners are able to recognize and analyze each component of the environment that will be reciprocated against him. (Horton, 2014). Problem Based Learning Model (Kolodner et al., 2009) that has been modified with spatial approach can improve the geographical skills of learners against environmental conditions that interact with learners both when the environmental conditions are good or bad like during the rainy season where the area experiencing a flood disaster (Mirah Sakethi, 2010). The research methods used with the research development approach (Munawaroh, 2016), with sample samplers at public elementary schools exposed to the flood disaster were four schools, and took sample classes at level 5 of each sample school. The results obtained in this study on critical questioning points using spatial questions the researchers incorporated the Question Formulation Technique (QE) approach (Agustini, 2005) while to improve the ability to analyze the researchers modify the Problem Based Learning model with Cooperative Learning approach with Guided Discovery Learning (Novita , Santosa, & Rinanto, 2016) and the latter in improving the geographic response ability of the researcher to modify by adding approach in the learning with Problem Solving approach (Musfiroh, Ratu Beta Rudibyani 2015)

Keyword :

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INTRODUCTION

Education in elementary school systemically is part of the basic education level. Elementary school is a very strategic type of public education, because it is the earliest formal education that provides the foundation for further education, namely education in junior high. Starting from elementary school is the process of children's intelligence nationally started. Primary School we can use as the first educational unit that accommodate the process of formal education for generally Indonesian children. Constitutionally, as stated in the Preamble of the 1945 Constitution of the State of the Republic of Indonesia, it is expressly stated that one of the aims of forming the Unitary State of the Republic of Indonesia is to educate the life of the nation. Furthermore in the Amendment of the 1945 Constitution particularly in Chapter XII Article 28A paragraph (1) stated that everyone has the right to develop themselves through the fulfillment of their basic needs, to be entitled to education, and to benefit from science and technology, art and culture, in order to improve the quality of life and for the welfare of mankind. Furthermore Article 31 paragraph (2) affirms that every citizen is obliged to follow basic education and the Government shall be obliged to finance it.

Philosophical and psychological-pedagogical views represent an expert's point of view in the field of philosophy, psychology, and pedagogy / education to the inevitability of the educational process for school age 6-13 years. It is said to be a necessity because education for children of that age is universal and has become a reality or often referred to as *conditio sine quanon*. For example, in all countries of the world, there is a primary education or elementary education like SD in Indonesia. We all must have attended elementary school before going to junior high school.

There are several arguments about the inevitability of education for that age (Bell-Gredler: 1986).

1. Institutionalization of the educational process for age in the schooling system of education, is believed to be very strategic, meaning it is appropriate to influence, condition, and direct the mental, physical and social development of the child in achieving systematic and systemic maturity.
2. Systematic and systemic maturation process is believed to be more effective and meaningful, it means more good and profitable results, rather than the process of maturation that is released naturally and contextually through the process of

socialization or association in the family and society and enculturation or interactive culture in cultural life solely.

3. Various psychological theories, especially learning theories that form the conceptual basis of learning theory, such as behaviorism theory, cognitiveism, humanism; and social, educational philosophy such as perennialism, which emphasizes the importance of cultural inheritance, essentialism, which emphasizes the transformation of essential values, progressiveness, emphasizing the development of individual potential, and social reconstructionism, which emphasizes the development of individuals for community change strongly supports the process of growing up children through education schooling (Brameld, 1965).

Therefore, elementary education is the foundation for the child in the development of all the pontensi he has optimally and peroses pembuiltinya itself is the beginning of a child. No exception is how a child begins to grow his geographical skills since the child goes to elementary school, so that his / her child is expected to have a good foundation in matters of kemampuan or academic potential and able to develop and apply it geographical skills at the next level of education.

Education is relevant (appropriate) if the education system can produce output according to the need for development of the relevance includes the quantity (quantity) or the quality (quality) of the output. Furthermore, the suitability should have a level of linkage (link) and match (match). The issue of relevance is a matter related to the relevance (conformity) between the ownership of the knowledge, skills and attitudes of a school's graduate to the needs of the community (labor needs). Education is said to be no or less relevant if the level of conformity is absent. the number of graduates from certain educational units who are not prepared by cognitive and technical ability to continue to the unit of education on it. The issue of relevance can also be known from the number of graduates from certain educational units, namely vocational and higher education who have not or even are not ready to work. In addition, we can also see the growing unemployment in Indonesia.

(Sidiq and Prayitno 2012) Broadly speaking, learning becomes important in improving learners' skills in learning, one with strategi with inquiry approach, this approach is divided into four important phases applied in learning as syntax. The four syntaxes in the inquiry approach are the procurement of the problem of the observed object, organizing the

problem in the form of a problem to be more structured so as to know the degree of difficulty, designing an experiment to solve the problem, and predict problem solving in the form of hypothesis and prove it by empirical experiment. Skills development of learners should consider the level of development of learners. The inquiry approach corresponding to that level is guided inquiry. This inquiry approach is combined with cooperative learning. The type of cooperative learning is the simplest and allows it to be combined with other strategies, models, or learning approaches. Cooperative learning can contribute to the development of learners' skills because there is interaction in learning. Aspects of a particular learner's skills can be developed with the interaction between learners or learners with teachers. This inquiry approach contributes to the discovery of new concepts resulting from problem solving. Discovery activities require good science process skills, then inquiry can develop the skills of learners. The inquiry mixture in cooperative learning is also in accordance with the principle of direct involvement in learning. The direct involvement of learners becomes meaningful. Learners engage directly in formulating problems from observations in learning, Science, Environment, and Learning in Efforts to Improve the Competitiveness of Nations get the solver. In addition, learners also interact directly with peers and teachers who can motivate learners in learning. From the above quote it is clear that skills are important not to mention geographical skills where geographical skills will create learners become literate space early on.

Based on the background of the above problems can be formulated problem, among others:

- a. How is the learning model able to improve the geographical skills of the students in the SD Negeri that responds to the flood disaster in their region
- b. How to learn interesting for learners who are able to develop geographic skills at the State Elementary School in North Jakarta Municipality based on the characteristics of the region?

The update in this research is to find a learning model based on the characteristics of the region that characterize the types of disasters that often occur in the region. Therefore since elementary school must be equipped with geographical skills to the space where learners live.

1. Finding aspects of geographic skills in elementary school students in areas that have often experienced flood disasters
2. Finding a learning model in elementary school that incorporates elements of geographical skills.
3. Increase the geographical skills of learners in the response to flood disasters in accordance with the character of disaster areas in the region.

This research is expected to contribute both theoretically and practically.

- a. Contribution Theoretically, It is hoped that the results of the research will reveal the model of geographical skills development in elementary school learning that characterizes the area with natural disasters that are often experienced by the flood.
- b. Contributions Practically. It is also hoped that this research can be used in the learning by the elementary school teachers in floating the geographical skills of a learner and able to develop a more interesting learning learners in learning. While in the academic environment itself later this research result can be used as real information in discussing geographic skill development model in learning in elementary school based on area characteristic with flood natural disaster.

This research method using quantitative method with development research approach where to see how big skill learners in geographical aspect need to be tested some model so that find good model in every aspect of development, unit of analysis in this research is learners residing in school with karakresistik area with the intensity of floods that vary each year it is taken 3 schools that is 1 school with high flood intensity means the school environment and home environment of learners who often experience flooding, 1 school of moderate flood intensity that is with the category of flooding occurred in the school environment or home environment the students, and 1 school which is the school environment and the home environment of the students are not exposed to the flood disaster but learners know the flood disaster from various sources such as media. The total number of students from each school is 40 students

DISCUSSION

In this study, there are 3 learning components that are collaborated to improve the 3 skills in general, namely the skills to ask questions, the skills to analyze a problem and the

skills in answering, then packaged in thematic learning that emphasizes the spatial aspects so that learners are able to understand the characteristics of the space under study, ie areas with flood characteristics. Researchers use collaboration between Guided Discovery Model, and Problem Based Learning Model

Suryosubroto (2009), method is the way, which in its function is a tool to achieve the goal. Learning method is a process or procedure used by teacher or instructor to achieve goal or competence. The teaching method is the general way of teaching that can be set on all subjects. Meanwhile, according to Surakhmad in Suryosubroto (2009: 140), teaching methods are ways of implementation rather than the process of teaching, or about how technical

something lesson material given to students in school.

From the above description concluded that, learning method is a way used by teachers in membelajarkan a material to learners in the classroom to achieve the purpose of the learning.

Selection of learning methods should be based on conformity with the task and learning objectives to be pursued by learners. Selection of appropriate learning methods will help learners in achieving the learning objectives that have been set. There are several learning methods that can be selected for use in the implementation of learning activities. Each method has its own characteristics that its use needs to be adjusted to the learning objectives to be achieved. Various learning methods that can be used one of them is the method of discovery. Suryosubroto, (2009), discovery is a mental process in which learners assimilate a concept or a principle. The mental process is for example: observing, classifying, making conjectures, explaining, measuring, making conclusions, and so forth.

According to Jerome Bruner (1977), discovery is a process. The discovery process can be a common ability through problem-solving exercises, the practice of forming and testing hypotheses. Thus in Bruner's view, learning by discovery is learning to discover, in which a learner is confronted with a problem or situation that seems odd so that learners can find a way of solving. From the above description it is concluded that guided discovery method is a method of learning which in the implementation of the teacher allows the learners to think for themselves so that they can find the general principle desired with

guidance and instruction from the teacher. One of the materials, in the form of facilities by teachers who will guide learners in the process of discovery of the concepts, the formula of the material taught is the Student Worksheet (LKPD).

Problem-based learning model known as Problem Based Learning (PBL) is a student-centered learning model in which learners seek to solve problems by using information from various sources and everyday experiences. Problem Based Learning (PBL) familiarizes learners to be confident in dealing with problems by helping learners to develop critical thinking skills and problem-solving skills. Model of learning problem based learning (PBL). The problem-based learning model is a lesson that teaches learners how to use concepts and interaction processes to assess what learners know, identify what they want to know, collect information and collaboratively evaluate hypotheses based on collected data. This understanding implies that the application of the Problem Based Learning (PBL) model can help learners to use what concepts learners understand and gather as much information as possible. In the PBL also required strong cooperation among learners. Learners will cooperate in collecting information and find the problem hypothesis to then jointly exchange information to find a way out of a problem being analyzed. b. Learning Steps with Problem Based Learning (PBL) Learning Model Problem-based learning has a clear procedure in engaging learners to identify problems. Rusmono, (2014) steps or stages of learning Problem Based Learning model are as follows:

- 1) Stage 1: Organize learners to the problem.
- 2) Stage 2: Organize learners to learn.
- 3) Stage 3: Assist in independent and group investigations
- 4) Stage 4: Develop and present works and exhibitions
- 5) Stage 5: Analyze and evaluate the problem-solving process

Based on learning step model of PBL that is:

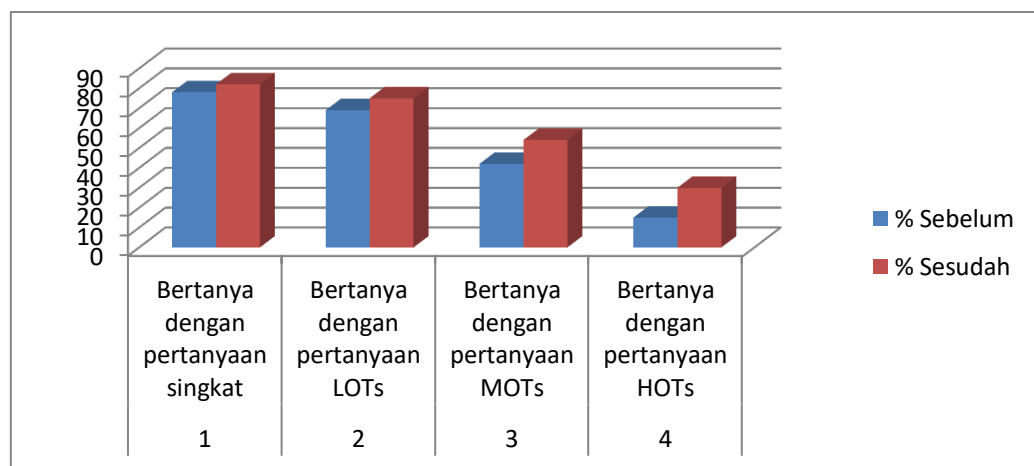
- 1) The introduction of problems to learners based on material taught to learners.
- 2) Learners are organized into groups to conduct a discussion on problem solving.
- 3) The results of group analyzes of learners are presented to other groups of learners.
- 4) The teacher helps the learners to reflect on the results of the investigation conducted by the learners.

In general there are advantages and disadvantages in each model of learning, as well as the model of Problem Based Learning (PBL).

The results showed the development of learning outcomes from the ability to ask learners that:

In the aspect of the ability to ask, learners experience a good development although not experiencing a meaningful increase that is up to increase by half or 50% but some learners are able to ask questions that are Hots. Seen from graph 1 where learners are more dominated on basic questions like who and what, while using the sentence why and how it rarely proposes.

Graph 1: the percentage of learners before and after the learning process with on the aspect of skill enhancing questions

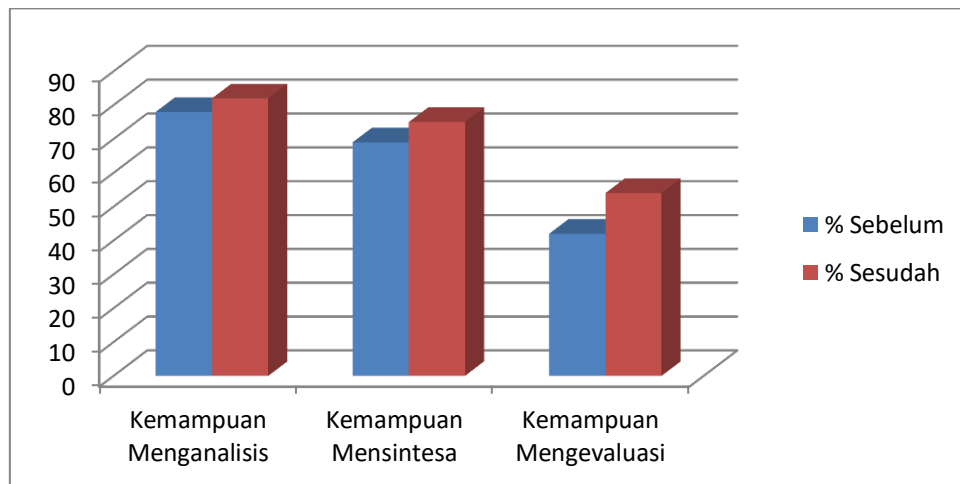


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Other geographical skills such as categorizing and analyzing to answer questions are also improved, illustrated in graph 2 below. In Garafik 2 did not experience a good increase, basically learners have understood about the frequent floods, and learners know how mitigation and problem solving in handling the flood disaster, ranging from pre-flooding such as raising perishable goods to taller, tidying the water channels in front of their house. In the condition of the flood they know like not panic, save the use of clean water and so on. After the flood they also understand such as helping to clean up the goods and keep the cleanliness. In analyzing simple structural and non structural mitigation they can analyze

Structural Mitigation is an effort made to minimize disaster such as by doing special danal development to prevent flooding and by making engineering disaster resistant building construction, as well as waterproof building infrastructure. Where the waterproof infrastructure of the building will be expected to not give such a severe impact if the disaster occurs. Non-structural mitigation is an attempt made in addition to structural mitigation such as regional planning and insurance. In non-structural mitigation it is expected from the development of increasingly advanced technology. The hope is a technology that can predict, anticipate and reduce the risk of a disaster.

Graph 2: the percentage of learners before and after the learning process with the improvement aspect answered



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CONCLUSION

In this study, it can be concluded that the modivication learning model is able to improve the geographic skills of the students on flood mitigation specs in Jakarta, ie floods that occur in the school environment or in the neighborhood around their houses, the ability to ask critical or high level increases, the ability to analyze and answer questions have increased.

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