ASYNCHRONOUS LEARNING AS FISHING MANAGEMENT LITERACY IMPROVEMENT ON BAJO TRIBE

Misran Rahman

Program Studi Pendidikan Luar Sekolah, Fakultas Ilmu Pendidikan, Universitas Negeri Gorontalo
misran@ung.ac.id

Abstract

This study aims to obtain an overview about the efficacy of implementation of the asynchronous learning to improve literacy skills of the fishermen of Bajo Tribe, a community that built settlements above the sea. Due to the digitalization era following the Covid-19 pandemic and other natural limitations, an asynchronous model is used to improve the fishermen's understanding of marine life. The method used in this study is an asynchronous workshop added with discussion. There are 25 participants, with the majority being fishermen. The results show an improvement in knowledge regarding marine life. Most participants realized that the sea has a variety of marine life that is very beneficial for human life, which piques their genuine interest in discovering environmentally sustainable fishing management options, enriching their awareness and knowledge, and improving their fishing management skills.

Keywords: asynchronous learning, education and training, fishing management literacy, Bajo Tribe.

Abstrak

Penelitian ini bertujuan untuk memperoleh gambaran mengenai implementasi model asinkronus dalam meningkatkan kemampuan literasi nelayan Suku Bajo di Gorontalo. Suku Bajo merupakan suku yang hidup di pesisir laut dan membangun tempat tinggal diatas laut. Metode yang digunakan dalam penelitian ini adalah workshop dengan model asinkronus yang dilengkapi dengan diskusi, dengan jumlah peserta 25 orang. Hasil penelitian menunjukkan bahwa terlihat peningkatan kompetensi oleh sebagian besar responden mengenai biota laut dan meningkatkan kesadaran mengenai pentingnya menjaga kelestarian laut. Para peserta memahami teknik pengelolaan perikanan yang ramah lingkungan, untuk memperkaya kesadaran dan pengetahuan mereka serta untuk meningkatkan keterampilan tentang pengelolaan penangkapan ikan.

Kata kunci: pembelajaran asinkronus, pendidikan dan pelatihan, literasi manajemen perikanan, suku Bajo.

INTRODUCTION

Bajo Tribe is one of the tribe in Indonesia that is notorious for its nomads living and built settlement above the sea. The tribe is estimated originally from Southern Sulawesi, which then dispersed to a number of locations on nearby land (Kusuma et al., 2017, p. 1008). The tribe expanded through trade and marriage, even dispersed to new territory due to unsettled legal issues (Grangé, 2017, p. 272; Kusuma et al., 2017, p. 1008; Nuraini, 2016, p. 4; Suliyati, 2017, p. 133). One of the tribe located in Gorontalo (Figure 1). The tribe, just like other Bajo Tribes, faces similar difficulty regarding building settlements above the sea, since the regulation regarding this issue remains unclear (Nuraini, 2016, p. 3). Nevertheless, Bajo Tribe in Gorontalo is legitimately part of Gorontalo Province and receiving help from local government for the village development (for example Mano, 2014). Its unique location made it as one of potentially popular tourism destination in Gorontalo (Bappeda Provinsi Gorontalo, 2021, pp. 19–20). Local government also has the responsibility to develop the village. As a result, the government has implemented numerous programs aimed at empowering people and alleviating poverty.

Furthermore, the character and skill of fishermen are influenced by the rapid advancement of technology and science. It is imperative to improve the quality of human resources in various facets of life. Strengthening fishermen's literacy is an endeavor to improve their competence so that they can improve their talents and skills, which will help them improve their well-being. The presence of government support is frequently met with hostility of the community, particularly fishermen. Dependence on government support has trapped many individuals, particularly fishers. They become less self-reliant as a result of this. This is fundamentally inconsistent with the Bajo tribe's original character, which has lived in the water for generations while shifting from place to place. As a result, growing competence as a manifestation of enhancing fishermen's literacy is an important feature that is still being promoted in order for them to be empowered, enhance their welfare, and be self-sufficient.
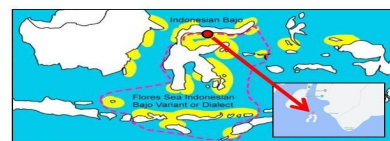

Figure 1. Map of dispersion Bajo Tribe in Indonesia (modified from Nuraini, 2016, p. 3). Yellow spread shows the dispersion of the Bajo Tribe. Red dot shows approximately Bajo Tribe in Gorontalo, as the location of

study. Smaller map shows enlargement of Torosiaje Village area (source: map.google.com)

Improvement of skill is achievable through education and training. Training that is done immediately and over a lengthy period of time is challenging during the current Covid-19 epidemic. As a result, one of the things that may be done is to provide training through the use of information and communication technology (ICT) media. Synchronous and Asynchronous ICT-based training are two well-known forms. Synchronous model is real-time interaction between participant and instructor, while the asynchronous is not real-time based. In term of distance learning, synchronous model applied by learning via video conferences such as Zoom or Google Meet, while asynchronous model applied by providing video lesson (Alhazbi & Hasan, 2021, pp. 2–3; Altun et al., 2021, p. 37; Asaduddin & Maulani, 2021, p. 111; Fahmi, 2020, p. 149; Lin et al., 2020, p. 14; Lin & Gao, 2020, p. 170; Nikmah & Azimah, 2020, pp. 116–117; Oguguo et al., 2021, pp. 139–140; Riwayatiningsih & Sulistyani, 2020, pp. 310–313). There are advantages and disadvantages in both. Synchronous model provides interaction and communication during the lesson but lack of flexibility, while asynchronous model provides wide range of accessing learning materials and flexibility of time but lack of immediate feedback and communication (L. Pinar, 2021, pp. 55–58). It is suggested, in the term of online courses, that interaction and/or modified-discussion should be modified in asynchronous model (Lin & Gao, 2020, pp. 176–177). However, learning system tends to be subjective depends on the user's needs and supportive facilities (Lin et al., 2020, p. 16). In Bajo Tribe, limitation of electricity use is occurred where rolling blackout is still applied. It is even more complicated due to the lack of signals and internet connectivity. Therefore, during the covid-19 pandemic where distance learning is obliged, synchronous model is hardly meeting the Bajo Tribe limitations. As a result, the application of the asynchronous model as a technique of enhancing environmentally safe fishing literacy abilities was attempted in this study. This is projected to improve the lives of Bajo fisherman in the village.

METHODS

This study applied to The Bajo people in Torsiaje village, Popayato region, Pohuwato district, Gorontalo Province (Figure 1). The total of 25 participants with three months project divided into three stages: preparation, training, and evaluation. The activities are: (1) creating a committee, (2) preparing videos, (3) preparing persons, (4) coordinating with partners, (5) determining the number of participants, (6) distributing invitations, (7) preparing tools, and (8) preparing assessment tools. Nurhajati and Bachri (2018, p. 159) stated that the basic competence of the participants should undeniably be the fundamental stage of further improvement in education and training – it becomes a parameter to determine need analysis. Information and skill development about fishing management is certainly needed by the people of Bajo Tribe, based on their living environment. Asynchronous model is applied by providing video about marine ecosystems and the conditions that allow various marine biota to thrive. The resource person guides and explains the film as it is shown publicly in front of the attendees. Participants watch the video's progression, listen to its contents, and ask questions about what they don't understand or need to be confirmed. During this activity, a question and answer session was held about the video's content or other marine-related topics. Finally, assessment of competence: concept comprehension and attitude evaluation.

The approach used in the training is asynchronous, using video tutorials. A number of groups will be formed from the participants. Participants saw videos about marine and fisheries issues, as well as environmentally friendly fishing management. Participants are guided by the instructor during the session. Finally, they were evaluated to see if they understood the concept, if they had any talents in obtaining environmentally friendly fish, and if they had any attitudes. Furthermore, this research employs an andragogy approach, assuming that the activity participants are adults.

Observation, interviews, and documentation were employed to obtain data in this study. The researcher used the interview technique to ask each sample or informant all of the questions. Furthermore, the informants' responses were divided into two categories: the same answer and different ones. This is done to obtain all of the informants' perspectives, but only the answers from the informants who are more appropriate and capable of representing all of the informants' perspectives are provided in the research results. Finally, this method of recording is employed as evidence to back up the findings of interviews and observations. The documentation technique seeks to keep the observations and interviews on track with the research questions. Furthermore, the documentation in this study intends to supplement the observation and interview procedures so that physical evidence can be collected later in the research. The researcher aims to comprehend the domain of the problem focus or target of this research utilizing taxonomic analysis as a data analysis technique in this study. Researchers gain a better understanding of the topic by consulting with sources which can provide a deeper comprehension of the research. The triangulation approach was used to assess the authenticity of the data in this investigation. This study's triangulation method tries to check and confirm validity by assessing from multiple perspectives.

RESULTS AND DISCUSSION

The Bajo Tribe is notorious for its ability to perceive nature's cues and its wisdom in regulating the environment. Although reports stated that the tribe distinguished their community from others, (for example Nuraini, 2016, p. 4), the people of Bajo Tribe in Gorontalo are not separated from other communites. The people of Bajo Tribe in Gorontalo are blended into three

villages in Pohuwato district: Torosiaje located above the sea, Torosiaje Jaya and Bumi Bahari located inland (Kobi & Hendra, 2020, p. 17).

Based on history, the sea Bajo tribe had just an archaic boat and no contemporary navigational technology when they conquered the ocean, but their expertise allowed them to do it, which still has preserved this expertise to this day. They use the indicators above to aid them in their fishing.

Similarly, environmentally friendly fishing gear includes gillnet and entangling nets, hook and line, falling gears, traps, dredges, surrounding nets, lift nets, and grappling and wounding devices. Some of these tools owned by Bajo fishermen. Some fishermen even used traditional fishing tools called bina which used cotton instead of hook to catch fish (Utina, 2017, p. 56).

The people of Bajo Tribe in Gorontalo are quite strict following the cultural restriction, which is indirectly favorable for nature preservation. For example, a tradition called Mamia Kadialo is currently still applied. Mamia Kadialo is a tradition of grouping the Bajo Tribe fishermen into three groups (palilibu, bapongka, and sasakai) based on the fisherman's equipment for fishing (Baruadi et al., 2017, p. 58). Some of the traditions in Bajo Tribe are believed based on Islamic traditions (Maglana, 2016, pp. 76–78). Islamic belief accentuated attachment to nature, thus obedience would prohibit environmental deterioration. For example, the tribe shall obey certain cultural rules during the tradition, such as restriction to disposed wastes in the sea, otherwise disaster would happen (Utina, 2017, p. 5). Kobi and Hendra (2020, p. 24), based on data collected in 2017, reported that people in Bajo Tribe who reside above the sea still dispose of the daily waste to the water due to lack of disposal place. This tradition should constrict them to dispose waste at least when the tradition is occurring. Other example is prohibition of cutting

mangrove sapling, since it is believed to be the habitat of spirits, while scientifically it helps to preserve the mangrove ecosystem (Utina et al., 2017, p. 5). Hence, mangrove is notably preserved in the vicinity of the residents (Figure 3).

During the covid-19 pandemic, the community is considered safe due to the tribe-isolation from the community in the other places. Hence, the people in Torosiaje village which is located above the sea tend to feel safer. However, in certain aspects, the condition really gets worse during covid-19 pandemic. Residence above the sea cost the community many challenges than on land. Some natural causes such as fresh water resources and electricity are limited, even more for signals and internet connectivity. Implementation of distance learning is still problematic in human resource and facilities even in well-built facilities residence, due to some reports (for example Sajida & Ranjani, 2020, p. 313; Simamora, 2020, p. 99), even more in a remote place like Torosiaje village, where almost no internet connection. Clearly construction about electricity and internet connection should be regarded by policy makers. Nevertheless, the author sought an approachable 'distance learning' type that is feasible for the people of Sea Bajo Tribe in Torosiaje village. The video/lesson material should be prepared or downloaded upfront in a place where internet connectivity is active (likely a place inland where electric pole exist). After that, a massive gathering such as a workshop can be carried out to execute the training.

The method of learning should meet the subject's requirement (Lin et al., 2020). Synchronous model distance learning is barely possible to be applied in this tribe. Therefore, the researcher offered asynchronous model as an indirect approach in the workshop, by providing a lesson video.
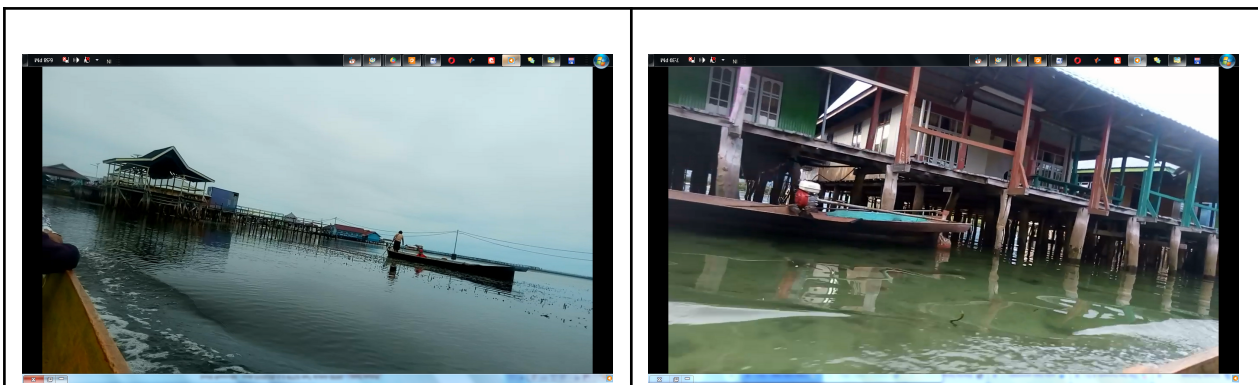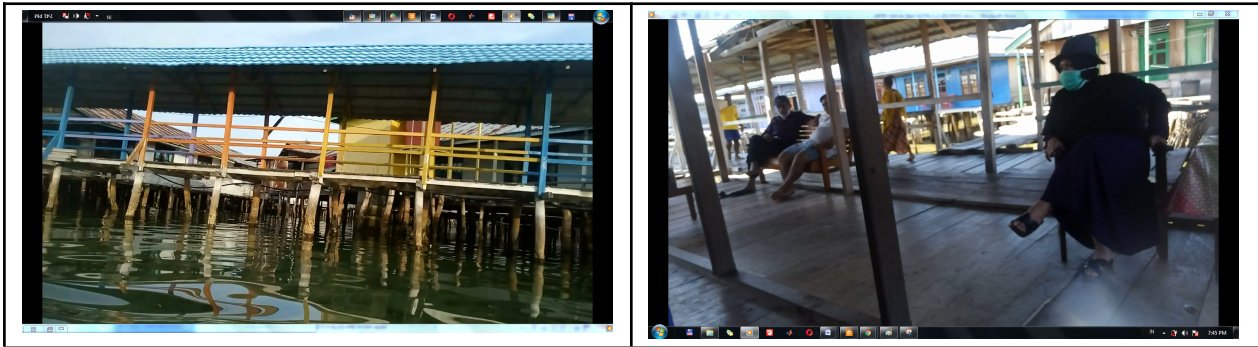
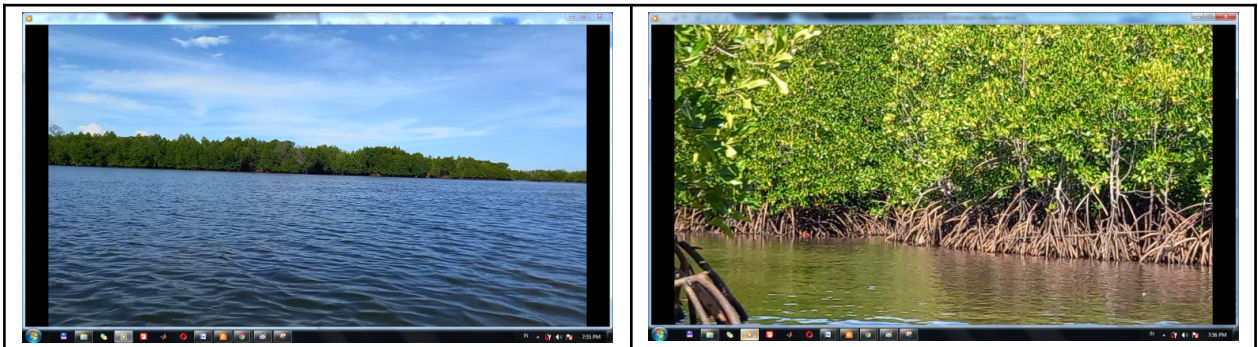Figure 2. Gorontalo Bajo Tribe residents above the sea.

Figure 3. Mangrove ecosystem in Torosiaje village, Gorontalo, the residents of Sea Bajo Tribe.

Figure 4. Discussion Session during asynchronous workshop.

Many studies reported some disadvantages of asynchronous models (Asaduddin & Maulani, 2021; L. Pinar, 2021; Lin & Gao, 2020; Rahmadani & Muhammad, 2021), including lack of interaction. We understand the importance of discussion which many of the asynchronous methods lack. During the video viewing, an instructor monitors and directs the participants to enhance dialogue and information sharing among participants (figure 4). This discussion also leads to sharing information about what happened to Bajo people this whole time. The discussion after the video viewing rather enriched information on both sides, the facilitator and the respondents. Through the discussion, the facilitator could grasp the factual condition of social economic challenge of the current Torosiaje Village, for example limited electricity, as it has been mentioned before. Freshwater resources are pumped from water ground with a pump machine running by electricity. Even more to talk about connectivity, which practically none. Thus, this video viewing method was something the people of Torosiaje appreciated (mentioned by the head of Torosiaje Village). The responses from respondents were also positive, as the video viewing lesson with explanation was original; as it has never been held in Torosiaje Village before, one of the respondents said. As unique things pique people's interest, the respondents

paid attention seemingly fully during the process. Discussion with representative respondents showed their good comprehension about the idea presented in the video presentation. The representative respondents understood more about safe fishing methods that are environmentally friendly. They were encouraged and encouraged to preserve nature, as preserving nature is more of a long term life for their children and grandchildren, not only based on cultural habit, which certainly is a good foundation however. Nevertheless, understanding it in a matter of science after the visualization with the video deepened the impression of the sea life around them.

CLOSING
Conclusion
This study revealed asynchronous learning as a method to improve fishing management literacy on Bajo Tribe in Torosiaje village, Popayato region, Pohuwato district, Gorontalo Province. Respondents showed appreciation of this method as a novel approach that it intrigued curiosity that made them focus, hence it eased their understanding about the content of the video lesson. Bajo tribe characters also encourage environmentally responsible fishing endeavors. Some of these characters have been passed down from generation to generation as a custom. Furthermore, because the Bajo people recognize that the sea is their source of subsistence, they strive to conserve the sea and prevent the extinction of marine life.

Recommendation
The study's findings are expected to be pursued further. Furthermore, the findings of the study are intended to be used by fisherman from the Bajo tribe.

REFERENCES
Alhazbi, S., & Hasan, M. A. (2021). The role of self-regulation in remote emergency learning: Comparing synchronous and asynchronous online learning. *Sustainability (Switzerland)*, *13*(19), 1–12. https://doi.org/10.3390/su131911070

Altun, T., Akyıldız, S., Gülay, A., & Özdemir, C. (2021). Investigating education faculty students ' views about asynchronous distance education practices during COVID-19 isolation period. *Psycho-Educational Research Reviews*, *10*(1), 34–45. https://journals.lapub.co.uk/index.php/perr/article/view/1710

Asaduddin, A. H., & Maulani, U. N. (2021). Beyond synchronous and asynchronous systems towards blended learning: Perspective on medical education through COVID-19 Pandemic. *Journal of Academia*, *1*(2), 110–116. https://doi.org/10.30998/jap.v1i2.733

Bappeda Provinsi Gorontalo. (2021). Bab II Gambaran umum kondisi daerah. In *Rencana Kerja Pemerintah Daerah Provinsi Gorontalo 2021* (pp. 1–106). https://bappeda.gorontaloprov.go.id/institution/file_share/BAB-II_179_637.pdf

Baruadi, A. S., Utina, R., & Katili, A. S. (2017). Short communication: the implementation of local wisdom intervention by Bajo people in eco-friendly artisanal fishery in Torosiaje Gorontalo, Indonesia. *Australian Journal of Basic and Applied Sciences*, *11*(12), 57–60. https://repository.ung.ac.id/en/karyailmiah/show/3099/short-communication-the-implementation-of-local-wisdom-intervention-by-bajo-people-in-eco-friendly-artisanal-fishery-in-torosiaje-gorontalo-indonesia.html

Fahmi, M. H. (2020). Komunikasi synchronous dan asynchronous dalam e-learning pada masa pandemic Covid-19. *Jurnal Nomosleca*, *6*(2), 146–158. https://jurnal.unmer.ac.id/index.php/n/article/view/4947/0

Grangé, P. (2017). A collaboration between linguistics and genetics: Tracing the Bajo diaspora history in Eastern Indonesia. *Proceedings of the 2nd International Conference on Innovative Research Across Discipline (ICIRAD) The*, *August*. https://doi.org/10.2991/icirad-17.2017.50

Kobi, W., & Hendra, H. (2020). Kajian geografi ekonomi: Studi kasus kondisi sosial ekonomi masyarakat suku Bajo di Popayato, Gorontalo. *Jambura Geo Education Journal*, *1*(1), 16–25. https://doi.org/10.34312/jgej.v1i1.4637

Kusuma, P., Brucato, N., Cox, M. P., Letellier, T., Manan, A., Nuraini, C., Grangé, P., Sudoyo, H., & Ricaut, F. X. (2017). The last sea nomads of the Indonesian archipelago: Genomic origins and dispersal. *European Journal of Human Genetics*, *25*(8), 1004–1010. https://doi.org/10.1038/ejhg.2017.88

L. Pinar, F. I. (2021). Grade 12 students' perceptions of distance learning in general chemistry subject: An evidence from the Philippines. *International Journal of Theory and Application in Elementary and Secondary School Education*, *3*(1), 44–61. https://doi.org/10.31098/ijtaese.v3i1.509

Lin, X., Dai, Y., Shi, H., & Li, C. (2020). E-learners' satisfaction as predictors of online classroom community. *Journal of Contemporary Education, Theory & Research*, *4*(2), 12–19. https://doi.org/10.5281/zenodo.4256511

Lin, X., & Gao, L. (2020). Students' sense of community and perspectives of taking synchronous and asynchronous online courses. *Asian Journal of Distance Education*, *15*(1), 169–179. https://doi.org/10.5281/zenodo.3881614

Maglana, M. C. (2016). Understanding identity and diaspora: The case of the Sama-Bajau of Maritime Southeast Asia. *Jurnal Sejarah Citra Lekha*, *1*(2), 71–80. https://doi.org/10.14710/jscl.v1i2.12089

Mano, D. H. (2014). *Gubernur Gorontalo Serahkan Bantuan Kepada Warga Torosiaje.*

Gorontalo.Antaranews.Com.
https://gorontalo.antaranews.com/berita/9145/gubernu
r-gorontalo-serahkan-bantuan-kepada-warga-torosiaje

Nikmah, K., & Azimah, N. (2020). A study of synchronous and asynchronous approaches: Online Arabic learning during the Covid-19 Pandemic. *Alsuna: Journal of Arabic and English Language*, *3*(2), 115–139. https://doi.org/10.31538/alsuna.v3i2.841

Nuraini, C. (2016). The intangible legacy of the Indonesian Bajo. *Wacana*, *17*(1), 1–18. https://doi.org/10.17510/wacana.v17i1.427

Nurhajati, W. A., & Bachri, B. S. (2018). Pengembangan Kurikulum Diklat (Pendidikan dan Pelatihan) Berbasis Kompetensi dalam Membangun Profesionalisme dan Kompetensi Pegawai Negeri Sipil (PNS). *Jurnal Pendidikan (Teori Dan Praktik)*, *2*(2), 156. https://doi.org/10.26740/jp.v2n2.p156-164

Oguguo, B. C. E., Ocheni, C. A., & Adebayo, F. K. (2021). Students` achievement in online test and measurement course in synchronous and asynchronous e-learning platform. *European Journal of Open Education and E-Learning Studies*, *6*(2), 137–151. https://doi.org/10.46827/ejoe.v6i2.3966

Riwayatiningsih, R., & Sulistyani, S. (2020). The implementation of synchronous and asynchronous e-language learning in EFL setting: A case study. *Jurnal Basis*, *7*(2), 309–318. https://doi.org/10.33884/basisupb.v7i2.2484

Sajida, S., & Ranjani, R. (2020). Examining the internet quota subsidy policy in Indonesia. *Iapa Proceedings Annual Conference*, *19*, 298–319. https://doi.org/10.30589/proceedings.2020.411

Simamora, R. M. (2020). The challenges of online learning during the COVID-19 pandemic: An essay analysis of performing arts education students. *Studies in Learning and Teaching*, *1*(2), 86–103. https://doi.org/10.46627/silet.v1i2.38

Suliyati, T. (2017). Social change of Bajo Tribe society in Karimunjawa: From "Sea Tribe" to "Land Tribe." *Journal of Maritime Studies and National Integration*, *1*(2), 128–138. https://doi.org/10.14710/jmsni.v1i2.2002

Utina, R. (2017). Ecological intelligence of coastal communities on biodiversity conservation (case study of Bajau coastal communities, Gorontalo). *Jurnal Metamorfosa*, *4*(1), 54–57. https://doi.org/10.2307/2257356

Utina, R., Katili, A. S., Nusantari, E., & Tamu, Y. (2017). Coastal biodiversity conservation through strengthening science values of local wisdom of Bajau in Torosiaje Gorontalo. *International Conference on Transdisciplinary Approach Research (ICTAR) 2017*.