Role of environmental laboratories at school as learning facilities

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Abstract. This research was carried out at the Southeast Sulawesi Province in elementary schools in the city of Baubau, in this case, the primary school that manages and utilizes the environment around the school as a learning facility. The total number of elementary schools as a whole is 118 Schools from 8 Subdistricts, out of 118 Primary Schools that manage and utilize the surrounding environment as a facility as many as 4 schools. The results obtained from the research will show that the use of natural laboratories in the school environment as learning facilities can increase student motivation, besides motivating students to create a fun learning environment for students, the use of natural laboratories in the learning process can also shape students’ character through management and utilization of the school environment.

1. Introduction

Education, in essence, is a conscious effort by a person or group of people to develop all aspects of personality and abilities possessed by humans in their togetherness both in the school environment and outside of school. Looking at the technological advances nowadays humans are required to master science and technology. Science can only be obtained through education and obtained continuously. From the description, it can be seen that there is a picture of the learning process or interaction with students and there is an effort made by the teacher to develop the potential of the student.

In this regard, human resources are fundamental national assets and the main determinant of successful development. Therefore, the quality of human resources must be continuously improved along with the progress of science, technology, art and religion. Strategic means for improving the quality of human resources are formal education, namely school.

The development of science and technology at this time requires the effort of educators and education to improve the quality of learning in order to support the acquisition of quality knowledge based on the level of development. The development of science and technology is very dependent on education personnel, in this case, the most important role is the teacher.

One alternative method that is applied to improve student learning motivation that enables students to learn optimally is to use learning resources in the natural environment. The use of the natural environment as a learning resource can help and develop the learning process in elementary schools.

At the elementary school level, a teacher must be able to increase motivation, critical power and reasoning of students through learning variations. In the learning process, there are students who do not have optimal learning motivation. The lack of learning motivation in students as students is caused
by the learning presented by the teacher tends to be textual only. Therefore, teachers must carry out various research and innovations by finding solutions to solve problems that arise in the learning process.

The optimal learning that is done by the teacher is to introduce students directly to their environment, not only to learn from the aspects of knowledge but also to foster social attitudes and broaden their horizons towards the surrounding environment [1]. Especially science subjects need a mature concept in its presentation because science lessons are knowledge of the universe and its contents, where students learn how to behave, utilize and maintain all the contents in nature, this is certainly not effective if it is just memorizing without understanding and explore the contents of the material.

The teacher has an important role in this case, the teacher as a manager in a class that determines the quality of learning, by which the teacher must be creative, dynamic, and also has warmth and understanding of the needs of his students. However, the obstacle for teachers is the limited learning facilities, one of which is a tool or learning media that acts as a concrete channeling of messages, teachers complain and feel difficulties in making learning media because of a lack of understanding and experience with creative media. Even though we are very easy to find natural science subjects in natural science, we can even get them naturally and for free, depending on how we manage and use them.

The use of nature as one of the learning facilities is a place where experiments and investigations are carried out. This place can be a closed room, room or open space. So it can be concluded that the laboratory is a room setting that is used as a place to conduct research and experiments in which there are supporting equipment. Whereas nature includes all living matter and matter, not life which is naturally on earth. Nature in a broad view has the meaning of the physical world or the material world so that it is called the purest. The natural laboratory is the use of the environment around the school to learn through observation and in direct contact with the learning object.

Learning by using natural learning resources is essentially using or utilizing the natural environment around students as a learning resource for learning needs in order to achieve learning goals. In its implementation, it can bring classes to the environment and can also be brought to the classroom/school environment. This means that learning will take advantage of the environment as a learning resource to achieve predetermined learning goals.

The use of the natural environment in the learning process has practical and economic advantages. Practical advantages because it is easy to obtain, while economic benefits because it is cheap and can be reached by all students. By using the environment as well as increasing the awareness of students to love their learning environment. This will be more meaningful, useful and can be felt directly by students.

The laboratory is an important teaching tool in teaching and learning that is carrying out observations, experiments and testing is part of laboratory functions so that the laboratory is used as a learning tool that can improve student learning achievement [2]. Teaching and learning activities in laboratories are an integral part of science education. In achieving educational goals the role of laboratory activities is very important.

Activities in the laboratory make it easy for participants to understand what they are learning the material through a scientific work approach. Learning activities carried out in a laboratory can be open and closed. Open laboratories are laboratories that are not limited such as school gardens, rivers, forests or mountains that can be used as learning facilities for students. Closed laboratories are limited by walls or in the form of rooms [3].

The natural environment has been a source of knowledge since the beginning of humanity, nature not only provided air or food for living things but knowledge which is a mystery that must be solved by humans [4]. In the world of peddling in the laboratory of nature, the whole world around us, both original and man-made, is often overlooked for practical activities. Laboratory of nature or the surrounding environment can be used as excellent learning facilities in improving understanding of
subject matter, but giving material to students it must be noted and emphasized that the environment is
used as a special learning facility available in the school environment for humans.

The environment as the basis of teaching is a conditional factor that affects individual behavior and
is an important learning factor. The learning/education/education environment consists of the
following: 1) The social environment is a community environment both large groups and small
groups. 2) The personal environment includes individuals as a person influences other personal
individuals. 3) The natural (physical) environment includes all-natural resources that are empowered
as learning resources. 4) Cultural environments include cultural and technological outcomes that can
be used as learning resources.

All human activities can not be separated from the role of the environment, it can even be said that
the environment is a basic element in human life because it has a close relationship. Environment is
the element of learning that is best for humans to understand the situation that occurs [5]. In learning
that is carried out in the school, the environment has a very broad meaning, namely learning outside
the classroom or learning in the classroom. Learning outside the classroom has significance for
students and teachers, including learning outside the classroom, students will adapt to the
environment.

A good learning environment frees students from physical stress, making it easier for students to
concentrate on school work and encourage students in logical thinking. Laboratory of nature or school
environment is the best learning facilities because learning is directly in direct contact with students.
This learning is done as an effort to increase student involvement in the use of natural laboratories as
learning facilities [6].

Ability and skills can only be internalized by seeing, modeling, drawing, compiling and building,
especially by relating to object and reality. Natural laboratories clearly illustrate that learning
resources must be maximized to be excellent learning facilities. The amount available in the school
environment is very large and varied and is usually not intentionally designed for learning purposes.

The learning environment is characterized by three important components: human resources
(students and students) teachers), mental states (reciprocal relationships) and the surrounding
environment (places of educational institutions, settings and methodological provisions for learning
and teaching) [7]. Teachers and students have a very important role in maximizing the surrounding
environment as learning facilities. In the implementation of learning the teacher should use adequate
learning resources because the use of learning resources is important in the teaching and learning
process.

The environment naturally encourages students to interact with other student students even with
adults. Observations carried out by students when observing certain objects in the environment, he
certainly wants to share the findings with others [8]. Students can engage in interaction with their
learning friends through observation in learning. Interactions that occur between learners will build
their social skills. Through activities like this students enjoy a relaxed and pleasant learning
atmosphere.

A school environment is a place for character building, besides that students must have concern for
the preservation of the environment around the school. The learning process that contains the
surrounding environment, the school plays an active role in managing and preserving it [9].

Environmental education can be integrated into a field of study in school as an effort to preserve
the environment by formally teaching in school. Environmental education is not a stand-alone field of
study [10]. In integrating learning in the environment the teacher involves students directly in contact
with nature.

The activity of observing, recording and reviewing the symptoms of nature, developing motor
skills of students in utilizing nature to find new findings is a natural laboratory function as a place to
practice developing intellectual skills through what they observe, forming the courage of students to
seek the essence of scientific truth from something objects in the natural and social environment,
provide concrete lessons that are easy to understand, give rise to curiosity accompanied by students'
curiosity about the scientific truths of an observed natural object
In the use of the environment as a learning facility can support learning activities have many advantages and reinforce the concepts of student understanding. In learning, the teacher can bring students to study into the open in this environment. As a source of learning that is very influential on the development of the school environment as a learning facility can improve social, psychomotor and emotional skills.

The steps for using learning resources for the natural environment to be carried out in this study are as follows: 1) The teacher determines the material and learning objectives that students must achieve related to the use of natural laboratories as learning facilities. 2) Determine objects and conduct investigations on the surrounding environment which will be used as a learning facility. 3) The teacher forms students in groups or individuals as needed. 4) Students receive assignments given by the teacher. 5) Students make observations on the natural environment laboratory determined by the teacher. (outside and inside the class). 6) Students discuss the results of group work. 7) Students conclude the results of observations that have been carried out and accompanied by the teacher.

Suggest that many advantages obtained in using the environment as a source of learning: 1) Learning activities are more interesting and not boring students sit in class for hours, so students' learning motivation will be higher. 2) The nature of learning will be more meaningful because students are faced with real or natural situations or conditions. 3) Materials that can be learned are richer and more factual so that the truth is more accurate. 4) Observing, asking, or demonstrating what has been found can improve student understanding. 5) The environment as a student learning facility will be rich in knowledge because of the variety that can be found in the school environment. 6) Students can foster a sense of love for the school environment so as to form a person who loves the surrounding environment.

Natural environment with regard to something of a natural nature, such as geographical conditions, climate, air temperature, season, rainfall, flora, fauna, natural resources, and so forth. The natural environment is right for the natural sciences [11]. Thus it can be concluded that the use of natural laboratories as learning facilities is very good for planting learning material in students, but it only needs to be emphasized that learning resources that are specifically provided are those that are related to the physical environment in the environment around students. In the use of the natural environment as a source of learning, a teacher must prepare as well as possible so that the learning objectives can be achieved properly.

This research was conducted in the Southeast Sulawesi region, especially in the City of Baubau which consisted of 118 elementary schools from 8 sub-districts, including 98 public elementary schools and 20 private schools. Of the 118 leading schools, only 4 schools have natural laboratory facilities, on average the school complains that the environment is not supportive in this case the geographical location of the school is densely populated and is on the edge of the land and with dense rocks that inhibit the growth of plant species. This study aims to see the experience gained by students through the use of natural laboratory learning facilities in their school environment, in the hope of providing an overview and motivation to other schools to better utilize the natural environment through teacher coordination by involving students.

2. Methods
The method used in this study is descriptive qualitative research method because the researcher wants to describe or describe the facts or circumstances or symptoms that appear in the role of the natural laboratory of the environment around the school as student learning facilities. This research was conducted in Southeast Sulawesi Province in elementary schools in the city of Baubau, in this case, the primary school that manages and utilizes the environment around the school as a learning facility. The total number of elementary schools as a whole is 118 Schools from 8 Subdistricts, out of 118 Primary Schools that manage and utilize the surrounding environment as a facility as many as 4 schools.
3. Results and discussion
The results obtained from the research will show that the use of natural laboratories in the school environment as learning facilities can increase student motivation, including activating students in learning activities because learning is no longer centered on the teacher but on students (student-oriented). The role of the teacher in the learning process is as a facilitator for students in conducting learning activities by utilizing natural laboratories and students discover and construct their own knowledge in learning based on facilities used in natural laboratories in the school environment. Besides motivating students also can create a pleasant learning environment for students, this is because learning activities are carried out directly in the natural environment by utilizing existing natural laboratories. The use of natural laboratories in the learning process can also shape the character of students through the management and use of the school environment by the school by involving students including fostering an awareness of the environment, discipline, and responsibility in maintaining the environment around the school.

4. Conclusion
Based on the results of research that has been published, it will illustrate the role of natural laboratories in the school environment as learning facilities which are marked in the form of student learning motivation in learning, the creation of a pleasant learning atmosphere and character formation in students.

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