Journal of Curriculum and Pedagogic Studies (JCPS)
Vol. 3 No. 1 June 2024, Page. 14 -21
https://e-journal.lp2m.uinjambi.ac.id/ojp/index.php/jcps

The Potential of "Pelak" as a Science Learning Media at SMP Negeri 5 Kerinci on Plant Diversity Material

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ABSTRAK

Pelak or garden is land owned by the community for planting various kinds of plants which is located not far from the house. *Pelak* has the potential as a real learning medium. This research aims to find out the types of plants found in *Pelak* and the potential of *Pelak* as a science learning medium, especially plant diversity material at SMPN 5 Kerinci. This research uses a qualitative approach. Data was collected through interviews and observations. The resource person for this research is the owner of *Pelak* and the 7th grade science teacher. Based on the research results, it is known that in *Pelak* around SMP Negeri 5 Kerinci there are a variety of plants consisting of 9 types of plants. Five of them fall into the monocot group and 4 dicots. Of the several types of plants, the most numerous are the zingiberaceae group. The potential of acting as a learning medium can be seen from the diversity of plants, the close distance to schools, the shady and comfortable atmosphere, the security in the surrounding area which is maintained because it is close to residential areas, the existence of internet access which can support students in obtaining learning information online and The surrounding environment provides opportunities for students to learn directly from real objects.

Keywords : Plant diversity, Pelak, Potential

Introduction

In the teaching and learning process, two very important elements are teaching methods and learning media. These two aspects influence each other. Choosing a particular teaching method will have an impact on the appropriate type of learning media, without forgetting three other important aspects, namely objectives, materials and learning evaluation. In this case, it can be said that one of the main functions of learning media is as a teaching aid which also influences motivation, conditions and the learning environment. (Badan et al., 2002).

The use of teaching media at the teaching orientation stage will greatly help the effectiveness of the learning process and delivery of messages and lesson content at that time. Media is one means of improving learning process activities. The diversity of media each has different characteristics, therefore it is necessary to choose them carefully and appropriately so that they can be used effectively. Learning media has a very important role. Learning media is not only a complement to the learning process but is also one of the determining factors for the success of the learning process in the classroom. Learning media has several functions, namely communicative, motivational, meaningful, equalizing perception and individuality. These five functions provide an explanation that learning media has a positive impact on the learning process (Aghni, 2018).

The use of appropriate media in biology learning is one solution to various problems related to students' learning interest and motivation. Proper use will increase students' attention to the topic to be studied, with the help of media students' interest and motivation can be increased, students will concentrate more and it is hoped that the learning process will be better so that ultimately student learning achievement can be improved. Therefore, the use of media as a tool in learning must be chosen appropriately and can really help students understand the material presented (Falahudin, 2014). One of the learning media is realia media.

Realia media is a learning strategy that utilizes tools or materials that exist in the student's environment, which can be in the form of plants, village parks, fields/gardens and school equipment or other concrete objects in the student's environment, with the aim of involving direct experience and challenges students' adventurous spirit to become more familiar with the surrounding environment. What most teachers must know and realize is that the use of concrete or real media can help students understand the material being studied, especially material that students consider difficult (Khairurraziqin, 2022).

Real learning media such as Pelak or gardens are a planned and sustainable land use system and technology owned by the community to plant various kinds of plants. Pelak or gardens, which are located not far from home, are only known in Jambi Province, especially in Kerinci Regency, one of which is in Siulak District.

The actors being developed are expected to be able to provide benefits to humans and to improve human welfare. Pelak is expected to help optimize the results of sustainable land use in order to guarantee and improve the living needs of the community and increase the carrying capacity of human ecology, especially in rural areas.

Pelak is a planned and sustainable land use system and technology, which is implemented on one unit of land by combining woody plants and agricultural plants carried out at the same time or alternately, and is divided into two systems, namely simple agroforestry and complex agroforestry. Simple agroforestry is a combination of tree and annual crops on one land which is carried out by intercropping, while complex agroforestry is land management involving many types of trees so that it resembles a forest ecosystem.

As is the case at SMP Negeri 5 Kerinci, the pelak is not far from the school's surroundings, and also by looking at the diversity of plants in it, therefore utilizing the surrounding environment like this pelak as a real medium for science learning can help provide new experiences for students in develop the knowledge you already have. Apart from that, with this research we can develop or introduce Pelak so that it is more widely known as the culture of the Kerinci people.

However, it is known that at SMPN 5 Kerinci currently teachers still predominantly use conventional methods as a way to deliver learning material, especially in biology lessons. Learning only takes place in the classroom which only relies on supporting books or worksheets. In fact, the environment around this school has the potential to be used as a medium for learning science, especially biology.

Methods

This research uses a qualitative approach. Qualitative research is research in which the data is in its natural state or as it is (naturalistic, natural setting), not changed in the form of symbols or numbers with the aim of finding the truth behind objective and sufficient data. In this study, the research subjects were: Science Teacher VII SMPN 5 Kerinci and the owner of the farm. To obtain data and information related to this research, the author used several methods, namely interviews, observation, inventory, documentation. The Research Stages are 1. Analyzing the curriculum (KI, KD, and learning objectives), 2. Determining the characteristics of the biology material to be taught, 3. Ensuring the relevance of the chosen method, 4. Determining the characteristics of students with local geographic background, 5. Ascertaining the potential ultimately as a source of learning from the surrounding environment. Activities in data analysis, namely data reduction (Data Reduction), data display (Data Presentation), and conclusion drawing (Verification).

Results and Discussion

Results

Types of plants found in Pelak around SMPN 5 Kerinci

Based on the results of observations, it is known that there are 3 players around SMPN 5 Kerinci. Each of these players has a different distance, for the first player is quite close, around 150m from the school, the second player is around 260m from the school and the third player is around 500m from the school. Of these three players, two of them are no longer looked after by their owners. However, only one actor is still being taken care of, therefore the author only researched one actor around SMPN 5 Kerinci.

Based on the results of research and interviews with pelak owners, it is known that there are 9 types of plants found in pelak (Table 1).

The potential of the pelak plant as a science learning medium, especially biology, at SMPN 5 Kerinci

Based on the analysis of the teaching module for semester 1 of class VII at SMPN 5 Kerinci in science subjects, it is known that there is a discussion chapter on biodiversity. This chapter is further divided into subchapters, regarding species-level diversity material, species-level diversity material also contains a discussion of plant diversity.

From the research results, it is known that pelak also has the potential for plant diversity that can be used as material, apart from that there are also several other potentials. Some of the potential culprits include:

1. In the pelak there is a diversity of plants consisting of monocots and dicots.
2. The distance traveled, when viewed from the distance between SMPN 5 Kerinci to Pelak, from measurements using Google Maps is 260m. To get to that location it only takes about 5 minutes. So getting to that location won't take long.
3. The general situation is quite conducive for learning because the atmosphere is cool, and around there are several houses and shady trees, the place is still located in a community environment.
4. This student is still located in the village community area, so internet access is still accessible so that it can support learning if internet access is needed during learning time.
5. Regarding learning materials and direct exposure to the surrounding environment, it provides opportunities for students to learn from real (concrete) objects.

Table 1. Diversity of plant types found in the fields around SMP Negeri 5 Kerinci

NO	Area Name	Scientific Name	Plant Groups	Benefits according to	Benefits according to literature
1	Turmeric	*Curcuma longa*	Yearly	Used as a cooking spice	Used as an antibacterial, antitumor, anticancer, antioxidant, antiseptic and anti-inflammatory, turmeric can also reduce fat and cholesterol levels in the blood and liver. (Fahryl & Novita, 2019).
2	Galangal	*Alpinia galanga*	Yearly	Used as a cooking spice	To treat several diseases including antifungal, antitumor, liver disease, rheumatism, fever and diabetes (Jannah et al., 2022).
3	Ginger	*Zingiber officinale*	Yearly	Used as a cooking spice	To prevent and treat diseases such as rheumatism, vertigo, nausea, coughs, aches, motion sickness, asthma, muscle aches etc. (Redi Aryanta, 2019).
4	Lemongrass	*Cymbopogon ciratus*	Yearly	Used as a food flavoring	Used as a traditional medicine such as treating sore throat, intestinal inflammation, stomach inflammation, diarrhea, mouthwash and stomach ache (Murdiyah et al., 2022)
5	Singkong/ Cassava	*Manihot esculenta* Crantz	seasonally	It has many benefits, such as tubers that can be processed into various foods, leaves as vegetables	Can be a source of energy, control blood sugar, antioxidants, etc(Fauzi et al., 2015)
6	Beans	*Phaseolus vulgaris* L.	seasonally	As a vegetable	Facilitates digestion, keeps the heart healthy, increases immunity, increases body metabolism, overcomes kidney stones (Nugrahani et al., 2016).
7	Onions	*Allium cepa L.*	seasonally	Used as a cooking spice or flavoring	Contains active elements which have the ability to suppress bacterial activity, stimulate body cell growth, as an antibiotic ingredient and as a source of vitamin B1 (Basuki, 2014)
8	Eggplant	*Solanum melongena L.*	annualilly seasonally	As a vegetable	Prevents hypertension, as an anti-seizure and anti-cancer disease and is also very good for digestion (Sobir et al., 2018)
9	Chilli	*Capsicum annuum L.*	seasonally	Used as a cooking ingredient	Helps cure muscle spasms, rheumatism, sore throats and allergies (Soepomo, 2013)

Discussion

Types of plants found in Pelak around SMPN 5 Kerinci

Pelak or garden is a planned and sustainable land use system and technology owned by the community to plant various kinds of plants. Pelak or garden, which is located not far from home, is only known in Jambi Province, especially in Kerinci Regency, one of which is in Siulak District. In general, various types of plants are planted in pelak, such as vegetables, chilies, shallots, beans, cassava, eggplant, turmeric, lemongrass, galangal, ginger and so on. Of the 9 species planted by the pelak owner, they belong to 7 families and the most numerous is zingiberaceae.

On average, the plants planted by smallholders are for their own consumption. These plants can be taken or harvested at any time. For example turmeric, galangal, ginger, lemongrass. However, there are also types of plants that when harvested are sold. For example, red onions and chilies. Shallots are only harvested once every 3 months, while this type of chili can be harvested 4 times in 1 month.

The potential of the pelak plant as a science learning medium, especially biology, at SMPN 5 Kerinci

Based on the results of observations and interviews, it is known that the fields around SMPN 5 Kerinci can be used as a learning medium.

So the plant species in this lake can be used as a reference in discussing plant diversity at the species level and its benefits. Based on the results obtained, there are several potential supports, one of which is:

Types of plants found in Pelak around SMPN 5 Kerinci

1. Plant diversity

There are 9 types of plants consisting of monocots and dicots. Of the several types of plants, there are 5 types of plants classified as monocots and 4 dicots and the most numerous are the zingiberaceae family. So there is a lot that can be learned from the type of plant to its morphological characteristics so that they can differentiate by looking directly at the diversity of plants in the surrounding environment, especially the pelak. This plant can represent class VII science learning, especially regarding plant diversity material. Because the diversity of existing plants can represent two groups of higher plants, namely monocots and dicots.

2. Mileage

When viewed from the distance between SMPN 5 Kerinci to Pelak, from the results of measurements using Google Maps, it is 260m. To get to the location it only takes about 3 minutes by motorbike, with the road in good condition because it is paved. So it won't take long to get there. This time efficiency in getting to the location is important in learning outside the classroom, because it doesn't take long.

3. Atmosphere and Security

Lokaso Pelak is quite conducive for carrying out learning activities because the atmosphere is cool with lots of shady trees, thus giving students a feeling of comfort when studying. Apart from that, Pelak is also close to residential areas. The place is still located in the community area which is located on the bank of a small river in the Tebing Tinggi village area.

4. Internet Access

This pelak is still in the village community area, so internet access is

still accessible so it can support learning if internet access is needed during learning time.

5. Benefits of Studying in Nature

Learning in Nature is a learning activity that uses techniques, tools, methods and a variety of learning activities that are usually carried out in the classroom but carried out outside the classroom by utilizing interesting sources from the natural surroundings such as in parks, school yards, under trees or in gardens. because in its delivery it relates to concrete objects.Jadi dengan mengajak siswa belajar di alam terbuka mengenai materi pembelajaran tentang keanekaragaman tumbuhan di lingkungan sekitar, maka mereka mendapatkan kesempatan untuk belajar dari benda yang nyata. Benda yang nyata ini bisa berwujud aneka tanaman atau sekedar mengamati fenomena alam. Dengan belajar dari sesuatu yang nyata, mereka akan lebih mudah memahaminya (Tiara, 2022).

So far, information from students is that learning is carried out only through the lecture method, teachers have never invited them to carry out learning in the surrounding environment. Based on the results of interviews with science teachers, information was also obtained that previously they had implemented learning outside the classroom or used the surrounding environment as a learning medium, but now it is rarely implemented because up to now teachers still only use conventional methods in the learning process. So by looking at some of the potential outcomes above, it can be used as a learning medium for students to have the opportunity to study in the field or learn in real life.

Conclusion

The types of plants found in pelak generally include vegetables, chilies, shallots, beans, cassava, eggplant, turmeric, lemongrass, galangal, which are types of plants that are often used for daily needs. In Pelak around SMP Negeri 5 Kerinci there is a diversity of plant species, consisting of 9 types of plants, of which there are 5 types of plants classified as monocots and 4 dicots. Of the several types of plants, the most numerous are the zingiberaceae group. The potential of Pelak as a science learning medium at SMP Negeri 5 Kerinci can also be seen from the diversity of plants, the distance to the location, the atmosphere and security of Pelak, internet access and the surrounding environment which provides opportunities for students to learn from real objects.

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