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The Potential of Sambas Malay Saprahan Tradition as a Culture-Based Biology Learning Resource

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Abstract: The process of modernisation makes a person forget his identity and identity as an Indonesian nation, so that it can result in the loss of noble cultural values and local traditions that risk resulting in the loss of cultural identity, one of which is saprahan which is a tradition of eating together in the Sambas Malay tribe. This study aims to identify plants and animals in the Malay saprahan tradition as a culture-based biology learning resource and analyse the potential of the saprahan tradition as a learning resource. The research method used is descriptive-explorative method, data collection through interviews, observation, identification, and response questionnaire. The results showed that there were 11 dishes in the saprahan tradition that used 20 types of plants and 5 types of animals. The results of the study are in accordance with the material classification of living things, food production, biodiversity. Diversity in the Sambas Malay saprahan tradition has the potential as a culture-based biology learning resource with an average score of 85% (Very Feasible).

Keywords: malay tribe sambas, learning resources, sarahan tradition.

▪ INTRODUCTION

Education has a very important role in shaping and creating quality human resources, namely individuals who have the ability, knowledge and character to face the challenges of the times. Education is not only a necessity, but also a cultural process that takes place systematically, planned, and structured, and is carried out continuously and continuously to ensure that the results achieved are in accordance with the learning objectives and the development of society as a whole (Banila et al., 2021). Teachers as the main actors in the educational process play a very crucial role in creating meaningful learning experiences for students. Teachers are required to continue to innovate in delivering learning materials, both through the use of creative teaching methods, integrating modern technology, and developing learning strategies that suit the needs and characteristics of students (Hamda et al., 2021). Including in biology subjects, so that learning objectives are achieved properly. Biology, as the study of living things and life, requires a contextualised approach to improve student understanding (Anggoroputro & Salamah, 2021). One approach that can be optimised is the use of the environment and local culture as a learning resource (Sari & Ma'rifah, 2021).

A culture-based approach offers a more meaningful learning experience (Fatmi & Fauzan, 2022). One of them is by integrating local traditions such as Saprahan Melayu Sambas. This tradition reflects the cultural values of the people of Sambas, West Kalimantan, which are closely related to togetherness, gotong royong, and sustainability. Saprahan, a tradition of eating together in a circle on the floor, is not only a social symbol but also contains potential as a relevant biology learning resource (Hemafitria et al., 2018). Saprahan is eating together and sitting cross-legged in groups of six people each. Saprahan is part of the culture of the Sambas Malay community which is very thick and closely related to the lives of its people (Syahrin & Nurida, 2018). The Saprahan tradition

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shows a close relationship between culture and ecology. The process of preparation and implementation of this tradition involves the utilisation of local biodiversity such as animals (chicken, cattle, fish) and plants (tomatoes, cucumbers, onions, pineapples, and spices) that are relevant to biological concepts such as ecosystems, biodiversity, and conservation. Efficient consumption patterns and food waste management can be used as learning materials on sustainability and organic waste management.

In a study conducted by Ramadhan (2018) examines the tradition of saprahan in Malay society in Sambas Regency. The study states that the saprahan tradition has Islamic educational values, one of which is the value of simplicity, which is reflected in the food served in saprahan. The food served is usually simple and not excessive, so it does not show an element of luxury. In addition, the saprahan tradition also reflects the harmonious relationship between the host and the guest, where both respect each other and maintain intimacy. Research Hastiani et al (2020) explains that traditional Saprahan values, such as openness, politeness, caring, and togetherness, play an important role in shaping the self-identity of Pontianak adolescents, with culture-based counselling in schools helping to strengthen the character of adolescents who are able to balance modernisation with local traditions. While the research conducted by Hasmika & AR (2022) explained that the Saprahan Tradition as local wisdom contains religious values, equality, mutual cooperation, togetherness, solidarity, and justice that are relevant to civic education, supporting the mission of Civics in shaping a civic culture that reflects the character of the Pancasila precepts and strengthening democratic life based on sociocultural values. From several studies that have been conducted, no studies have been found that specifically link biology learning with the saprahan tradition. In fact, the saprahan tradition contains elements of biology, especially those related to the food dishes. This is what makes this research very important to do.

In addition, the health aspects of this tradition, such as food hygiene and eating behaviour, can be integrated into the learning of microbiology, sanitation and public health. Thus, students not only understand biological concepts cognitively but also apply them in everyday life. Despite its rich potential, the Saprahan tradition is being eroded by modern lifestyle changes. The younger generation tends to be less familiar with this tradition, this is due to the process of modernisation which makes a person forget his identity and identity as an Indonesian nation, so that it can result in the loss of noble values of local and national culture and traditions. which risks resulting in the loss of cultural identity (Utami & Suharno, 2021). Biology teachers in initial interviews also revealed that the textbooks used do not support the integration of local culture, so learning becomes less contextualised and limited to theoretical concepts.

To overcome this challenge, culture-based biology learning such as Saprahan can be developed. Teachers need to design innovative learning strategies by utilising local traditions as media and learning resources. In this way, students are invited to be more active, get direct and meaningful learning experiences, and understand the relationship between culture, biology and the environment. Integrating Sambas Malay Saprahan tradition in culture-based biology learning not only improves students' understanding of scientific concepts but also instils cultural awareness and love for local heritage. Through this step, education can contribute to preserving local culture while preparing students to face global challenges with a more caring attitude towards the environment and sustainability.

▪ METHOD

The population in this study consisted of traditional leaders, Sambas palace courtiers, cooks, Sambas Malay indigenous people, and high school biology teachers in Sambas region. The sample of this study was 30 people consisting of traditional leaders, the people of Sebangun Village, Lumbang Village, and Dalam Kaum Tekarang Village who were involved in the Sambas Malay saprahan tradition. The sampling method used snowball sampling, where the first informant provided information to find the next informant, and so on until the sample size was reached. The researcher selected the informants based on their involvement in the tradition and knowledge relevant to the research.

This research used a descriptive-exploratory design, with the following steps: The first stage included the preparation of research instruments, such as interviews, questionnaires, and observation sheets. Data collection was conducted through interviews with traditional leaders, the community, and biology teachers using snowball sampling technique. Observations were made on the saprahan tradition that took place on 11-12 May 2024. After the data were collected, analysis was conducted to identify the potential of plants and animals in the saprahan tradition that can be used as a source of culture-based biology learning. The results of the analysis were then compiled in a research report containing conclusions and recommendations for the development of culture-based biology learning. The period of this research lasted for 1 month, starting from preparation to reporting the results of the research.

The instruments used in this study were interviews, questionnaires, and observations. Interviews using semi-structured interviews conducted with traditional leaders, palace servants, indigenous people, and biology teachers to explore information related to the saprahan tradition and the potential of plants and animals related. The questionnaire was used to identify potential learning resources related to the saprahan tradition. The questionnaire consisted of 16 questions which represented 6 aspects of learning resources. Observations were made of the saprahan tradition to identify plants and animals used in the tradition. This observation instrument focuses on direct observation and recording of relevant phenomena. To ensure the validity and reliability of the instrument, a pilot test was conducted on several respondents outside the research sample to obtain feedback that was useful in refining the instrument before it was used in the main research. To calculate the percentage of teacher questionnaires, the following formula was used (Ardiyanto et al., 2024) :

$$P = \frac{f}{\mathrm{N}} \times 100\%$$

Furthermore, the percentage score of the teacher response questionnaire was analyzed in accordance with the criteria of the potential category rubric indicators, as shown in Table 1 below:

Table 1. Category potential of sambas malay saprahan tradition as a biology learning resource

Persentase	Interpretasi
81% ≤ skor ≤ 100%	Very Decent
61% ≤ skor ≤ 80%	Feasible
41% ≤ skor ≤ 60%	Decent Enough

21% ≤ skor ≤ 40%	Not Eligible
0% ≤ skor ≤ 20%	Very Less Worthy

(Sunarya et al., 2024)

Data collected from interviews, observations, and questionnaires were analysed using qualitative and quantitative analysis techniques. Qualitative analysis in the form of interview and observation data was analysed using coding techniques to identify the main themes related to the potential of plants and animals in the saprahan tradition that can be used in biology learning. This process was carried out inductively to find patterns that emerged from the data. Quantitative analysis in the form of questionnaire data was analysed using descriptive statistics to describe the potential of learning resources and biology teachers' understanding of the use of local wisdom in learning. This analysis includes the calculation of the frequency and percentage of answers from 4 biology teachers who filled out the questionnaire.

▪ RESULT AND DISSCUSSION

Based on observations at Sambas Malay traditional weddings in Dalam kaum village, Lumbang village and Sebangun village, there were 11 dishes, namely white rice, sardine-cooked tuna, red-cooked chicken, beef stew, salted (dried) fish, jackfruit vegetable, fried noodles mixed with long beans, spicy sour belulang, pickled cucumber and pineapple, white boiled eggs (opor telur), and cincalok. From the results of interviews with 30 resource persons, namely the Prince Ratu of Sambas Palace, local traditional leaders, cooks at weddings, and housewives.

Table 2. Saprahan food menu

No	Food list	Types of plants and animals on the plate
1	*Nasi putih*	In rice cooking, there is a plant that is used as the main ingredient, namely the rice plant
2	*Tongkol masak saus cabai (Tongkol chili saus)*	In sardine-cooked mackerel tuna, the animal used is mackerel tuna as the main ingredient. Plants that are usually used as seasonings include shallots, garlic, red chillies, tomatoes, ginger and candlenuts..
3	*Sup Nangka*	In vegetable jackfruit dishes, the plants used include young jackfruit as the main ingredient, coconut milk derived from coconut, and spices such as shallots, garlic, red chillies, galangal, and coriander.
4	*Ikan Asin*	In the dry fried anchovy dish, which is used as the main ingredient and seasoning, the animal used is dried anchovy as the main ingredient..
5	*Mie Goreng Campur Kacang Panjang*	In a long bean mixed fried noodle dish, long beans are the main ingredient, shallots, garlic, red chili, spring onions and noodles.
6	*Kikil Asam Pedas*	In the spicy and sour kikil dish, the animal used is kikil (cow skin) as the main ingredient. Plants that are usually used as seasonings include shallots, garlic, red chilli, ginger, galangal, candlenut and tamarind. Bay leaves, lime leaves, lemongrass and tomatoes are also often added to give the dish a distinctive aroma and flavour.

7	*Semur Daging*	In beef stew, the animal used is beef as the main ingredient. The herbs that are usually used as seasonings include shallots, garlic, coriander, anise, coconut milk derived from coconut, ginger, galangal, candlenut, and soy sauce derived from soya. Cinnamon is also often added to give the dish a distinctive aroma and flavour.
8	*Ayam Masak Merah*	In the red-cooked chicken dish, there are several animals and plants used as main ingredients and seasonings. The animal used is chicken as the main ingredient. Plants that are usually used as seasonings include shallots, garlic, red chili, tomatoes, ginger, and candlenut. In addition, galangal is often added to give the dish a distinctive aroma and flavor.
9	*Acar Mentimun dan Nanas*	In the pickled pineapple cucumber dish, the plants used include cucumber, pineapple, shallots and red chillies. For pickling seasoning, vinegar, sugar, and salt are often used.
10	*Oppor Telur*	In egg oppor dishes, the animals used are eggs from chickens as the main ingredient. Plants that are usually used as seasonings include shallots, garlic, white cumin, coriander, ginger candlenut galangal and coconut milk derived from coconut.
11	*Cincalok*	In the culinary world, cincalok is the fermented product of small shrimps used as a condiment, usually mixed with shallots, chillies and lime.

From table 2, it is known that there are 11 types of food menus in the Sambas Malay saprahan tradition which are processed from 20 types of plants and 5 types of animals. Animals used in the dishes include chicken, beef, meckerel tuna, and anchovies. The plants used include rice, shallots, garlic, tomatoes, ginger, candlenuts, jackfruit, red chillies, coconut, coriander, anise, long beans, red beans, cinnamon, galangal, pineapple, white cumin, potatoes, shallots, and cucumber. The combination of various types of plants and animals not only enriches the flavour of the dishes, but also shows the wealth of natural resources available and utilised by the Sambas Malay community in the saprahan tradition. Of the eleven dishes on the saprahan menu, 5 types of animals and 20 types of plants were used, as shown in Table 3.

Tabel 3. Identification of animal and plant species

No	Lokal Name/ Picture	Scientific Name	Parts Used	Description
1	 *Ayam Pedaging*	Gallus gallus domestica	Meat	Broiler chickens are characterised by larger and fatter bodies, rapid growth, and high protein content (Rumondor et al., 2023). In the saprahan tradition, chicken is usually processed into a red cooked chicken dish or chicken scrub.

2	 *Sapi Mendura*	Bos indicus	Meal	Madurese cattle have characteristics such as rice yellow, brick red to red-brown body colour, small to medium body posture, short legs, hooves and black muzzle (Kurnadi et al., 2022). Mandura beef is usually processed into rendang dishes.
3	 *Ikan Tongkol*	Euthynnus affinis	Meat	Mackerel Tuna is one of the large pelagic fish species that is in great demand by local and foreign communities (Rahman et al., 2023). Its body colour is dark blue-black on the back and white on the front. The meat is rich in protein and healthy fats and is often processed into mackerel tuna dishes cooked with sardines.
4	 *Ikan Teri*	Mystacoleucus padangesis	Meat	Anchovy is a popular pelagic fish species in Indonesia, measuring 6-9 cm, and lives in groups in shallow water areas with a salt content of 10-15 g/kg. This fish has an elongated and flattened body with a slightly translucent colour and a long white line in the middle of its body (Mestagensi et al., 2021).
5	 *Udang Rebon*	Acetes indicus	Meat	Rebon shrimp is a type of shrimp seafood, but with a very small size compared to other types of shrimp. Because of its small size, this shrimp is called rebon shrimp. (Ridha et al., 2023).
6	 *Padi*	Oryza sativa	Beans	Rice is one of the main commodities consumed in Indonesia. It can be seen that the rice produced by this rice plant is used as a staple food consumed daily by the community (Firmansyah et al., 2019). Rice has a slender and tall stem with long and narrow leaves.
7		Allium cepa	Tumbers	Shallots are a type of onion that is widely used as a basic ingredient in dishes around the world. Shallots have a distinctive flavour and high nutritional content, making them a

	Bawang Merah			very reliable ingredient in the food industry (Saputra et al., 2023).
8	 *Bawang Putih*	Allium sativum	Tumbers	Garlic (Allium sativum L.) is a plant from the Alliaceae family. The plant ranges in height from 20 cm to 40 cm and is bulbous which has a strong aroma and sharp flavour. Garlic's distinctive aroma is produced from the sulphur content called allicin (Lestari & Santika, 2023).
9	 *Tomat*	Solanum lycopersicum	Fruit	Tomatoes are one of the fruits that are commonly demanded and consumed by the public without or with prior processing. Tomatoes are annuals, which means there is only one harvest period, in the form of shrubs or bushes with a length of up to 2-3 metres and belong to the Angiospermae flowering plant group (Hadi, 2023).
10	 *Jahe*	Zingiber officinale	Tumbers	Ginger is a type of plant that belongs to a type of rhizome plant. Ginger is commonly used by people as an ingredient in herbal drinks, and ginger is thought to be able to treat coughs and rheumatism. Ginger is a type of plant that belongs to a type of rhizome plant (Muhsin & Ramandha, 2023).
11	 *Kemiri*	Aleurites moluccana	Rizome	Candlenut plants have many benefits for human life because almost all parts of the plant can be utilised, but the part of the plant that has high economic value is the candlenut seed. You can use candlenut seeds as a flavouring ingredient for cooking, medicine, beauty care products, and many more (Kurniawan & Dewi, 2024).
12	 *Nangka*	Artocarpus heterophyllus	Fruit	Jackfruit is one of the most widely grown fruit crops in Indonesia. People consume jackfruit both as a vegetable and fruit because of its many health benefits. Jackfruit is rich in various essential nutrients, including energy, protein, vitamins and minerals (Fuzan et al., 2023).

13	 *Cabe Merah*	Capsicum annuum	Fruit	Red chillies are one of the vegetables that have high economic value. Red chillies are one of the most popular chilli varieties because they are not only used for household consumption but are also often used as raw materials for processing industries (FR & Suparyana, 2023).
14	 *Kelapa*	Cocos nucifera	Fruit	The coconut plant is a tall, trunked plant with a height of up to 3 meters and is the sole member of the cocos genus of the Aracaceae tribe (Lestari & Cahyadi, 2023).
15	 *Ketumbar*	Coriandrum sativum	Beans	Coriander seed is a spice plant that has long been used and utilised by humans as medicine or to enhance the flavour of food (Kuntaarsa et al., 2021).
16	 *Adas Manis*	Pimpinella anisum	Beans	Aniseed is a plant that has a small oval shape and looks like rice dregs. Aniseed has a larger shape than white cumin, almost the same shape. The seeds are dry, oval, not very long, and the aroma is not as fragrant as that of white cumin (Amalia et al., 2022).
17	 *Kacang Panjang*	Vigna unguiculata ssp. Sesquipedalis	Fruit	String beans are an everyday staple food in Indonesia. The use of long beans is very diverse, served in a variety of dishes ranging from raw to cooked (Syahputra & Habib, 2024).
18	 *Kacang Merah*	Vigna angularis	Beans	Red bean (Phaseolus vulgaris) is one of the legume commodities that are well known by the public. Red beans have a relatively short shelf life, while the utilisation of red beans has not been widely done (Tilohe et al., 2020).

19	 *Kayu Manis*	Cinnamomum verum	Steam bart	Cinnamon is a plant that is often used as a spice. Cinnamon is known to contain active compounds such as alkaloids, saponins, flavonoids, polyphenols, tannins, and essential oils containing cinnamaldehyde (Mursyida & Wati, 2021).
20	 *Lengkuas*	Alpinia galanga	Rizome	Galangal is a member of the Azingiberaceae family. This plant is one of the plants known as antibacterial and antifungal. The antibacterial compounds contained in galangal are phenols contained in essential oils. Galangal is one of the spices that is very easy to obtain and cheap (Badria et al., 2023).
21	 *Nanas*	Ananas comosus	fruit	Pineapple is one of Indonesia's leading fruit commodities and ranks fourth in production after bananas, mangoes, and siam oranges (Safitri & Kartiasih, 2019). The pineapple plant originated in tropical America, such as Brazil, Argentina, and Peru. Today pineapples have spread throughout the world, especially in tropical areas around the equator between 25º LU and 25º LS. Pineapple fruit is one of the trade commodities that plays an important role in the food crop subsector in the agricultural sector (Suprayogi et al., 2022).
22	 *Jinten*	Cuminum cyminum	Beans	One of the most commonly used spices in traditional medicine is white cumin seeds, and white cumin is often used in seasoning spices (Singh et al., 2021).
23	 *Kentang*	Solanum tuberosum	tumbers	Potato is one of the most important and prioritized commodities to be developed in Indonesia, as it has the potential to be exported to other countries. Potato stems are characterized by being knobbly, hollow, and non-woody. Potatoes have two root systems, namely taproot and fibers (Mustofa, 2019). Potato tubers can be round, oval, tapered, or kidney-like and vary in

				size from one to another (Ismadi et al., 2021).
24	 *Bawang Bombai*	Allium cepa linnaeus	Tumbers	Onions are one type of natural ingredient that is often used for cooking spices (Ladeska et al., 2020). Onions, also known as large onions, are a type of onion that has a large bulb and is round and flat. It has a dry brown outer skin and a white or pale yellow inner layer.
25	 *Timun*	Cucumis sativus	Fruit	Cucumber, or Cucumis sativus, is a type of vegetable often used in salads, pickles, and various other culinary dishes. Cucumber plants are one type of fruit vegetable plant from the pumpkin family (ArIyani et al., 2022). Cucumbers have green skin and crunchy flesh with a fresh and slightly sweet flavor.

Discussion

The feasibility of the potential of plants and animals used in the menu of dishes in the sambas Malay saprahan tradition as a biology learning resource is based on the criteria for learning resources obtained based on the results of filling out a questionnaire by biology teachers as shown in Table 4 used.

Table 4. Validator assessment result

Aspek	Persentase	Interpretasi
Clarity of potential	87.5%	Very feasible
Clarity of purpose	86%	Very feasible
Clarity of material objectives	84.36%	Very feasible
Clarity of information revealed	81.25%	Very feasible
Clarity of exploration guideliness	84.36%	Very feasible
Clarity of expected results	84.64%	Very feasible
Averages	85%	Very feasible

In the aspect of clarity of potential, the percentage interpretation of 87.5% is very feasible according to the respondents as many as 4 teachers. Based on the results of the study, the clarity of the potential referred to in learning, namely the potential for animal and plant diversity in the culture-based Sambas Malay saprahan tradition, has the potential to be used as a culture-based biology learning resource.

In the aspect of objectives, the percentage of 84.36% was interpreted as very feasible by respondents as many as 4 teachers. This is because biology learning objectives can be achieved from the results of research on the potential of plant and animal diversity in the Sambas Malay saprahan tradition as a culture-based learning resource. In the aspect of clarity of the target material, it got a percentage of 86% with a very feasible interpretation from the respondents as many as 4 teachers. This is because culture-based

learning resources can make biology learning more interesting and can help the learning process of students.

In the aspect of clarity of information disclosed, it gets a percentage of 84.36% with a very feasible interpretation from the respondents as many as 4 teachers. This is because the potential diversity of plants and animals in the Sambas Malay saprahan tradition as a biology learning resource has clarity of information and material that is in accordance with the junior and senior high school modules.

In the aspect of clarity of exploration guidelines, get a percentage of 81.25% with a very feasible interpretation of the respondents, as many as 4 teachers. This is because the potential diversity of plants and animals in the Sambas Malay saprahan tradition as a biology learning resource can solve existing problems in learning and can be used properly by students and teachers.

In the aspect of clarity of the expected results, it gets a percentage of 84.64% with a very feasible interpretation from the respondents, as many as 4 teachers. This is because the results of research on the potential diversity of plants and animals in the Sambas Malay saprahan tradition are expected to help students understand the material and can be used as a biology learning resource.

So it can be concluded overall that the plants used in the Sambas Malay Saprahan tradition process as a biology learning resource are included in the interpretation of 'very feasible' with a percentage of 85%. The suitability of plant potential material used in the Sambas Malay Saprahan tradition is seen based on the syllabus of Junior High School Biology Class VII, VIII, and IX and Senior High School Biology Class X, XI, and XII Curriculum 2013. The number of teaching materials that are in accordance with the potential of these plants can be seen in the following table. as shown in Table 5 used.

Table 5. Teaching materials for junior and senior high school biology in accordance with the potential of plants and animals in the saprahan tradition as a source of culture-based biology learning

Class	Material	KD
VII	Classification of living things	KD 3.2 Identify the classification of living things into groups based on the characteristics observed. KD 4.2 Present the results of observations about the classification of living things in the form of tables or diagrams.
VIII	Plant structure and function	KD 4.3 Present the results of observations about the structure and function of plant tissues in the form of written reports or other media.
IX	Food production	KD 3.7 Analyze food technology, plant, and animal cultivation in order to support food security. KD 4.7 Present the results of the analysis of food technology and plant and animal cultivation in the form of a written report or presentation.
X	Biodiversity	KD 3.2 Analyze biodiversity in Indonesia and its role in life. KD 4.2 Present the results of the analysis of biodiversity in Indonesia in the form of writing, tables, or diagrams.

From filling out the teacher response questionnaire, it can be seen that the feasibility and suitability of the potential of plants and animals in the Sambas Malay saprahan tradition has fulfilled the interpretation of being very feasible to use as a biology learning resource. The criteria for learning resources according to Fahrazi et al (2023) include: 1) clarity of potential; 2) clarity of purpose; 3) suitability of purpose; 4) clarity of information that can be revealed; 5) clarity of exploration guidelines; and 6) clarity of expected benefits.

Clarity of Potential

The clarity of potential is determined by the existence of the subject and the problems that can be revealed (Alamsyah et al., 2020). The subjects in this study are plants and animals in the Sambas Malay saprahan tradition. Information that can be raised in this research is the classification of living things, the structure and function of plants, biotechnology and food production, biodiversity, growth and development of living things, the structure and function of tissues in plants, and the structure and function of tissues in animals.

Suitability of Objectives

Suitability of learning resources with objectives. Learning resources should be selected based on the objectives that will be achieved by using them. The plants found are the types of plants used in the Sambas Malay ash disposal tradition. Learners can observe, identify, classify, and analyse the types of plants found. Learners can find out the types of biodiversity, classification of living things, plantae, growth and development of living things, and the structure and function of tissues in plants used in the ash disposal tradition process. Determining the object of learning resources must pay attention to the relevance to the learning objectives and the ease of access so as to enable students to learn about it.

Clarity of Purpose

Clarity and designation refer to the clarity of the existing learning objects and subjects (Kabani et al., 2023). Clarity of observation targets, namely plants and animals in the saprahan dish menu. The target of observation is junior high school students in grades VII, VIII, and IX and high school students in grades X, XI, and XII, especially biology teaching materials, namely classification of living things, structure and function of plants, food production, and biodiversity.

Clarity of Information Disclosed

The clarity of information can be seen from two aspects, namely the process and product adjusted to the curriculum (Slamet et al., 2020). he information that can be revealed in this study is that there are 20 types of plants and 4 types of animals included in biodiversity. Information obtained from observation is clearer and more factual because it is obtained directly from environmental conditions. Objects found in the field will provide real experience to students, lessons are more concrete and not verbal.

Clarity of Exploration Guidelines

The results of the research obtained are based on work procedures, including determining the object of research, using tools and materials, preparing work methods, determining data analysis, and drawing conclusions (Muthoharoh & Nugroho, 2023). This research was conducted by determining the object, namely the Sambas Malay community, then tools and materials, namely books, pens, cameras, and interview guidelines. Based on the results of data verification by biology teachers, it can be concluded that the Sambas Malay saprahan tradition can be used as a biology learning resource.

Clarity of Expected Gain

The results obtained in the form of research processes and products have clarity that can be used as a learning resource based on cognitive, affective, and psychomotor aspects.(Nurdiana et al., 2024). The potential of plants and animals used in the Sambas Malay saprahan tradition can be utilised as a biology learning resource because it is expected to gain cognitive aspects, effective aspects, and psychomotor aspects. The acquisition of cognitive aspects, obtained by utilising the potential in Sambas district is that students are able to think at a high level to gain knowledge by describing, classifying, and analysing the types of plants and animals, according to the biotechnology process found. The acquisition of affective aspects means that students can be honest, careful, disciplined, cooperate, be responsible for the results of activities, and have a positive scientific attitude such as protecting, maintaining, and making good use of nature and the environment. The acquisition of psychomotor aspects means that students can be skilled in using tools and coordinating research data by making observation tables and training student independence.

▪ CONCLUSION

Based on the research results, there are 20 types of plants and 5 types of animals used in the Sambas Malay saprahan tradition process, namely *Gallus Gallus Domestica* sp. *Bos indicus, Euthynnus affinis, Mystacoleucus padangensis, Acetes indicus, Oryza sativa, Allium cepa, Allium sativum, Solanum lycopersicum, Zingiber officinale, Aleurites moluccana, Artocarpus heterophyllus, Capsicum annuum, Cocos nucifera, Coriandrum sativum, Pimpinella anisum, Vigna unguiculata* ssp. Sesquipedalis, *Vigna angularis, Cinnamomum verum, Alpinia galanga, Ananas comosus, Cuminum cyminum, Solanum tuberosum, Allium cepa linnaeus, and Cucumis sativus*. The feasibility of the potential of plants and animals used in the Saprahan tradition as a biology learning resource is very feasible, with a percentage of 85%. The suitability of the material for analysing the potential of plant and animal diversity in the Sambas Malay Saprahan tradition as a culture-based learning resource is appropriate for achieving basic competencies at the junior high school level material, namely the classification of living things, the structure and function of plants, biotechnology, and food production, as well as at the high school level, namely biodiversity, growth and development of living things, the structure and function of tissues in plants, and the structure and function of tissues in animals.

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