

Development of Learning Media About the Study of Etnobotany Plant in Lauje Tribe at the Village of Siboang, Sojol District Donggala Regency

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Abstract

*This study aims to reveal knowledge about the use of plants used by the Lauje tribe in Siboang village by identifying the types, parts of plants used, benefits, and methods of processing plants and making research results as learning media in the form of pocket books. This type of research is descriptive exploratory with the roaming method and the samples are taken randomly. The pocket book learning media development model used in this study is the 4-D model (four D model). The results of this study obtained as many as 43 types of plants that are useful for everyday life and are believed by the public to have the potential to cure disease. A total of 43 plant species were found in Siboang Village consisting of 28 families, the largest being *Arecaceae*, *Poaceae* and *Zingiberaceae* each consisting of 4 species. These types of plants are used for various benefits, among others. As a food ingredient, as medicine, as a cooking spice, as a complement to traditional ceremonies, handicrafts as additional income, and as fuel. This research produced a product in the form of a pocketbook with a percentage of 83% (Very Appropriate) as a learning medium.*

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Introduction

Indonesia, a country located in the tropics, is known for its various potential biological natural resources. Biodiversity is an asset of the Nation which is very important and deemed necessary for its preservation and utilization. Central Sulawesi with its rich biodiversity is also supported by the potential for traditional knowledge possessed by various indigenous ethnic groups in Central Sulawesi (Pitopang & Ramawangsa, 2016).

Indonesia's tropical forests have more than 80,000 species or types of plants, and almost 80 percent of all plant species have medicinal properties. Traditional medicine is a hereditary legacy from ancestors that are deeply rooted in national culture, therefore both in its ingredients and in its use as traditional medicine is still based on experiences passed down from generation to generation both orally and in writing (Widiastuti et al., 2017).

Ethnobotany is a study of the interaction between humans and plants in their traditional utilization activities. This study is a descriptive form of documenting botanical knowledge in traditional communities that have used various kinds of plant

services to support their lives. Life support for everyday purposes such as medicine, building materials, staple food, traditional ceremonies, and as an economic source for certain types of plants. In the history of human development, plants have had a very important role in the development of social culture (Alvionita, et al. 2020).

The Lauje tribe is one of the tribes that mostly live in the forest. The source of their life comes from plants that are used as food and drink and even ingredients derived from plants are used as medicine obtained from the forest. Their habit of moving places of residence is that their food sources are reduced. But some of those who chose to stay had the initiative, namely farming, with the main crops of bananas, corn, papaya, wild mango, and tubers. Ethnobotany knowledge is found in many traditional tribes in Indonesia which is the result of interacting and using forest plants from generation to generation (Has et al., 2020).

Nyoman (2013), Plants as food producers become one of the providers of food for humans. Food is obtained almost entirely from plants, the types that are important to be used by humans directly. Plants provide food material which consists of various plant vegetables and fruits. Local people

believe that plants that can be eaten by these animals are plants that can also be eaten by humans (Silalahi et al., 2018).

Regarding the abundance of flora diversity, the province of Central Sulawesi also deserves to be taken into account because various traditional medicines are still found, one of which is Siboang Village. There is one community who still uses plants for various daily needs. The people of the Lauje Tribe, who live in IV Maros hamlet, Siboang Village. The Lauje tribe community has a local knowledge system in utilizing various types of plants that are used in daily life, for example for medicine, food clothing, decoration, animal feed, and plants necessities. Their customary rituals. As a non-food product, it produces wood that is useful for buildings, paper, furniture, and so on (Nurhidayah et al., 2015).

However, it is not known what types of plants they usually use. Apart from its relatively beautiful area, as an area that is close to the border with other regencies, namely Toli-toli district, and has a community that still adheres to local wisdom. So that based on the reasons put forward, the researcher has the motivation to conduct a research entitled "Development of Learning Media About the Study of Plant Ethnobotany in the Lauje Tribe in Siboang Village, Sojol District, Donggala Regency".

Development research is an effort to develop and produce a product in the form of materials, media, tools, and learning strategies that can be used to solve learning problems in the classroom or laboratory, and not to test theories. Learning will be more meaningful if students are directly involved or involved in the use of media (Paramita et al., 2018).

Imtihana et al., (2014), stated that the use of learning media will be able to help and provide opportunities for students, to participate in providing concrete learning experiences, so that learning objectives can be achieved and can generate motivation and interest in student learning. The use of instructional media can help achieve learning success (Nunu, 2012).

Pocket books can be used as a medium that conveys information about the subject matter and others in one direction so that students can develop their potential to become independent learners. The user of small pocket book media can be stored in a pocket and is easy to carry everywhere. The availability of learning media will facilitate the

interaction between teachers and students so that learning activities will be more effective and efficient. This is in line with the findings (Puspita et al., 2017).

Materials and Method

This research is divided into 2 types of research, namely the first exploratory descriptive research carried out in the open with the aim of seeing aspects of plant biology in the Lauje Tribe in Siboang Village, Sojol District, Donggala Regency. This research is intended to describe the existing phenomena, which there are efforts to describe, record, and identify. Descriptive research aims to obtain information about the current state (Imtihana et al., 2014). Then the results of this research will be developed into learning media in the form of pocketbooks.

Then the second type of development research is development or Research and Development (R&D). Research and development (R&D) methods are research methods used to produce certain products and test the effectiveness of these products. Research and development methods are research methods used to produce certain products and test the effectiveness of these products. The resulting product is in the form of teaching materials integrating Science (Tiarasari et al., 2018).

This research was conducted in August 2020 at Siboang Village, Sojol District, Donggala Regency. The tools and materials used in this study included cameras, scissors, machetes, raffia ropes, hanging labels, newsprint, plastic bags, sasak, stationery, interview lists, and identification books used. The ethnobotany research material used was all plants used by the Lauje tribe in Siboang Village, Sojol District, Donggala Regency.

The data source of this research is primary data, which is data obtained by the researchers themselves when they go to the field with respect to the object under study. The main data in this study is secondary data derived from previous research from articles, theses, books on plant ethnobotany studies, BPS Donggala Regency, and all related literature. The sample in this study consisted of key informants and non-key informants and all plant species.

Damayanti et al. (2017), the development model used in this study is the 4-D model (four D models). This 4-D model consists of 4 main stages, namely: (1) define, (2) design, (3) develop and (4)

disseminate, the model developed by [Thiagarajan, et al. \(1974\)](#). The stages of making pocketbook media are as follows: The definition stage.

By defining material in accordance with the learning objectives, as for the learning objectives, namely, students can recognize the benefits of various types of plants.

1) Design stage

The stage of designing or designing a product according to student needs and learning materials. Making a pocketbook with a size of 9 cm x 12 cm and writing it using Times New Roman letters, complementing the material with photos of plant documentation and the product design being developed, namely a pocket book containing material on plant Ethnobotany of the Lauje Tribe in Sibolang Village.

2) Development stage

This development stage is an advanced stage of previously produced products, namely by developing learning media in accordance with the product (pocketbook). The pocketbook is bound using a spiral. Making pocketbooks by using the Microsoft Word application. Arrange the layout and contents of the modified pocketbook, namely Cover, Title, Preface, Table of Contents, how to use the pocketbook, Introduction, Material Description, and Bibliography. Before the pocket book media validation is carried out, first the pocket book media assessment instrument is validated. This validation is intended to see the feasibility of the pocketbook assessment instrument. After the pocketbook validation instrument was deemed appropriate, then the pocketbook media validation was carried out. Validation was carried out by media expert lecturers and design experts, material experts, and students.

3) Deployment stage

This stage is a trial phase where the learning media that have been made are displayed to see the feasibility of the media that has been developed. The subject trial in this study was conducted with a total of 30 respondents consisting of 20 large-group respondents, and small-group respondents consisting of 10 students. At this stage, the test subject is given

a product assessment questionnaire in order to obtain quantitative data.

The data collection technique used in this study is to use the roaming method with free collection techniques along with key informants/information sources (local experts, healers/ sando, traditional chiefs, village elders, and communities who understand these plants as well as consume them) then the sample is taken labeled then asked for the name local, benefits, parts of the plant used for the key informant. Furthermore, it is identified by reference to the relevant books.

The data analysis in this study used qualitative and quantitative descriptive analysis techniques. This analysis is a content analysis based on the respondent's knowledge of plants as medicine, food, and beverages. Qualitative data were obtained from community interviews to determine the types of plants, organs used, sources of acquisition, and ways of utilizing the plants used. Meanwhile, quantitative data in the form of a percentage of plant use and percentage of plant identification were matched with supporting literature.

Calculating the percentage of media feasibility data using the following formula:

$$\text{Formula: } P = \frac{\sum x}{\sum xi} \times 100\%$$

Information:

P: Percentage

$\sum x$: Total score obtained

$\sum xi$: Total overall score

After the percentage value is obtained, it is interpreted in a sentence with the criteria as stated by [Arikunto \(2009\)](#) in Table 1.

Table 1. Criteria for the percentage of eligibility for the media.

Percentage (%)	Validation criteria
81-100	Excellent
61-80	Very Good
41-60	Enough
21-40	Poor (revised)
0-20	Very Poor (revised)

Results and Discussion

The results of research that have been carried out from the location, the number of plant species found were 43 species with 28 families. Plant parts used include roots, stems, leaves, flowers, sap, fruit, seeds, tubers, and all parts of the plant with different usage methods. These types of plants are used for a variety of their needs, among others, as

medicine, as foodstuff, as spices, as a complement fuel, for more details, see Table 2.
to traditional rituals, as building materials, and as

Table 2. Data of plant ethnobotany research

No	Name of Plant			Family
	English	Local	Scientific	
1	Guava	Jampu	<i>Psidium guajava</i>	Myrtaceae
2	Awar-awar	Lombonuk	<i>Ficus septicum</i>	Moraceae
3	Jackfruit	Panasa	<i>Artocarpus heterophyllus</i>	
4	Coconut	Niu	<i>Cocos nucifera</i> L.	Arecaceae
5	Palm tree	Bagis	<i>Arenga pinnata</i>	
6	Areca nut	Lugus	<i>Areca catechu</i>	
7	Rattan stems	Bolagon	<i>Daemonorops robustus</i>	
8	Reeds	Gio	<i>Imperata cylindrical</i>	Poaceae
9	Lemongrass	Tibabanoi	<i>Cymbopogon citrates</i> L.	
10	Corn	Binte	<i>Zea mays</i>	
11	Rice	Bogas	<i>Oriza sativa</i> L.	
12	Eggplant	Atedo	<i>Solanum melongena</i> L.	Solanaceae
13	Tomato	Tamate	<i>Solanum lycopersicum</i> L.	
14	Pepper	Malisa	<i>Capsicum annum</i> L.	
15	Galangal	Alikku	<i>Alpinia Galangal</i>	Zingiberaceae
16	Turmeric	Unit	<i>Curcuma longa</i> L.	
17	Ginger	Loiya	<i>Zingiber officinale</i>	
18	Kecombrang	kacimpang	<i>Etlingera elatior</i> (Jack)	
19	Onion	Piamegang	<i>Allium Cepa</i>	Liliaceae
20	Garlic	Piamemeas	<i>Allium sativum</i>	
21	Pumpkin	Taedo	<i>Cucurbita moschata</i>	Cucurbitaceae
22	Cassava	Kasubi	<i>Manihot esculenta</i>	Euphorbiaceae
23	Jatropha	katilalo	<i>Jatrhopa curcas</i> L.	
24	Banana	Pensa biasa	<i>Musa paradisiaca</i> L.	Musaceae
25	Forest banana	Pensa jolo	<i>Musa balbisiana</i>	
26	Blue grass	aroppo	<i>Desmodium</i> sp.	Fabaceae
27	Durian	Durian	<i>Durio zibethinus</i> Murr	Bombacaceae
28	Kopasanda leaves	Sariudo	<i>Chromolaena odorata</i>	Asteraceae
29	Soursop	Dulialanda	<i>Annona muricata</i>	Annonaceae
30	Bamboo	Taring	<i>Bambusa vulgaris</i>	Bambuseae
31	Sidaguri	Senaguli	<i>Sida rhombifolia</i> L.	Malvaceae
32	Sweet potato	Dimolou	<i>Ipomoea batatas</i>	Convolvulaceae
33	Moringa	Ramungge	<i>Moringa oleifera</i> L.	Moringaceae
34	Orange	Lemo	<i>Citrus aurantifolia</i>	Rutaceae
35	Mango	Taipang	<i>Mangifera indica</i>	Anacardiaceae
36	Roses	Bunga mawar	<i>Rosa</i> sp.	Rosaceae
37	Frangipani flower	Kamboja	<i>Plumeria acuminata</i>	Apocynaceae
38	Pandan leaves	Pandan	<i>Pandanus amaryllifolius</i>	Pandanaceae
39	Betel leaf	Dolo	<i>Bette pipir</i> L.	Piperaceae
40	Fern	Papau	<i>Diplazium esculentum</i>	Athyriaceae
41	Star fruit	Caneneng	<i>Averrhoa bilimbi</i>	Oxalidaceae
42	Papaya	Pepaya	<i>Carica papaya</i> L.	Caricaceae
43	Melinjo	Daun sua	<i>Gnetum gnemon</i> L.	Gnetaceae

1) Plants that are used as food

It is generally known that food is the main source in life to get energy and food is also a very basic requirement in human life. Based on the results of research conducted on the people of the Lauje Tribe in Siboang Village, they also use 19 types of plants to meet their daily needs. Several

types of plants used as food can be consumed directly and some must be processed first. This is in accordance with Melay's (2019), that most of the plants have the potential to be used as industrial plants, fruit plants, spices, and plants as food producers.

2) Plants that are used as medicine

Based on the results of the interview, it shows that the Lauje tribe in Sibolang Village still uses plants that are used as medicine to cure various diseases. The results of the ethnobotany observations of plants used as medicinal ingredients were as many as 25 types of plants. From these plants, different parts of the plant are used, including roots, stems, leaves, fruit, and rhizomes.

3) Plants that are used as spices

From the interview data, the people of the Lauje tribe in Sibolang Village also use plants to be used as spices that are commonly used and mixed into dishes to cook food to further add to the taste and aroma of cooking. Several types of plants that are often used by the community as spices, namely 10 types, are caused by the content contained in these plants such as taste and aroma. Many of the plants used as spices in this tribe are cultivated to plant them in the yard and in the garden. Besides being used as spices, they can also be used as medicine (Tribudiarti et al. 2018).

4) Plants that are used as a complement to traditional ceremonies

The people of the Lauje tribe in Sibolang Village still have magical beliefs despite the increasingly modern times, they still carry out rituals and traditions that are usually carried out by their ancestors such as wedding rituals, flower bathing in pregnant women, and for women who are prospective brides, moving away home and thanksgiving haqiqah baby. From the data obtained, 15 types of plants are used as a complement to traditional ceremonies.

5) Plants that are used as building materials, handicrafts

It is generally known that in ancient times, our ancestors used plants to make their homes. In modern times, the Lauje tribe still uses 8 types of plants as building materials, and handicrafts, and can be a source of economy for the tribe. They get these plants in the forest and make a place to live in the forest to make it easier to get these building materials. Generally, the part of the plant logs is widely used as boards and house poles. This is in accordance with the opinion of Nurchayati & Ardiyansyah (2018), the processing of biological and environmental resources related to ecological aspects, the environment whose use is based on wisdom so that these natural resources can be used continuously.

6) Plants that are used as fuel

Traditional fuel is wood from plants, the Lauje tribe in Sibolang Village still uses wood as fuel for cooking, and from the data obtained, as many as 9 types of plants. Even though it is modern times, these people still use wood for their daily activities, for one reason they are very easy to get because it does not cost money and can be taken from the forest or garden in their neighborhood.

The results of the assessment of learning media about pocketbooks, which were carried out by content experts, media experts, and design experts (Lecturers) stated that the learning media in the form of pocketbooks were suitable for use as learning media and could support the learning process, the percentage obtained was 83.17%. Testing on students got a total percentage of 82.81%.

Based on the results of research conducted in Sibolang Village, to find out the ethnobotany study of plants used by the community, there were several types of plants that varied with 43 species, these results were the result of direct observations in the field using roaming techniques, interviews, and documentation. The people in Sibolang Village still really maintain these plants and cultivate them well to be used continuously and make it easier when they want to use these plants. This is in line with Walujo (2011), statement that the use of food plants and plants for health has also been going on since the emergence of human civilization on Earth. The use of plants as medicinal ingredients is the starting point for modern medicinal plant research.

From the results of the interviews, there were 43 types of plants used by the people of Sibolang Village, including: *Psidium guajava* (guava), *Ficus septicum* (awar-awar), *Artocarpus heterophyllus* (jackfruit), *Cocos nucifera* L. (coconut), *Arenga pinnata* (palm tree), *Areca catechu* (areca nut), *Daemonorops robustus* (rattan stems), *Imperata cylindrical* (reeds), *Cymbopogon citrates* L. (lemongrass), *Zea mays* (corn), *Oriza sativa* L. (rice), *Solanum melongena* L. (eggplant), *Solanum lycopersicum* L. (tomato), *Capsicum annum* L. (pepper), *Alpinia galangal* (galangal), *Curcuma longa* L. (turmeric), *Zingiber officinale* (ginger), *Etilingera elatior* (kecombrang), *Allium cepa* (onion), *Allium sativum* (garlic), *Cucurbita moschata* (pumpkin), *Manihot esculenta* (cassava), *Jatropha curcas* L. (jatropha), *Musa paradisiaca* L. (banana), *Musa balbisiana* (forest banana), *Desmodium* sp. (blue grass), *Durio zibethinus* Murr (durian), *Chromolaena odorata* (kopasanda leaf), *Annona*

muricata (soursop), *Bambusa vulgaris* (bamboo), *Sida rhombifolia* L. (sidaguri), *Ipomoea batatas* (sweet potato), *Moringa oleifera* L. (moringa), *Citrus aurantifolia* (orange), *Mangifera indica* (mango), *Rosa* sp. (rose), *Plumeria acuminata* (frangipani flower), *Pandanus amaryllifolius* (pandanus leaf), *Piper betle* L. (betel leaf), *Diplazium esculentum* (fern), *Averrhoa bilimbi* (starfruit), *Carica papaya* L. (papaya), *Gnetum gnemon* L. (melinjo). Of the 43 types of plants, people use them daily in traditional ways. For example, such as curing a disease, they use plants in a very simple way, namely smoothing the leaves of the plants on a stone and then applying them to the wound and cooking them in the traditional way, namely using a stove and firewood they get from the forest or in the garden. These results are in accordance with the results of research from Sari et al. (2017), which found 43 types of plants used in traditional medicine by the informants.

The research data on the types of plants used as medicinal ingredients in the Lauje tribe in Siboang Village were obtained from as many as 25 types of plants. The part of the plant that is most widely used as medicine is the leaves. According to the respondents' admission, leaves are easy to obtain and the preparation process is quite simple and does not damage other parts of the plant. The young leaves are also processed because the texture of the leaves is soft and the leaves have the most chemical content because the photosynthesis process occurs in the leaves. The parts of plants that are used are very diverse and must be an odd number, namely 3 or 7 pieces, because they believe in bringing goodness with this odd number, and almost all parts of the plant are used, including roots, rhizomes, stems, leaves, fruit, and sap. These parts are used as a treatment according to their function the use of which varies according to experience and knowledge from generation to generation and is believed to be able to cure diseases according to the experience they get. This is in accordance with the statement by Qasrin et al. (2020), which states that medicinal plants have long been used by traditional people in healing various diseases by processing boiling.

Food is a very basic and important requirement in human life. Likewise with the Lauje Tribe who live in Siboang Village. The results of the study noted that there were 19 useful plants used as food/food, part of which consisted of tubers, stems, leaves, flowers, fruit, and seeds. How to use plants

as food is still very simple, whether eaten directly by old fruit or called ripe fruit in the trees (papaya, banana, jackfruit, durian) or through processing with the way it is cooked. Food is cooked in various ways, including fried (banana), baked (sweet potato, cassava), boiled (corn), and as a mixture of other ingredients (moringa leaves) and other spices (turmeric, ginger). The staple food for the Lauje tribe is rice which is processed into rice. The community processes it by cooking it for food, besides that it can also be mixed with turmeric that has been refined and coconut milk, and then cooked by cooking it so that it becomes food called yellow rice. From this explanation, some of the plants used as spices are also part of the staple food, so more savory dishes add a more delicious taste to food.

Even though the Lauje tribe resides in Siboang Village, even though it is modern, they still carry out the rituals and traditions that their ancestors used to do. The usual traditional rituals are still carried out, namely, the custom of welcoming the bride and groom using rice which is scattered in front of the bride and groom, and the gate is decorated with young coconut leaves and several types of fruit stored in boxes made of bamboo. The custom of moving house using bananas, coconuts, and jackfruit tied once and hung. The traditional flower bath for the bride and groom and flower bath for pregnant women uses pandan leaves, roses, frangipani flowers, and young coconut water. Haqiqa babies use young coconut leaves to make ketupat and it is customary to heal people who are sick for a long time using young coconut leaves to make ketupat, 3 colors of glutinous rice and white rice, and 1 chicken egg in each of the glutinous rice and live chickens are released when the rituals have finished.

There are 15 species of plants used for customary ritual purposes, as can be seen in Table 2. In these rituals, the Lauje tribe people use plants as ingredients in the procession to complement the traditional rituals. Plants that are used as a complement to their traditional ceremonial rituals are cultivated and some of the Lauje tribe people plant these plants in their neighborhood and some plant them in their gardens, even though they still get these plants from the forest.

It is generally known that most of the building materials come from plants. Plants can be used both in making house buildings and for use as handicrafts and can be used as economic producers. Based on

the results of interviews with respondents, there were 8 types of useful plants that are used as plants for building materials and handicrafts that can be used as economic producers. The types of plants used as building materials and handicrafts can also be used as fuel for cooking, however, people take plant as fuel that have died or are no longer used for other purposes, because they also use partial fuel. From coconut husk that is dry.

The results of the research that are relevant to research in Sibolang Village can be seen that all parts of the plant can be used as daily necessities, plants are useful as medicine, as well as almost all parts of the plant, are used and their properties are used in treating various diseases such as coughs, headaches, sprains, tinea versicolor, malaria, ulcers, diarrhea, ulcers, skin diseases, and so on. Utilization of the most part of the plant is the leaf. The part used is the leaves which are part (organs) of plants that are widely used as medicine in the traditional way because the leaves are generally softly textured because they have a high water content (70-80%). In addition, the leaves are a place for the accumulation of photosynthesis which is thought to contain elements. Elements (organic substances) that have the property to cure disease. Substances that are widely found in leaves are essential oils, phenols, potassium, and chlorophyll compounds. This is in accordance with research from [Efremila et al. \(2015\)](#), which states that the most widely used part is leaves, namely as many as 15 species (30%).

Utilization of Research Results as learning media by covering media or learning resources should not only be good in terms of content but also interesting in terms of design so that it can attract students' attention to read and not make it difficult for students to understand its content. However, effective instructional media does not absolutely have to be an expensive thing. Even simple materials can be used as learning media such as pocketbooks that can be made simply by using pictures of plants to be studied and printed as simply as possible with a minimized size according to pocket size. This pocketbook can also make it easier for students to carry it anywhere according to the needs of students.

Development research is a process used to develop and validate educational products and to systematically design, develop and evaluate programs, processes, and learning outcomes that must meet the criteria of internal consistency and effectiveness. Meanwhile, [Putra et al. \(2013\)](#), defines development as a process to develop and

validate products that will be used in education and learning.

A pocketbook is a tool aid that can be used in the learning process. The pocketbook can be read at any time, for example in a vehicle, waiting for a change of teachers, or when the teacher is not teaching. Pocket books can be used as a medium that conveys information about the subject matter and others in one direction so that students can develop their potential to become independent learners. This is in line with the findings of researchers, that pocketbooks can generate motivation and stimulation of learning activities, and even play an important role in learning activities in the classroom. This is in line with the opinion of [Poerwadarminta \(2006\)](#), that the use of small pocketbook media that can be stored in a pocket and is easy to carry anywhere.

[Asyhari & Silvia \(2016\)](#), Pocketbook is a medium that can help provide stimulus (stimulus) to the learning process. The media made in this study were pocketbooks. This pocketbook is designed in such a way with a more attractive design and more concise and dense content to make it easier for readers to understand the contents of the pocketbook. The pocketbook created by the researcher was tested by 3 lecturers of the Biology Education Study Program consisting of content experts, design experts, and media experts and 30 students consisting of two groups, namely a small group of 10 people and a large group of 20 people.

The results of the assessment of learning media by lecturers who have been appointed to be the validator team are content expert lecturers with an average percentage of 70%, design experts with 86.66%, and media experts with 92.85%. The assessment of large group students is 84.37% and small group students 81.25%. From the results of this percentage, it can be stated that the learning media that have been made are suitable for use as learning media. This is in accordance with [Murdianti et al. \(2017\)](#), research which states that pocketbooks are effectively used in learning, this is indicated by the difference in the average learning outcomes of students supported by increased learning outcomes.

Conclusions

Based on the results of the research that has been done, it can be concluded as follows: (1) There are 43 types of plants used by the Lauje tribe in Sibolang Village, Sojol District, Donggala Regency,

consisting of 28 families, (2) Parts of plants that are often used by the Lauje tribe in Siboang Village, Sojol District, Donggala Regency as medicinal ingredients are roots, rhizomes, stems, leaves, fruit, flowers, sap and seeds. The method of processing plants by the Lauje tribe in Siboang Village, Sojol District, Donggala Regency is carried out in various ways, such as boiling, mashing, sticking, smearing, grating, squeezing, chewing and drunk and (3) The results of research on the ethnobotany study of plants in the Lauje Tribe in Siboang Village, Sojol District, Donggala Regency can be used as a learning medium in the form of a pocketbook.

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