

APPLICATION OF SCIENCE LEARNING IN THE OPEN NATURE CLASS OF JUNIOR SCHOOL IT INSAN KAMIL, BIMA TOWN

Muhammad Irfan

STIT Sunan Giri Bima
ivan_karara@yahoo.co.id

ABSTRACT

By utilizing the surrounding environment as a learning resource students can easily master science concepts because students make observations in concrete situations. The positive impact of the environmental approach is that students can be motivated by their curiosity about something in their environment. Students will feel more challenged because students are dealing directly with real objects. Learning outcomes are very important because they become a benchmark for the extent to which the teaching and learning process takes place optimally. This study aims to determine the application of the application of natural science learning in the open air class of SD IT Insan Kamil, Bima City. This research is a type of field research, using qualitative research methods. 4. The average value of students in the skill aspect is higher than the knowledge aspect, with a skill value of 79 and knowledge of 81. This is because in the skills aspect, during Covid-19 learning students can easily learn science material at home. By collecting assignments based on students' skills, they directly learn natural science in the open.

ABSTRAK

Pemanfaatan lingkungan sekitar sebagai sumber belajar siswa dapat dengan mudah menguasai konsep-konsep IPA karena siswa melakukan observasi dalam situasi konkrit. Dampak positif dari pendekatan lingkungan adalah siswa dapat termotivasi oleh rasa ingin tahunya terhadap sesuatu yang ada di lingkungannya. Siswa akan merasa lebih tertantang karena siswa berhadapan langsung dengan benda nyata. Hasil belajar sangat penting karena menjadi tolak ukur sejauh mana proses belajar mengajar berlangsung secara optimal. Penelitian ini bertujuan untuk mengetahui penerapan penerapan pembelajaran IPA pada kelas alam terbuka SD IT Insan Kamil Kota Bima. Penelitian ini merupakan jenis penelitian lapangan, dengan menggunakan metode penelitian kualitatif. 4. Nilai rata-rata siswa pada aspek keterampilan lebih tinggi dibandingkan pada aspek pengetahuan, dengan nilai keterampilan sebesar 79 dan pengetahuan sebesar 81. Hal ini disebabkan karena pada aspek keterampilan, selama pembelajaran Covid-19 siswa dapat dengan mudah mempelajari materi IPA di rumah. Dengan mengumpulkan tugas berdasarkan keterampilan siswa, mereka langsung mempelajari ilmu pengetahuan alam di alam terbuka.

Keyword : Learning of Science, Science

INTRODUCTION

Good learning should provide opportunities for students to develop their potential and activeness. The teacher's task is not only to provide knowledge, but to prepare situations that lead students to ask questions, observe, conduct experiments, communicate and find facts and concepts on their own. With activeness in students, the achievements obtained will also increase. For this reason, an interesting and fun learning atmosphere is needed. Contextual learning is learning that relates learning material to the real world context that students face everyday both in the family, community, natural surroundings and the world of work, so that students are able to make connections between the knowledge they have and its application in everyday life.

In accordance with this framework, contextual learning theory emphasizes the multi-aspects of the learning environment such as classrooms, laboratories, libraries, employment, the environment around the school, and others. Contextual learning encourages educators to choose or design a learning environment that combines as many learning experiences as possible such as the social environment, cultural environment, physical environment, and psychological environment in order to achieve learning objectives. One of them is by learning natural science in the open that matches the character of elementary school students.¹

Learning is a process characterized by changes in a person. Change as a result that can be shown in various forms such as changes in knowledge, experience, attitudes and behavior, skills, abilities and abilities, reaction power, acceptance power and other aspects that exist in individuals. Learning will be more meaningful if the child experiences what is learned, not just knowing it. According to James O. Whittaker, learning can be defined as a process in which behavior is generated or changed through training or experience.²

Natural Science (science) is a group of systematically organized knowledge, and its use is generally limited to natural phenomena. Development is not only marked by the existence of a set of facts, but by the existence of scientific methods and scientific attitudes. Wina Putra stated that IPA subjects are not only a collection of knowledge about objects or living beings, but require work, ways of thinking and ways of solving problems. In line with the understanding, specifically IPA has a close connection with a systematic way of finding out about nature, not only a collection of knowledge in the form of facts, concepts, and principles, but also a process of solving problems and discovering knowledge. Good IPA learning should relate IPA to students' daily lives. Students are given the opportunity to ask questions, develop ideas, develop curiosity about everything in the open world. Develop skills (skills) needed to learn. The use of varied learning media resources will increase the student's learning

¹ Oemar Hamalik. *Proses Belajar Mengajar*, (Jakarta: PT. Bumi Aksara, 2008), hlm. 27

² Abu Ahmadi. et al. *Psikologi Belajar*, (Jakarta: Rineka Cipta, 1991), hal. 199

experience, make students not bored and provide an interesting learning experience for students. This is supported by Ruswandi stating that: 'utilizing the environment as a learning resource will make the teaching and learning process more meaningful, because the students are confronted with events and situations that are actually natural. Something that students learn becomes more real, more factual, and the truth is more accountable'.³

By utilizing the surrounding environment as a learning resource students can easily master science concepts because students make observations in concrete situations. The positive impact of the environmental approach is that students can be motivated by their curiosity about something in their environment. Students will feel more challenged because students are dealing directly with real objects. Learning outcomes are very important because they become a benchmark for the extent to which the teaching and learning process takes place optimally. Learning outcomes are the abilities possessed by students after receiving their learning experience. These abilities include cognitive, affective and psychomotor aspects. Learning outcomes can be seen through evaluation activities that aim to obtain evidentiary data that will indicate the level of students' ability to achieve learning objectives. Based on the results of the initial survey, there were still some students who did not understand the science material delivered by the teacher, and there were also students who played around during class hours so that learning did not take place in a conducive manner. Based on the description above, the writer wants to research the title 'Application of Natural Science Learning in the Outdoors Classes of SD IT Insan Kamil Kota Bima'

Definition of learning outcomes

Learning outcomes are the results of the learning process in the form of changes in behavior or mental improvement of students in the form of the impact of teaching and accompaniment. The impact of teaching is a result that can be measured as written in the form of a report card or in a diploma. And the impact of accompaniment is the application of knowledge and abilities in other fields. Learning outcomes can be interpreted as the abilities possessed by students after going through the process of learning activities. In the learning process students can understand and know many things so that it makes it easier to obtain learning outcomes. Learning is a process of a person trying to obtain a relatively permanent change in behavior. Learning outcomes are the level of knowledge possessed by students after carrying out the learning process. Based on the understanding of learning outcomes above, it can be concluded that learning outcomes are everything that is obtained by students from a learning process. Learning outcomes for students can be characterized by the ability to master

³ Jurnal Imiah Mahasiswa Prodi PGSD FKIP Unsyiah Volume 1 Nomer 1, 59-68 Agustus 2016

the material, the ability to solve problems, the ability to interact, good grades, and changes in behavior.

The term learning outcomes comes from the Dutch 'prestatie', in Indonesian it becomes an achievement which means the result of effort. In the literature, achievement is always associated with certain activities. Bloom divides learning outcomes into three domains, namely the realm of knowledge including low-level cognitive, but the type of knowledge learning outcomes influences the next type of learning outcomes. This applies to every field of study, for example memorizing a formula will foster an understanding of how to use the formula. Memorizing words will make it easier to make sentences. Understanding can be seen from an individual's ability to explain a problem or question. Application is the use of an abstraction in a special situation. The abstraction can be in the form of ideas, theories, or technical instructions. And applying abstractions to new situations is called application. Repeatedly applying it to old situations turns into rote knowledge or skill.

The affective domain is a domain related to attitude. The characteristics will appear when the students pay attention to the lesson, their discipline in following the lessons at school and high motivation when following the lessons. Can value teachers, study habits, and social relationships. The psychomotor domain is a realm that relates to the ability of a person's skills or abilities to act. In the psychomotor domain, there are five categories, namely: imitation, manipulation, determination, articulation, practice. Based on the description above, it can be understood that learning outcomes are learning achievements achieved by students in the process of teaching and learning activities, which are generally characterized by the achievement of learning outcomes in cognitive, affective, and psychomotor aspects.

Factors that influence learning outcomes

Learning as a process or activity implied by many things or factors. There are many kinds of factors that affect learning. The learning outcomes achieved by students are the result of interactions between various influencing factors, both internal and external factors, in detail, a description of the internal and external factors as follows:

- a. Internal factors: factors that originate from within the learner, which affect their learning abilities. These internal factors include: intelligence, interest and attention, learning motivation, perseverance, attitude, study habits, as well as physical and health conditions.
- b. External factors: factors that come from outside students that influence student learning outcomes, namely family, school, and society, family circumstances affect student learning outcomes. Families who are less well off in terms of the economy, quarrels between husband and wife, lack of attention from parents, and daily habits of bad behavior in the family can affect student learning outcomes. Based on the explanation

above, it can be seen that the factors that influence learning outcomes are internal factors, namely factors that come from within the student, external factors, namely factors that come from outside the student's self and learning approach factors, namely all the ways or strategies used by students in supporting the effectiveness and efficiency of the process of learning certain material

Contextual Learning

Contextual learning is learning that relates learning material to the real world context that students face everyday both in the family, community, natural environment and the world of work, so that students are able to make connections between the knowledge they have and its application in everyday life, by involving the seven main components of learning namely: constructivism, questioning, inquiry, learning community, modeling, reflection, and authentic assessment. The meaning of constructivism is that students construct/build their own understanding from new experiences based on prior knowledge through a process of social interaction and assimilation-accommodation. Learning is said to use a contextual approach if the learning material is not only textual but is linked to its application in the daily lives of students in the family, community, natural surroundings, and the world of work, by involving the seven main components so that learning becomes meaningful for students. Any learning model as long as it meets these requirements can be said to use a contextual approach. Contextual learning can be applied in large or small classes, but it will be easier to organize if it is applied in small classes. The application of contextual learning in a competency-based curriculum is very appropriate.

Science learning in grade V is science learning for elementary schools which is adapted to the stages of cognitive development. According to Piaget, every individual experiences the following levels of intellectual development as follows a) sensorimotor (0-2 years), at this stage the child regulates nature with his senses and (motor) actions, b) pre-operational (2-7 years), at this stage the child has not been able to carry out mental operations, c) concrete operations (7-11 years), at this stage the child begins to think rationally and accept the opinions of others, d) formal operations (11 years and over), at this stage children can formulate many alternative hypotheses in response to problems and think as adults. From this theory it is clear that fifth grade students are at the formal operational stage so that they can play an active role in learning science in the open. Science learning in class V consists of several competency standards and basic competencies which will be discussed below, focusing more on research subjects in class V semester II, the subject matter of simple machines. A simple machine is a tool used to facilitate human effort and work. Humans create various tools to facilitate and assist their various business activities and daily work. With the help of simple machines or planes, human work is getting easier and faster. Some of the aircraft or machines that were created were simple

devices. Such as scissors, corkscrews, screwdrivers and screws. The main difference between simple planes and complex planes is the components. Simple machines generally consist of one device, while complex machines are a collection of several simple machines that form a particular system. Examples include water pumps, escalators and tractors.

According to Darmono, science is a collection of rational and objective knowledge related to the universe and its contents. It was further stated that in essence natural science can be seen as a process, that is, from human efforts to understand natural phenomena in a way that is analytical, thorough, complete, and connects natural phenomena to one another, so that all of them form a new point of view about the object being observed. . Based on the opinion above, it can be concluded that Natural Science is a collection of systematic theories. Because it can be observed directly and its application is generally limited to natural phenomena. IPA is a subject that provides direct experience. The science learning process emphasizes everyday life.

Being able to instill belief in God Almighty, develop skills, attitudes and scientific values, prepare students to become citizens who are literate in science and technology, master the concept of science for the provision of life in society and continue their education to a higher level. The functions of science subjects according to the Ministry of National Education include: Providing basic knowledge, both to be able to continue to higher education levels and to be applied in everyday life, Developing skills in acquiring, developing and applying science concepts, Instilling attitudes scientific and trains students in using the scientific method to solve the problems they face, awakens students to the orderliness of nature and all its beauty, so that students are encouraged to love and glorify their Creator, fosters creative and innovative power of students, helps students understand new ideas or information in the field of science and technology, Cultivate and develop students' interest in science.

RESEARCH METHOD

The qualitative research method is a method based on the philosophy of postpositivism, used to research on natural object conditions, where the researcher positions himself as a key instrument, the selection of data sources is carried out purposively, data collection techniques are triangulation (combined), data analysis is inductive/ qualitative research, and the results of qualitative research emphasize meaning rather than generalization. While the approach used in this study is a descriptive approach to the analysis of qualitative data with data collection methods including interviews, observation and documentation. The subject of research is the source of obtaining information regarding the object of research. The subjects in this study were informants who were asked for information related to the research object. The selection of the subject uses certain considerations. The purpose of certain considerations is to refer to

parties who are considered related or choose to contribute to the object of research. The parties/subjects of the research included school principals, class teachers and fifth grade students. Data collection techniques were the most important step in research, because the purpose of this research was to obtain data. To obtain the data needed in this study, researchers used data collection techniques with the method of observation, interviews/interviews and documentation. Furthermore, the researchers used data analysis developed by Miles and Huberman which was divided into 3 activity steps, namely data reduction, data display, and conclusion drawing/verification.

RESEARCH RESULTS AND DISCUSSION

Integrated Islamic Elementary School (SDIT) Insan Kamil Kota Bima as a realization of the Ta'awun Foundation in the field of education has been prepared to become a school of excellence. SDIT Insan Kamil founded in 2007 is a follow-up program from TKIT Insan Kamil which was previously formed by the Ta'awun Foundation in 2003. The concept of educational renewal is intended to create school autonomy and underlies school-based management, so this concept allows better school management and produce quality graduates more independent. SDIT Insan Kamil Kota Bima is designed with a teaching program that seeks to answer community needs in educational packaging.

The formation of the character of students is the basis for developing quality human beings in this school. Enriched academic potential with the local curriculum in the form of Arabic and Tahfidz is expected to enrich students not only to be able to have intelligence intelligence, but also emotional and spiritual. Learning completeness for each indicator that has been determined in a basic competency ranges from 0-100%. The ideal criterion of completeness for each indicator is 75%. The educational unit must determine the minimum completeness criteria by considering the average ability level of students and the ability of supporting resources in implementing learning. Thus, then, the Insan Kamil Integrated Islamic Elementary School determines the completeness criteria for each subject.

A teacher, vision and mission, as well as facilities and infrastructure are supporting factors for learning to take place properly, so that the learning system can run smoothly. While the inhibiting factors are busy parents who are farmers and so on every day, so they cannot accompany children to study according to the time, the weather does not support when we are studying in nature, and the views of children who are very broad when studying in nature make children less focus on a learning that is done in the open. Based on research that has been carried out by researchers at the Insan Kamil Integrated Islamic Elementary School, Bima City, it is clear that natural science learning has implemented outdoor learning.

The learning system is carried out online because it is still in the condition of the Covid-19 pandemic. The teacher monitors learning through the task combination WhatsApp group, with the help of student guardian guidance. For example, in learning science for class V with simple planes and material from the earth and the natural surroundings, the teacher provides direction and guidance through the WhatsApp group. In conducting an analysis of the steps for implementing science learning in the open environment for class V, Insan Kamil Integrated Islamic Elementary School, Bima City.

Here the researcher observes the material conveyed by the teacher to students, namely about simple machines, based on the results of a documentation study on lesson plans (RPP) in science subjects class V semester II the teacher uses a basic framework for implementing learning steps consisting of preliminary activities, core activities, closing activities. Preliminary activities before entering this activity are carried out in various ways, including; apperception, pre-test, checking the number of students present followed by appreciation activities, namely conditioning students to be ready and concentrate in carrying out learning. After the preliminary activities, it is followed by the core activities, namely the teacher explaining science learning lessons, the teacher explaining the meaning, uses and benefits according to the material, giving examples of what it is like and students then mentioning examples in the surrounding environment.

After finishing mentioning the examples, then the students were asked by the teacher to practice the use of the material around them in the open. Students search for and find objects in the environment in the open according to the direction of the teacher's assignment. Students who have implemented this learning then submit assignments through photo documentation sent via the WA group to the teacher. In the closing activity, the teacher invites students to review learning by asking students to answer the questions posed by the teacher regarding the material. After the lesson is finished, the lesson is closed by greeting and reading a prayer together. This implementation has provided positive improvements in students. The application of natural science learning in the open-air class V of Insan Kamil Integrated Islamic Elementary School, Bima City is declared successful if: Students succeed in mastering the indicators desired by researchers which have been mentioned in the Lesson Plan (RPP), Students can explain the meaning of the material properly and correctly. Student learning outcomes in the form of final semester test scores (UAS) for class V Integrated Islamic Elementary School Insan Kamil Kota Bima. During the Covid-19 pandemic, it shows the success of a learner.

The application of natural science learning in the open is indeed the right choice for one of the strategies in learning natural science, this is because learning natural science in the open makes it easier for students to understand science material quickly, precisely and correctly. In the application of natural science learning in the open, students are confronted directly with

objects that are appropriate to the material. This can also trigger students to think critically and students are more active so that they will always remember what they have learned. Based on the researcher's analysis, it can be said that the learning steps carried out by the teacher who teaches the application of natural science learning in the open are very coherent and practical.

This evaluation was carried out with the aim of knowing how far students had progressed in learning natural sciences by learning in nature. Evaluation can be done at every meeting, namely when the Science subject is taking place. That way students are asked to explain according to the previous meeting, then the teacher sees, hears, and corrects what the students explain. If it is smooth, correct and appropriate then at the next meeting students can continue learning. However, if students are not fluent in explaining the material, then students must repeat the learning until it is correct, fluent and precise. The application of natural science learning in the open has brought tangible results, which can improve learning outcomes and students' abilities to become faster and better.

CONCLUSIONS

The application of natural science learning in the open-air class V of Insan Kamil Integrated Islamic Elementary School, Bima City, is carried out online in a combination of outdoor assignments. The material taught in natural science learning is material about simple machines, the earth and the natural surroundings. This material utilizes the environment around the house as a source for learning because it is still in the Covid-19 emergency period, there is no face-to-face learning in class. The selection of material is adjusted to the needs and must look at the situation and conditions because not all materials can be applied in outdoor-based learning. Learning through a combination of tasks in the open using the learning steps of preliminary, core and closing activities. Preliminary activities include; apperception, pre-test, checking the number of students present. Preliminary activities are conditioning students to be ready to carry out learning.

The core activity is that the teacher explains the science subject matter. The teacher explains the meaning, uses and benefits according to the material, gives examples and students then mentions examples in the surrounding environment. After finishing mentioning the examples, then students are asked by the teacher to practice the uses that are around them in the open. Students who have practiced these activities collect assignments through photo documentation sent via class WhatsApp. In the closing activity, the teacher invites students to review learning by asking students to answer questions posed by the teacher regarding the material and assignments. After the lesson is finished, the lesson is closed by greeting and reading a prayer together. This learning is said to be successful because the 21 students show satisfactory grades. Students have achieved the minimum completeness criteria (KKM) with a

KKM score of 70, the scores above include three aspects, namely aspects of knowledge, skills and attitudes. However, the aspects assessed only cover 2 aspects, namely aspects of knowledge and skills. Because during the Covid-19 pandemic, students studied at home so teachers could not directly assess the attitudes shown by students. The average score of students in the skill aspect is higher than the knowledge aspect, with a skill value of 79 and knowledge of 81. This is because in the skills aspect, during Covid-19 learning students can easily learn science material at home. By collecting assignments based on students' skills, they directly learn natural science in the open.

REFERENCE

- Abdurrahman, Mulyono. 1999. Pendidikan Bagi Anak Berkesulitan Belajar. Jakarta: PT. Rineka Cipta.
- Abu. et al.1991. Psikologi Belajar. Jakarta: Rineka Cipta.
- Arikunto, Suharsimi. 1996. Prosedur Penelitian Suatu Pendekatan Praktek. Jakarta : Renika Cipta
- Dahar R.W.1988. Teori-teori Belajar. Jakarta:Depdibud Ditjen Dikti. Yudianto.buku Ajar Ipa 2. Metro: STAIN JURAI SIWO METRO
- Depdiknas. 2006. Kurikulum Tingkat Satuan Pendidikan Sekolah Dasar. Jakarta: BSNP.
- Dimyanti dan Mudjiono. 2006. Belajar dan Pembelajaran. Jakarta: PT. Rineka Cipta.
- Dwi Setiyorini, Nunung.Pembelajaran Konstektual IPA Melalui Outdoor Learning di SD Alam Al-Ridho Semarang”.
- Hamalik, Oemar.2008. Proses Belajar Mengajar. Jakarta: PT. Bumi Aksara.
- Implementasinya Dalam KTSP. Jakarta: Bumi Aksara.
- Indrawan, Rully,& R.Poppy Yaniawati.2014. Metodologi Penelitian. Bandung: Refika Aditama
- Jurnal Imiah Mahasiswa Prodi PGSD FKIP Unsyiah Volume 1 Nomer 1, 59-68 Agustus 2016
- Kasiyanti. Pemanfaatan Pendekatan Lingkungan Alam Sekitar Untuk Meningkatkan Hasil Belajar Ipa Pada Siswa Kelas III Sd Negeri Tegalsari Girimulyo Kulon Progo. Universitas Negeri Yogyakarta.
- Lexi J.Moleong. 1993. Metodologi Penelitian Kualitatif. Bandung: PT. Remaja Rosdakarya.
- Mastiyah,Siti. Pembelajaran IPA berbasis lingkungan sekitar dalam mengembangkan sikap ilmiah dan keterampilan proses siswa di MIN 1 Yogyakarta.
- Mulyana, Dedy. 2001.Metodologi Penelitian Kualitatif. Jakarta: Remaja Rosda Karya.
- Mulyasa. 2002. Menjadi Guru Profesional. Bandung: Remaja Rosdakarya. Suryabrata, Sumadi. 2010. Psikologi pendidikan. Jakarta: rajawali pers.
- Muslichah. Asyari. 2006. Penerapan Pendekatan Sains-Teknologi-Masyarakat.
- Pratiwi. Pemanfaatan Lingkungan Sekitar Dalam Pembelajaran IPA DI SD. universitas negeri Yogyakarta
- Samatowa, Usman. 2011. Pembelajaran IPA Disekolah Dasar. Jakarta: PT Indeks.
- Setyoningsih, Titik. 2017. Pengelolaan Pembelajaran IPA Berbasis Lingkungan Sumaji et.al.1998. pendidikan sains yang humanistic. Yogyakarta: Penerbit Kanisius.

- Slamet. 2003. Belajar dan Faktor-faktor yang mempengaruhinya. Jakarta, Rineka cipta.
- Sudjana, Nana. 1989. Dasar-Dasar Proses Belajar. Bandung: Sinar Baru. Ahmadi,
- Sugiyono. 2012. metode penelitian pendidikan pendekatan kuantitatif, kualitatif dan R & D. Bandung Alfabeta.
- Susanto, Ahmad. 2013. Teori Belajar dan Pembelajaran di Sekolah Dasar. Jakarta: Kencana Prenada Media Group.
- Tatang, M. Amirun. 1990. Menyusun Rencana Penelitian, Jakarta: Rajawali press. S. Nasution. 2006. Metode research. Jakarta: Bumi Aksara, Cetakan ke VIII.
- Sustrisnohadi. 1991. Metodologi Research. Yogyakarta: Andi offset.
- Trianto. 2011. Model Pembelajaran Terpadu. Jakarta: Bumi Aksara.
- Utaminingsih, Retno. Pemanfaatan Lingkungan Sebagai Laboratorium Alam Pada Pembelajaran Ipa Sd” Program Studi Pendidikan Guru Sekolah Dasar Universitas Sarjanawiyata Tamansiswa.
- Wahyana dan Trianto. 2010. Model Pembelajaran Terpadu: Konsep, Strategi Dan

