

EXPERIENTIAL LEARNING MODEL TO INCREASE THE SCIENCE'S CONCEPT OF MI'S STUDENTS

M. Fahmi Maulana, Efi Tri Astuti

UIN Sunan Kalijaga

Email: maulanafahmi2@gmail.com, efitriastuti@gmail.com

ABSTRACT

Experience-based learning is one of the learning methods that is easily accepted and understood by middle childhood. The middle childhood's interest in learning will be bigger than before if involving their experience. From the aspect of psychology, middle childhood will more easily understand the concret material e rather than abstract. Moreover, science materials in primary schools are mostly always in touch with activities in everyday life. But the reality is that most teachers don't involve the middle childhood's experiences. To realize experience-based learning on science, MIN Kedungwaru Lor of Demak's regency chose an experiential learning model. Based on observation in MIN Kedung Waru Lor showed that experiential learning model is able to give solution so that children more easily understand the material and make the concept. The experiential learning model is different with the traditional learning model, because the traditional learning model is teacher-centered. Experiential learning model is a model of learning that emphasizes the concrete experience of middle childhood in their daily life which is applied into the learning. Experiential learning model also invites middle childhood to create a concept of what has been learned.

Keywords: Experiential learning, method, conceptual understanding

INTRODUCTION

The quality of the education who determines the progress of a nation depends. Once of the importance an education is included in the Law on number 20 of 2003 chapter I article I and paragraph I about the National Education System which states that:

Education is a conscious and well planned effort to create an atmosphere of learning and learning process so the learners actively develop their potential to have spritual power, self control, personality, intelligence,noble character, as well as the their necessary skills, society, nation and state. (Pendidikan adalah usaha sadar dan terencana untuk mewujudkan suasana belajar dan proses pembelajaran agar peserta didik secara aktif mengembangkan potensi dirinya untuk memiliki kekuatan spiritual keagamaan, pengendalian diri, kepribadian, kecerdasan, akhlak mulia, serta ketrampilan yang diperlukan dirinya, masyarakat, bangsa dan negara.)¹

Based on the Law about the National education system, we can understand that the concept of the education is not only required to prepare students for one profession, but also to solve their problems in everyday life.² In this case, the existence of the teacher as a major component that directly intersects with learners is very important. However the education curriculum are good and ideally, however the educational facilities and infrastructure are

complete, but without the teacher's ability to implement it, will be less meaningful.³ Especially today, in the information era the teachers no longer act as the only learning resource, but more role as a learning manager.⁴

The expertise of the teachers in teaching learning materials in the classroom is a form of demands that must be met by the teachers. This is can implies to the urgency of the learning process that not only as a transferring the teacher's experience to the learners process, but also a series of processes to explore, discover and develop something asa a new experience for learners.

Successful of experiential learning model not only involves learners in an activity, but also helps the learners to give the meaning of the activity. John Dewey argues that an experience can lead to learning can even lead to change.⁵ This is caused the last purpose of the learning process is the learners hace trasfer of learning, so the expectation is they can transfer the knowledge that they get to real situations in theri daily activities.⁶

In the schools of science learning, the learning transfers's skills are needed by learners. Because in the science lessons is not only enough to prioritize the facts or concepts alone, but it need experience to understanding this fact or the concept. If viewed from the aspect of psychology, the children of elementary school are in concrete operational stage, which

1 Undang-undang RI Nomor 20 tahun 2003 tentang SISDIKNAS, (Yogyakarta: Pustaka Widyatama, 2003), hlm. 7.

2 Trianto, *Model-Model Pembelajaran Inovatif Berorientasi Konstruktivistik*, (Prestasi Pustaka, 2007), hlm.1.

3 Wina Sanjaya, *Strategi Pembelajaran Berorientasi Standar Proses Pendidikan*, (Jakarta: Prenada Media, 2007), hlm.13.

4 Ibid, hlm. 95

5 Mel Silberman, *Handbook Experiential Learning*, terj. M. Khozim, (Bandung: Nusa Media, 2014), hlm 3.

6 Baharudin dan Esa Nur Wahyuni, *Teori Belajar dan Pembelajaran*, (Jogjakarta: Ar-Ruzz Media, 2010), hlm 164.

will better understand the concrete material than the abstract material presented. So, the learners more easily understand complicated concepts if accompanied by concrete examples in accordance with daily life, practicing their own concept discovery through handling and treatment of material that is real.

Based on the facts in the field, one of the fourth grade teachers at MIN Kedungwaru Lor in the Demak regency who chose the experiential learning model. According to his argument, the experiential learning model is very suitable to be applied, because it involves the experiences of the learners and makes learners able to show and pour all of their experiences when the learning process takes place. This model is suitable to apply the materials related to everyday life. One of the science materials in elementary schools related to everyday life are energy and its changes.

Experiential Learning Theory (ELT) developed by David Kolb around the 1980s became the basis of the experiential learning model. That is a learning model that emphasizes the concept of holistic learning in the learning process. In the experiential learning model, the experience has a central role during the learning process. As defined by the *Association for Experiential Education* (AEE), “*experiential education is a process through which a learner constructs knowledge, skill, and value from direct experiences.*”⁷

Colin Beard and John Wilson (2002), the author of *The Power Of Experiential Learning* that contained in the book Mel Silberman with the title *Handbook Experiential Learning* state that experience may be underlying all

of the learning, but it does not always lead to learning.⁸ So, we must be directly involved with the experience and reflect on what happens, how and why it can happen. This means that one of the needs to further process the facts and concepts to be motivated.

The term of experiential in this concept is purpose to distinguish between cognitive learning that tends to emphasize aspects of cognition more than effective aspects, and the eliminates the role of subjective experience in the learning process. As defined by David Kolb (1983), the author of *Experiential Learning* argue that learning is a process in which knowledge is created through the transformation of experience.⁹ So, knowledge is the result of the understanding and transforming experience. In the Experiential Learning model, there are three elements that applied, including changing the cognitive structure of learners, changing the attitudes of learners, and expanding the skills of existing learners.¹⁰ The three elements are interconnected and give overall influence, not separated, and if one of the elements is missing, so the other elements will not be effective.

There is a difference between a traditional learning approach and the Experiential learning. The Experiential learning model allows learners to succeed by giving a freedom to the students to decide what the experiences on their focus, what skill that they want to develop, and how they conceptualize the experiences they experience. This is different from the traditional learning approach where learners become passive listeners and only teachers that control the learning process without involving

⁷ Song Lin Xiong Huang, *Advances In Computer Science, Environment, Ecoinformatics, And Education, Part IV*, (Wuhan, China: International Conference, CSEE, 2011), hlm. 419.

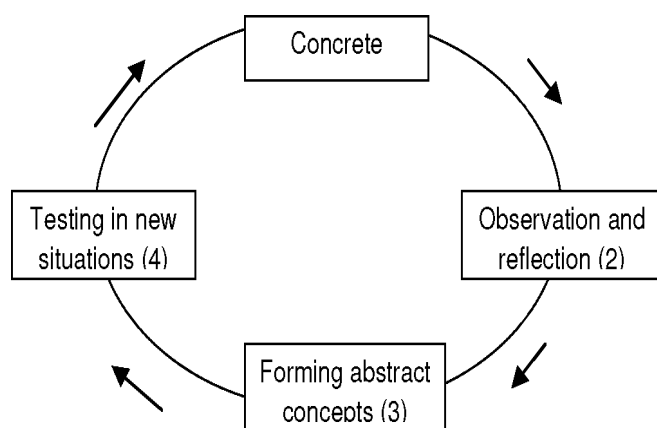
⁸ Mel Silberman, *Handbook Experiential Learning*, terj. M. Khozim, hlm. 3.

⁹ Ibid, hlm. 4.

¹⁰ Baharudin dan Esa Nur Wahyuni, *Teori Belajar dan Pembelajaran*, hlm. 165.

learners.¹¹

Experiential Learning Model consists of 4 stage,¹² that are : 1) concrete; 2) the *Observation and reflection* stage; 3) *Forming abstract concept*; 4) testing in new situation stage. These four steps by David Kolb are described in the following circle:



Picture 1. Experiential Learning cycle

Based on the Experiential Learning cycle, can explain:

1. *Concrete*. At this stage learners don't have yet an awareness of the nature of an event. Learners can only feel the moment as it and have not been able to understand and explain how and why the moment happened. This is a what happens in the first stage of the learning process.
2. *Observation and reflection*. At this stage, learning should give the opportunity to the all learners to observe actively to the events that happened. The first of this stage begins by searching the answers and thinking about the events that exist in the world around them. Learners do reflection by

developing questions about how and why it can happen.

3. *Forming abstract concept*. After that, teacher give a freedom to the learners to make observation, then make conceptualization of the result of their observations. This means that learners attempt to create an abstraction, develop a theory, concept or law and procedures about something that became the object of attention.
4. *Testing in new situations*. This stage is based on the assumption that the outcome of the learning process must be a concrete product. At this stage, the learner is able to apply concepts, theories or rules into real situations. Learning should give space for freedom to practice and test theories and concepts in the field.¹³

Science Learning which is often called IPA is that originally means experience, but eventually when people say about science, the general people called natural science. Relation about the term, the scope of the science or science learning is always associated with the activity of finding out to understand the universe systematically, so that in science learning consist of mastery of knowledge and facts, but also involves the discovery process.

The nature of science learning can be classified into three parts: 1) natural science is a product, which is a collection of result research of the scientists and a concept that has been studied as an empirical activity and analytical activities among of the science as a product are facts, principles, laws, and theoretical science; 2)

¹¹ Ibid, hlm 164-166

¹² M. Nur Ghufon dan Rini Risnawita, S, *Gaya Belajar Kajian Teoretik*, (yogyakarta, :Pustaka Pelajar, 2013), hlm 93-96

¹³ M. Saechan Muchith, *Pembelajaran Kontekstual*, (Semarang: Rasail Media Group, 2008), hlm. 82-84.

natural science as a process, that is to explore and understand the knowledge of nature. Caused natural science is a collection of facts and concept, so natural science requires a process to find facts and theories that will be generated by scientists. The process to understanding the natural science is science process skills, such as observing skills, measuring, classifying, and concluding; 3) natural science as an attitude, which is a scientific attitude. A scientific attitude must be developed in science learning. There are nine aspects developed from the scientific attitude in science learning, that are : the attitude of curiosity, the attitude to get something new, the attitude of cooperation, not despair, not prejudiced, introspective, responsible, free thinking, and self-discipline.¹⁴

METHOD

The type of the research used is qualitative field research. This qualitative research is a research procedure that produces descriptive data both of people's written or oral words and observable behaviour.¹⁵ The research approach in this research is descriptive analysis, because the research to describe and analyze the problem occur the learning process.

This research was held in the MIN Kedungwaru Lor of the Demak regency on March 2017. The data source of this research is taken from some research object, including fourth grade teacher and supporting document of the research. Researcher use some techniques, these are observation, interview

and documentation to collecting data. While to test the validity of the data, the researcher uses the triangulation data to compare the interview data, observation data and documentation data. So, the data found are valid and true.

To analyzing the data, researchers used descriptive analysis method with three methods of the data analysis, these are data reduction, data presentation and conclusion. To avoid misunderstanding, this research is limited to the implementation of Experiential learning model in the science learning of energi and its change's material of fourth grade on MIN Kedungwaru Lor of Demak Regency.

DISCUSSION

a. Implementation of *experiential learning model*

Implementation of experiential Learning model of science on fourth grade at MIN Kedungwaru Lor of Demak regency can be seen from the steps undertaken of the teacher, such as : a) The first Step include: the teacher invite and directing the learners to pray together, the teacher check the presence of the learners and giving apresepsi which is a form of stimulus the energy and its change material by asking who was before going to school to drink something warm?, the teacher explaining the purpose and motivating the learners to be diligent and active in the learning process; b) The core activities include: the teacher exploring the learners experience by asking what is felt when holding a glass that contains warm water and what is felt when the learners near the campfire?, then proceed with elaboration stage that is the teacher start introducing learners about heat anergy, heat energy sources, heat transfer mode, heat energy forms in everyday life. After completing the explanation of the science material, the teacher

14 Ahmad Susanto, *Teori Belajar Dan Pembelajaran di Sekolah Dasar*, (Jakarta: Kencana Prenadamedia Group, 2013), ce ke-1 hlm 167-169.

15 Lexy. J. Moleong, *Metode Penelitian Kualitatif*, (Bandung: Remaja Rosda Karya, 2002), cet. XVII, hlm.3

invites the learners become 4 groups with the same assignment, that is transferring heat by conduction, convection and radiation. After practicing, the teacher helps the learners to formulate (conceptualization) from the results of his observations, and then to try in other examples of cases. To deepen the students's understanding, there is a confirmation stage. Which is question and answer between the teacher and learners; c) final activities, that applied in this activities are making conclusions from the material being studied, assessing the activities of the learners and motivating.

b. The teacher's characteristic to apply the *Experiential learning model*

To apply the Experiential learning model, some of the characteristics of the teacher are reflected: a) the teacher's intention and motivation are seen from the appearance of a teacher in terms of confidence, intention and motivation. The teacher's performance of MIN Kedungwaru Lor of Demak Regency is well mannered and neat with a calm yet self assertive attitude that illustrates from the authority's the teacher, high sense of responsibility and strive to create the success of the learning; b) the teacher use the standard language, clear intonation and pronunciation; c) the attitudes of the teacher about guiding small discussions in giving attention to learners who are divided into several small groups.

c. Learner's state to apply the *Experiential learning model*

The result of the observe the learners's state during the learning the Experiential learning model, are: a) the learners always look very enthusiastic to express their experience if the teacher ask them; b) the learners following what the teacher instructed in the discussion easily. There are some learners have less enthusiastic, so the teacher giving motivation to participate

to the group; c) the learners look enthusiastic and active to follow the learning, which is saw from their enthusiasm to pick up their book package, notebooks, and a set of stationary, and also their activeness to ask something about the material when they feel less understood and when discussion, and also exchange their opinions with their friends; d) the spirit of the learners is very high to follow the learning, and they still continue the responsibility to completing their task by the teacher given; e) the learner's attitude in the learning process are obeyed and done every teacher instruction.

d. Supporting and inhibiting factors to apply the *experiential learning model*.

There are support and inhibit factors of the effectiveness of experiential learning model, are: Supporting factors. Based on the collect data, there are supporting factors, these are the learners have the basic knowledge about energy and its change materials, by discussion models the learning become fun and responsible, the learning media so availability, the competence of the teacher to apply the experiential learning model to accommodate the various type of learners; beside that, there is an inhibiting factor, that is require a lot of time to handle the learners who don't obey the teacher.

CONCLUSION

Experiential learning model is one of the suitable learning method to science teaching of energy and its change materials. The model uses the learners experience to understanding the material, and motivating them to be active in the learning. Beside that, the learning model will give a new experience to the learners, so will be increase their confidence.

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