

Resource Geography: Utilization of Tongke-Tongke Mangrove Forest Area as A Learning Resource

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Abstrak. Learning resources are an important component and have a very important role in improving the quality of learning. The purpose of this study was to determine the activities and learning outcomes of students in resource geography courses by utilizing the tongke-tongke mangrove forest area as a learning resource. This research uses qualitative research methods. The source of data is the resource person (informant). There are three stages of data collection techniques, namely literature study, observation, and interviews. The technical analysis is done through data reduction, data presentation, and conclusion drawing or verification. The results showed that the utilization of tongke-tongke mangrove forest area as a learning resource can optimize student learning activities and outcomes. Utilization of tongke-tongke mangrove forest area as a learning resource can be a solution as a deepening of material and can stimulate student learning motivation in learning activities.

Keywords: Utilization, mangrove, learning resources

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INTRODUCTION

Learning can improve the ability to construct new knowledge as an effort to improve good mastery of learning materials. One of the components in the learning process is learning resources (Samsinar, 2020). Learning resources are an important component and have a very important role in improving the quality of learning (Pratiwi et al., 2021; Narmi et al., 2021). Educators who are skilled in using learning resources will look authoritative in front of students, because they give the impression of being up-date and not outdated (Arga et al., 2019). Therefore, lecturers must utilize learning resources in the learning process. Lecturers who play a role as course instructors need to present learning resources or bring students directly to these sources as evidence that geography phenomena can be collaborated with the forest area / field trip method.

The existence of the surrounding nature is a potential that can be utilized to support student activities in learning (Rahmadi et al., 2018; Syarif et al., 2022). The existence of this mangrove ecosystem has not been optimally utilized as a learning resource (Saputri et al., 2019). Degradation of coastal areas and mangrove forests is expected to affect the environment and people's lives in the future (Suleman et al., 2018). The process of degradation of coastal natural resources and mangrove forests needs to get an in-depth study so that it can provide early anticipation so as not to cause major losses in the future (Bibin & Ardian, 2020; Saputro et al., 2019). Therefore, the environment can be used as a source of learning and learning media in higher education because the environment provides benefits for humans.

Resource geography learning essentially studies and examines the concept of resource concepts related to natural resource management policies, humans and the environment, the effect of resource utilization on the environment, and determining appropriate policies in utilizing natural resources and the social environment. The learning environment should be created according to the needs of students in learning. Creating a good learning environment can help students in achieving the desired learning objectives. The quality of student interactions with learning resources affects learning outcomes (Rosiyanti & Muthmainnah 2018; Indriana et al., 2021). So that there are differences in learning outcomes between students who have a high intensity in utilizing learning resources and students who have a low intensity in utilizing learning resources (Harfiani, R., & Fanreza, R., 2019; Tubu et al., 2021). therefore, learning resources are an integral part of learning activities, which enable individuals to gain knowledge about abilities, attitudes, beliefs, emotions, and feelings.

Learning resource geography not only functions as a science that makes students cognitively competent, but also must shape attitudes and behaviors. Therefore, during learning, it is necessary to adjust the material to local conditions and phenomena. (Syarif et al., 2016) stated that in behavioral theory, human behavior is formed by the results of experience and the role of the environment. Students' attitudes and behaviors can be shaped by the local culture of the local community or by certain geographical conditions of the area. (Sukmawati et al., 2015) said that through learning experiences, students inherit noble cultural values and institutionalize these values in themselves. Therefore, it is necessary to

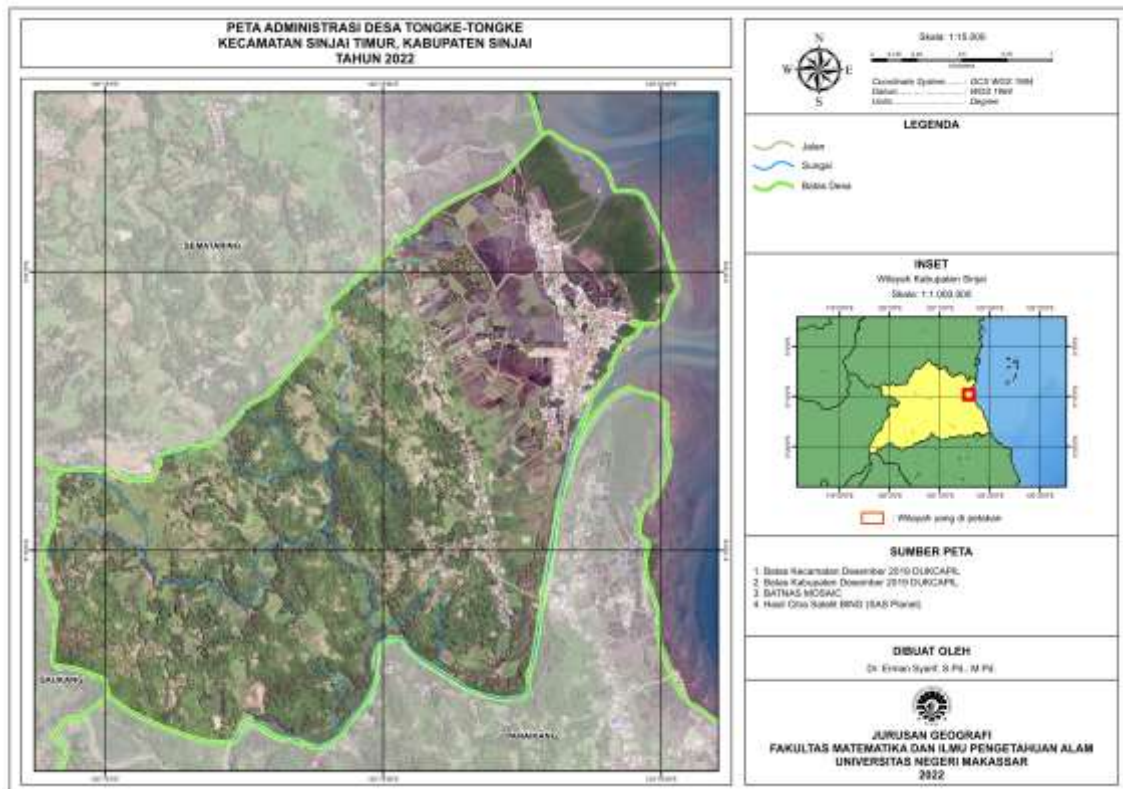
contextualize the learning process of resource geography to form the attitude of students who care and behave wisely towards their environment.

Observation results in resource geography courses: 1) lecturers teaching resource geography courses have utilized the tongke-tongke mangrove forest area as a learning resource with the aim that students are easy to understand the material taught. Because in the learning process of resource geography, lecturers must be able to connect lecture material with actual events, and make it easier for students to the material being taught; 2) lecturers are not only tasked with developing students' cognitive aspects, but educators must be able to develop affective aspects and skills; 3) the importance of integrating environmental conditions as a learning resource in the learning process with the aim of being able to explore thinking potential, train and familiarize students with problem solving activities; and 4) the learning outcomes of resource geography in the even semester of 2021/2022 are still not satisfactory because there are still many C grades, it should be at least a B grade because many demands of the job market accept with a minimum IP of 3.0.

The purpose of this study was to determine the activities and learning outcomes of students in resource geography courses by utilizing the tongke-tongke mangrove forest area as a learning resource. Through this method, it is expected to have a positive influence on student learning activities and outcomes.

RESEARCH METHOD

This research uses qualitative research methods, namely to describe the utilization of the tongke-tongke mangrove forest area as a learning resource. This research was conducted in the Geography Education Study Program for students of class 2020 even semester 2021/2022. The source of data is informants. The informants in this study include community leaders, village heads, tonke-tongke community, and students.



Picture 1. Administrative Map of Tongke- Tongke Village, North Sinjai District

Data or information can also be obtained through observation of events or activities related to the research problem. By observing an event or activity, a cross check can be made on the verbal information provided by the subject under study. In this study, direct observation of the tongke-tongke mangrove forest area was carried out. In this study, data were obtained from various sources using various data collection techniques carried out continuously which met the specified data standards in accordance with the characteristics of the data obtained in this study (Sugiyono, 2015).

There are three stages of data collection techniques, namely: 1) literature study to find sources related to mangrove forest areas, 2) observations made directly to the tongke-tongke mangrove forest area, 3) interviews, to dig deeper into how the utilization of tongke-tongke mangrove forest area destinations as a learning resource for resource geography courses. Technical analysis is done through data reduction, data presentation, and conclusion drawing or verification. In testing the validity of the data using data collection triangulation.

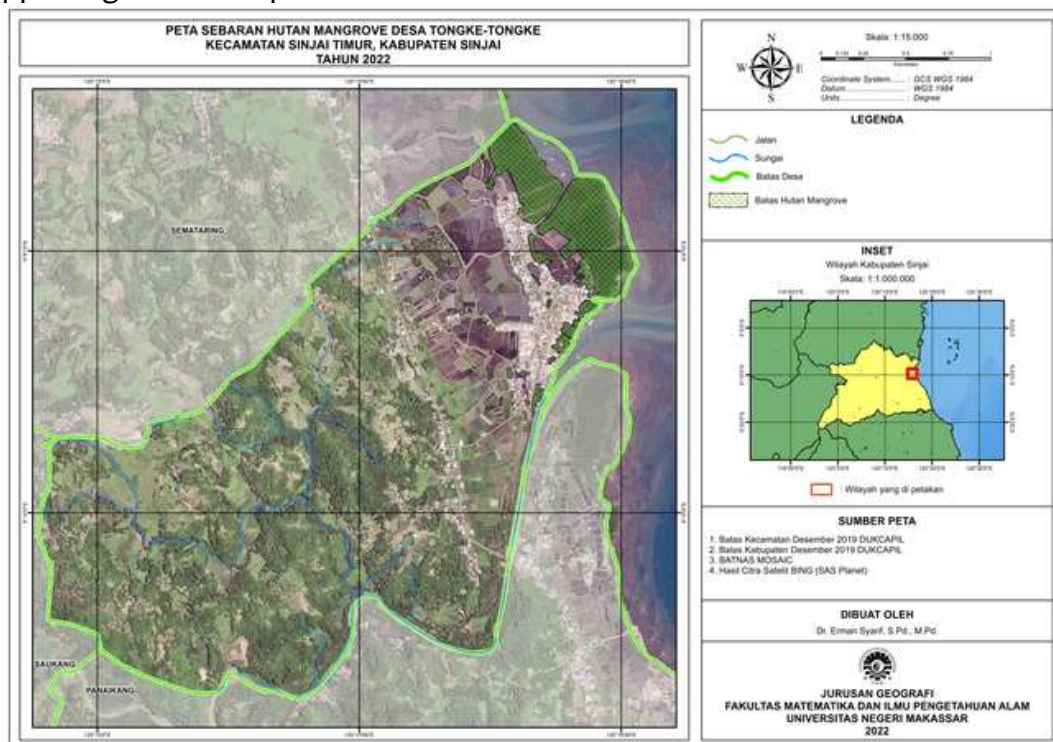
RESULT AND DISCUSSION

Utilization of Tongke-Tongke Mangrove Forest Area as a Learning Resource for Geography Resources

Tongke-Tongke Mangrove Forest tourism is a tourist destination area that is famous for its attractiveness and panoramic beauty that is able to hypnotize the eyes of visitors so that it is used as a traveling agenda by local and foreign tourists. The success of the Mangrove forest is evidenced by the achievement of Tongke-

Tongke to be the top 25 out of 150 regencies / cities that have mangrove forests as a national nomination event. Tonke-Tongke Mangrove Forest in Sinjai Regency was named the best forest in South Sulawesi in 2017. The Tongke-Tongke Mangrove forest area is one of several mangrove forest areas in the Sinjai Regency area. Located in Tongke-Tongke Village, East Sinjai District, this area is a special attraction in terms of mangrove tourism development as well as its relationship with tourism and fisheries development in Sinjai Regency. The Tongke-Tongke mangrove forest area has an area of about 173.5 ha and is used as a mangrove restoration and learning center.

Mangrove forests are the main ecosystem supporting important life in coastal areas. In addition to having an ecological function as a nutrient provider for aquatic biota, spawning and nursery for various biota, retaining seawater intrusion, retaining abrasion, retaining the fury of hurricanes, and tsunamis, absorbing waste, preventing seawater intrusion and so on. Mangrove forests also have economic functions such as providing wood, and leaves as raw materials for medicines and others. Utilization of mangrove natural resources in this area is in the hands of organizations and communities in Tongke-tongke Village. Furthermore, this management system, the community is given the opportunity and responsibility in managing its resources. Or integrated management is needed between all elements of Stakeholders. In order to realize the integrated management of Tongke-tongke coastal areas based on the community, management stages are needed starting from community-based coastal area management planning and referring to the sustainable development planning process in coastal areas. Community involvement in developing the Tongke-tongke mangrove area is needed in supporting the development of this area into an ecotourism area.



Picture 2. Map of Mangrove Forest Distribution in Tongke-Tongke Village

Table 1: Types of mangrove plants found in the Tongke- Tongke area

Mangrove Species	Family	Local name
<i>Aegice ras corniculatum</i>	Myrsinaceae	Otti-otti
<i>Avicennia alba</i>	Avcenniaceae	Fire-fire
<i>Avicennia officinalis</i>	Avcenniaceae	Fire-fire
<i>Avicennia cylindrica</i>	Avcenniaceae	Fire-fire
<i>Bruguiera cylindrica</i>	Rhizophoraceae	Bakko Panda
<i>Bruguiera gymnorhiza</i>	Rhizophoraceae	Bakko Panda
<i>Ceriop sp</i>	Rhizophoraceae	Cokke
<i>Nypa Fructicans</i>	Palmae	Nipa
<i>Rhizophora mucronata</i>	Rhizophoraceae	Bakko/Bakau
<i>Rhizophora apiculate</i>	Rhizophoraceae	Bakko/Bakau
<i>Sonneratia alba</i>	Sonneratiaceae	Padada
<i>Sonneratia caseolaris</i>	Sonneratiaceae	Padada
<i>Hibiscus tiliaceus</i>	Malvaceae	Haru
<i>Pandanus tectorius</i>	Pandanaceae	Panda
<i>Terminalia Catappa</i>	Comretaceae	Ketapang

Source: Research Results. 2022



Picture 3. Condition of the Mangrove Forest Area



Picture 4. Students observing ponds resulting from mangrove forest land conversion.



Picture 5. Students observe the shape of mangrove tree roots

Table 2: Utilization of Mangrove Forest

No.	Mangrove Forest Utilization	Description
1	Tourism Object Indirect use value	Tongke-tongke Village community utilizes mangrove forest tourism objects as a provider of employment with selling, opening floating cafes, and utilizing residential terrace land as parking areas for visitors.
2	Protection against natural disasters indirect use value use value)	Mangrove forests can prevent natural disasters, because one of the main functions of the forest is to prevent natural disasters. mangroves is to protect the coastline from abrasion and dampen waves big like a tsunami.
3	Seed Source Indirect benefits(indirect use value)	Utilization system in the form of mangrove seeds managed through farmer group institutions mangrove or natural resource conservation group in Tongketongke village (KPSA). Seed sales are subject to retribution forest by the Sinjai District Government amounting to 3%.

- | | | |
|---|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | Fishing and crabbing
<i>Direct use value</i> | The potential of mangrove forests that have been created into a coastal ecosystem that can be utilized as a livelihood for fishermen to catch fish and shrimp both for sale and consumption. |
| 5 | Wood Utilization
<i>Direct use value</i> | Direct utilization of mangrove forests in the form of timber is the last step to be taken. This can be detrimental if the monitoring system is weak and uncontrolled. |

Source: Sinjai Regency Environment and Forestry Service 2022

Activeness and Learning Outcomes of Geography Education Study Program Students FMIPA UNM in Utilizing Tongke-Tongke Mangrove Forest Area as a Learning Resource for Geography Resources

Table 3. Student activeness in learning

Criteria	Education Class A				Education Class B			
	Forest area Mangroves	%	Classroom meeting	%	Mangrove forest area	%	Classroom meeting	%
Very Active	29	74,36	11	28,21	26	78,79	9	27,27
On	10	25,64	17	43,58	7	21,21	15	45,46
Less Active	0	0	11	28,21	0	0	9	27,27
Inactive	0	0	0	0	0	0	0	0
Total	39	100	39	100	33	100	33	100

Based on the data in Table 1, it shows that by utilizing the tongke-tongke mangrove forest area as a learning resource, more than 70% of students' learning activities reach the active and very active categories in learning activities.

Table 4. Student Learning Outcomes

Description	Education A	Education B
Classical Completeness (%)	100 %	100 %
Optimal number of students (≥ 80)	30 (76,92%)	25 (75,76%)
Optimal number of students	9 (25%)	8 (24,24%)

Based on the data in Table 3, it shows that student learning outcomes show that all students have reached the minimum completion criteria and 75% of students achieve optimal learning outcomes.

The results showed that the tongke-tongke mangrove forest area has potential potential that can be used as a resource geography learning resource. Mangrove forests are biological natural resources that have a variety of potential diversity that provides benefits for human life. Mangrove forest ecosystems are one of the natural resources of coastal areas that have an important role in terms of social, economic, and ecological aspects (Umar et al. 2019). The main function is as an ecosystem balancer and provider of various life needs for humans and other living things (Tan & Siregar2021).

Mangrove forests can function to prevent abrasion that occurs in coastal areas. In addition, mangrove ecosystems have ecological functions and economic functions. The ecological function of mangrove ecosystems provides environmental services as a place to study ecological concepts from various parties, one of which is as a learning resource. Utilization of mangrove forest areas as a learning resource in resource geography courses provides convenience for lecturers and students in the learning process. The environment has its own uniqueness to become a learning resource so as to motivate students in learning activities (Saputri et al., 2019). In addition, learning resources must facilitate students with learning activities that utilize local potential (Hasyim, 2019). Utilizing learning resources can help and provide learning opportunities and can provide real learning to students (Juwandi & Widyana, 2019). Therefore, to utilize the tongke-tongke mangrove forest area as a learning resource, effective steps must be designed in advance and must be in accordance with the learning objectives to be achieved.

Various ways can be done to utilize the tongke-tongke mangrove forest area as a resource geography learning resource, for example by conducting field trips guided by lecturers. Students can do assignments in groups by visiting the tongke-tongke mangrove forest area. This method must go through several conditions, one of which is relevant learning planning, namely, in the resource geography course. Strategy is a universal pattern in educational activities and students in realizing learning activities to achieve a goal (Wafa, 2017). The learning materials prepared must be in accordance with the policies in the curriculum and in accordance with the demands and needs of the community (Suryaningsih, 2018). Learning resources are everything that can make it easier for students to obtain a number of information, knowledge, experiences, and skills in the teaching and learning process (Dahlia et al. 2018). The use of learning resources can overcome the limitations of space, time and sensory power, broaden students' insights and experiences, provide accurate and up-to-date information, increase student learning motivation, develop students' ability to think more critically and positively.

CONCLUSION

Based on the results of research and discussion, it can be concluded that the utilization of tongke- tongke mangrove forest area as a learning resource can optimize student learning activities and outcomes. Utilization of tongke-tongke mangrove forest area as a learning resource can be a solution as a deepening of material and can stimulate student learning motivation in learning activities.

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