



SCIENCE TEST INSTRUMENT BASED ON BLITAR LOCAL WISDOM IN ELEMENTARY SCHOOL STUDENTS

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Abstract

Blitar is one of the regions in East Java that has diverse local wisdom. Various uniqueness can be found in habits, customs, celebrations, regional dances, regional music, culinary, tourist attractions, social community activities and other cultures that are full of philosophy. This research uses a literature study method with a descriptive qualitative research type. Conducted with the aim of knowing various local wisdom in Blitar that can be associated with science test instruments for elementary school students. Local wisdom in Blitar needs to be recognized by the younger generation through education in order to remain sustainable. Although this research is still limited to literature studies, it is hoped that further empirical research can develop science test instruments based on local wisdom in Blitar.

Keywords: Blitar; Local Wisdom; Science; Test instruments

INTRODUCTION

Indonesia as a multicultural country has a unique and diverse cultural wealth of the work, taste and creation of local communities (Agustina, 2018). This cultural diversity is commonly known as local wisdom. Local means local while wisdom is wisdom. This is in accordance with the opinion of (Fitriana, 2016) who defines local wisdom as local wisdom that contains local ideas full of wisdom and is embraced by the community. Local wisdom is everything that becomes potential and the results of human thoughts / works that are passed down from generation to generation so that it characterizes and has wise and wise values (Shufa et al., 2018). Local wisdom that exists and grows in the community has distinctive characteristics and becomes a differentiator from other regions. Local wisdom can also be interpreted as local ideas (Sudarmin, 2014). According to (Asriati, 2012) ideas related to local wisdom can be sacred or ordinary. Based on the various opinions above, local wisdom can be interpreted as the uniqueness of an area that comes from wise and wise ideas/thoughts, customs, culture or habits of the people of the area to be maintained and preserved.

Every region in Indonesia has different local wisdom and is unique to that region, one of which is Blitar. Blitar is one of the regions in East Java consisting of districts and cities. Blitar Regency consists of 22 sub-districts, while Blitar City consists of 3 sub-districts. Blitar is one of the historical cities in Indonesia because it is the birthplace of one of the Proclamator Fathers, Ir. Soekarno. Blitar is also known as the City of Patria, quoted from <https://blitarkota.go.id/id>, the word

PATRIA means "Love of the homeland". When using the word PATRIA, it can remind people of the spirit of nationalism that patriots from Blitar have shown through their dedication in fighting.

As an area rich in local potential, the wisdom that exists in Blitar needs to be recognized, especially by the younger generation, one of which is through science learning at school. Natural Science is one of the subjects that aims to provide students with structured knowledge, ideas, and concepts about the surrounding environment (Fahrezi et al., 2020). To develop cognitive, affective, and psychomotor aspects in science learning, science learning needs to be carried out in accordance with basic scientific principles, which include processes, results, and attitudes (Sayekti, 2019). In this context, science learning as a process includes various investigative skills such as observation, measurement, data analysis, conclusion drawing, and so on. Science learning as a result is related to the accumulation of knowledge which includes concepts, principles, laws, and theories in the field of science. Meanwhile, science learning as an attitude relates to ways of thinking and approaches to scientific problems.

In learning science, learning must be associated with a contextual approach so that learning is more meaningful. Contextual learning is learning that connects material with students' environmental conditions (Melawati & Istianah, 2022). Law Number 20 of 2003 concerning the National Education System and Regulation of the Minister of National Education of the Republic of Indonesia Number 81A of 2013 state that schools are fully supported to organize learning that incorporates local wisdom values. This is because Indonesia is rich in local potential. Incorporating local wisdom values into the learning process is very important, so that students recognize and are able to develop local potential in their environment. According to previous research, learning local wisdom-based tests can also improve students' cognitive learning outcomes (Khaerani et al., 2020).

The utilization of local wisdom in science learning can help students to develop a deeper understanding of their surrounding environment, as well as appreciate and preserve local cultural heritage. According to (Rahmatih et al., 2020), wisdom values from local wisdom can be implemented into the characteristics of science in the form of attitudes, processes and products. The utilization of local wisdom in science learning can be integrated in test instruments to evaluate student learning outcomes. In Blitar itself, elementary schools have not integrated local wisdom in evaluation questions. This study will discuss various Blitar local wisdom that can be integrated in science learning, especially in test instruments.

METHOD

The research method used is a literature study with a descriptive qualitative research type with library research. Literature study in the form of reviewing various written sources in the form of journals, articles and other relevant documents aims to collect information related to local wisdom in Blitar. The data obtained is used as a basis for exploring the value of wisdom that can be integrated into local wisdom-based science test instruments for elementary school students.

FINDING & DISCUSSION

The local wisdom that will be integrated in this study is local wisdom in Blitar. Some local wisdom that allows to be integrated in the development of science test instruments for elementary school students are as follows.

1. Batik Turi of Blitar City



Figure 1 Batik Turi of Blitar City. Taken from <https://blitarkota.go.id/>

On October 2, 2018, the Blitar City Government ratified Kampung Turi as Kampung Batik Kembang Turi. This step was taken as an effort to preserve local heritage and improve the economy of the community, especially in Turi Village, in the field of batik (Oetari & Rosandini, 2021). The typical motifs in Kampung Batik Kembang Turi are the Kembang Turi and Koi Fish motifs. According to Mrs. Eti Rohaeti, who serves as the secretary of Kampung Batik Kembang Turi, the philosophy associated with Batik Kembang Turi is actually only limited to reflecting the name of the village and creating a distinctive identity from Blitar City, although it does not have a very deep meaning. However, based on an interview with Mr. Nanang Pramadi, who is the Chairman of the Original Blitar Batik Association (ABABIL), the philosophy behind the Kembang Turi batik motif is that the Turi Plant is a symbol of life that can grow anywhere, and the Koi Fish has a positive meaning that means goodness (Oetari & Rosandini, 2021).

In the context of science instruments, the process of making turi batik can be integrated in the material of changes in the form of objects found in class 5 KD 3.6 Apply the concept of heat transfer in everyday life. The process of making batik in Kampung Batik Kembang Turi still uses traditional methods both together and individually. The current batik production system in Kampung Batik Kembang Turi is rooted in the experience gained by the community and artisans during the training provided by the government. In the process of making Batik Kembang Turi, the square repeat (one-step) motif technique is used, which is a simple and basic method, in accordance with Kight's (2011) research. The coloring technique involves colet, where the dye is applied directly on the surface of the fabric, as suggested by Gratha (2012). Dyeing also involves the use of remasol dyes with color locking using waterglass.

2. Kebon Rojo Park



*Figure 2 Picture of the Fountain Roundabout in Kebon Rojo Park Blitar.
Taken from: Google Maps / M Yunus Bahtiar*

Kebon Rojo Family Recreation Park, previously known as Kebun Ratu Wilhemina, is a park inherited from the Dutch colonial government (Burhani et al., 2014). The park is located on Jalan Diponegoro, right behind the official residence of the Mayor of Blitar, and adjacent to the home of the late President Dr. Ir. Soekarno's parents on Jalan Sultan Agung. In addition to functioning as the lungs of Blitar city, this park is also a place of gathering, learning, recreation, debate, and vacation for the local community. People also often come to this park for fresh air. Besides being overgrown with shady trees, in Kebon Rojo Park there are also various types of animals, including deer, protected green peacocks, ostriches, starlings, gonggong quails, walik chickens, alas chickens, hedgehogs, and long-tailed monkeys, ostriches, and pigeons.

Ecosystems in Kebon Rojo Park can be used as material for developing local wisdom-based science test instruments in grade 4 KD 3.2 Comparing the life cycles of several types of living things and linking them to conservation efforts, grade 6 KD 3.1 Comparing how plants and animals reproduce.

3. Grebeg Pancasila



Figure 3 Grebeg Pancasila. Taken from Kompas.id

Grebeg Pancasila is a tradition that is still being honored by the people of Blitar City. This tradition was initiated by Blitar culturalists and artists to continue commemorating the birthday of Pancasila. Grebeg Pancasila is a festival celebration or tradition to commemorate the birthday of Pancasila, which is held every June 1 in Blitar City (Sari & Wahyunigtyas, 2021). In the implementation of Grebeg Pancasila, it consists of five stages, namely Bedholan Grebeg Rite, Tirakatan Night Rite, Cultural Upaca Rite, Kirab Gunungan Lima Rite, Kenduri Pancasila Rite (Novitasari et al., 2021).

In the implementation of Grebeg Pancasila, there are many rituals that must be carried out and can be related to IPA, one of which is the Kirab Gunungan Limo ritual which begins with the Atthasila ritual. The Atthasila ritual contains eight moral rules in which there is a recommendation to fast after 12 noon until dawn the next day. The goal is to endure hunger and lust to do bad things, fasting activities are closely related to class 5 digestive material KD 3.3 Explain the digestive organs and their functions in animals and humans and how to maintain the health of human digestive organs.

4. Drop ice



Figure 4 Blitar's signature ice drop. Taken from Detik.com

Drop ice is unique to Blitar City, known as its signature ice cream. It was first created around the 1930s and in the 1990s, it became a popular dish in important events (Rohmah & Suprayitno, 2018). Unlike regular ice cream produced by factories, drop ice is home-made. The basic ingredients of this ice consist of brown sugar and coconut milk which are then frozen. The presentation has a unique touch because sunduk or sticks are used to scoop it, similar to sunduksate, instead of sticks like several flavors, such as strawberry, chocolate, durian, and mung bean. With an affordable price, drop ice is highly sought after by local people and tourists from outside the city.

Blitar ice drop can be integrated into science, especially in the process of changing form from liquid to solid, according to 5th grade material KD 3.7 Analyze the effect of heat on changes in temperature and form of objects in everyday life.

5. Kendang Jimbe



Figure 5 Kendang Jimbe Blitar. Taken from Finance.detik.com

Kendang jimbe is one of the icons of Blitar City even though it is not the original craft of Blitar City. The production of jimbe drums in Blitar City has penetrated the international scene to Asian countries such as China (Alivia, 2021). Kendang Jimbe is played by beating directly using bare hands. Blitar jimbe drums have a curved shape, while jimbe drums from other regions tend to have an oval shape. There are also various motifs in the kendang jimbe craft. The uniqueness of the complex manufacturing process and the variety of motifs are the reasons why Blitar jimbe drums are in demand at the international level. In addition, its attractive visual appearance and melodious sound also make it in wide demand.

In relation to science, kendang jimbe is one of the sound sources that has a certain frequency, according to the material of grade 4 KD 3.6 Apply the properties of sound and its relationship with the sense of hearing.

6. Emprak Dance



Figure 6 Emprak dance. Retrieved from <https://risaindrii.wordpress.com/>

Blitar also has a variety of arts, including Emprak dance, Jaranan, and Barong Rampog dance. One of the arts that has grown and developed is Emprak dance. Emprak dance is the result of new creations derived from the traditional art of Emprak. Dimas Pramuka Admaji created the concept of Emprak dance as a response to the lack of public interest and government attention to Emprak art (Mentari,

2016). Thus, Dimas elevated Emprak art into an innovative dance work that became an attraction for Blitar residents. The Emprak dance is not only inspired by Emprak art, but also includes elements of typical Eastern Javanese movements and several other folk arts in the Blitar region, such as Tayuban and Jaranan. All these movements are then put together with a touch of distortion and stylization to form a complete dance work.

Emprak dance can be integrated into science, especially the movements in this dance are related to the material of human locomotion, 5th grade material KD 3.1 Explain the means of motion and their functions in animals and humans and how to maintain the health of human locomotion.

7. Tambakrejo Beach



Figure 7 Tambakrejo Beach. Picture taken from <https://wisataku.blog/>

Tambakrejo Beach is one of Blitar's natural tourist destinations located in Tambakrejo Village, Wonotirto District, Blitar Regency. This beach presents extraordinary natural beauty, with white sand that reaches about 10 km in length, sparkling blue sea water, and a stunning bay (Nugraheni & Suryawan, 2018). In addition to its natural beauty, Tambakrejo Beach also offers a unique experience with fishing villages lined up around it. Here, you can see fishing boats ready to explore the ocean. One of the popular activities at Tambakrejo Beach is enjoying the calm waves. Travelers can bask in the sun, swim in the clean beach, or explore the surroundings with traditional fishing boats.

Community activities at Tambakrejo Beach can be related to science materials in elementary schools, for example the utilization of sea breezes by fishermen. This is in accordance with KD 3.6 Apply the concept of heat transfer in everyday life.

CONCLUSION

Local wisdom can be interpreted as the uniqueness of an area that comes from wise and wise ideas/thoughts, customs, culture or habits of the people of the area to be maintained and preserved. The local wisdom of each region has different uniqueness, Blitar is one of the regions rich in diversity. Various local potentials that can be integrated in science learning in elementary schools through local wisdom-based test instruments, including, Batik Turi Khas Blitar can be integrated in the

material of changes in the form of objects and heat, Kebon Rojo Park Blitar ecosystem material, Grebeg Pancasila digestive organ material, Es Drop typical of Blitar material changes in the form of objects, jimbe drums sound material and emprak dance related to human locomotor material.

This research is still limited to literature studies, but it is hoped that further empirical research can develop local wisdom-based science test instruments in Blitar. A valid and reliable local wisdom-based test instrument can provide new experiences for students. In addition, local wisdom in Blitar can be preserved and recognized by the younger generation.

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