



Indonesian Educational Research Journal

Journal homepage: <https://journal.id-sre.org/index.php/ierj/index>



Mathematical Concepts and Cultural Values at Abui Community Culture: Ethnomathematics Study in Traditional Villages, Alor Regency, Indonesia

Ester M.N. Elly Auw¹, Aloisius Loka Son^{2*}, Yosepha Patricia W. Laja³

^{1, 2, 3} Mathematics Education Program, Universitas Timor, Indonesia

* aloisiuslokason@unimor.ac.od

Received	Revised	Accepted	Published
April 8, 2023	April 24, 2024	April 25, 2024	April 30, 2024

Abstract

This study aims to explore mathematical concepts and cultural values in the *Abui* community, in the village of Takpala, Alor Regency, Indonesia. The research method used is qualitative research with an ethnographic approach. The research subjects are three informants and the research objects are the *Fala foka* house, *Lopo*, *Moko*, and the *Lego-lego* dance. The instruments used in this research are observation, interviews, and documentation. The research findings obtained include: 1) mathematical concepts found in *Fala foka*, *Lopo*, *Moko*, and *Lego-lego* dance in the traditional village of *Takpala* are plane figures such as squares, circles, rectangles, rhombuses, and triangles, as well as spatial figures such as square pyramids, cylinders and pointed cones, and concepts of lines and sets; 2) cultural values found in the roof of *Fala foka* include supplication, the attic symbolizes unity, the pillars symbolize the four cardinal directions, *Lopo* symbolizes purity, *Moko* symbolizes the identity of the Alor community, and the *Lego-lego* dance symbolizes unity. It is recommended for teachers to apply the results of this research in the learning process, and for further researchers to use the results of this research in designing mathematics learning based on ethnomathematics.

Keywords: Abui Society; Cultural values; Ethnomathematics; Mathematical concepts.

1. INTRODUCTION

Mathematics is a fundamental science that is crucial in human life. In daily life, without realizing it, all societies apply mathematical knowledge, whether it be construction workers, market traders, traditional activities, or even children who have not yet attended school. Mathematics is not only seen as a subject but also as an activity deeply embedded in culture. Mathematics is a form of culture and has indeed been integrated into all aspects of community life (Hardiarti, 2017).

Mathematics and culture are inseparable in daily life. Mathematics is one of the sciences used by humans in daily life, while culture is a habit that contains elements of important values and is passed down from generation to generation. The habits performed are inseparable from the application of

^{2*} Corresponding author, email: aloisiuslokason@unimor.ac.id

mathematical concepts, thus providing unique and diverse results. From the explanations above, it can be said that culture is a habit performed by society, commonly referred to as civilization. Therefore, one alternative to linking mathematics with culture is called ethnomathematics.

Ethnomathematics can be described as mathematics in the surrounding environment or mathematics in society. Sarwoedi et al (2018) describe ethnomathematics as a way used to study mathematics by involving activities or local cultural activities, thus facilitating someone to understand mathematics. On another level, ethnomathematics can be described as a specific way chosen by certain cultural groups in activities such as grouping, ordering, counting, playing, creating patterns, and explaining in their own way. If related to the world of education, ethnomathematics is a study that examines the history and concepts of mathematics, which has implications for teaching (D'Ambrosio, 2007).

The Abui tribe has traditions passed down by their ancestors such as various customs, traditions that have grown and developed in the community's life from ancient times to the present. The uniqueness of the Abui tribe lies in the form of traditional houses which have characteristics and are used as residences, storage places, and as venues for traditional ceremonies. Another unique feature is found in the *Moko*, besides being used as a dowry, *Moko* is also believed to be the belly of the Alor earth, because the local people believe that *Moko* originates from the ground. Other uniqueness can be found in the *Lego-lego* dance which is performed by embracing each other and stomping their feet simultaneously.

Previous research conducted by Padafing (2019) concluded that the mathematical concepts contained in *Moko* and woven fabric are cylinders, circles, rhombuses, rectangles, congruence, parallel lines. Ly's research (2022) concluded that the *lego-lego* dance is performed with several movements including foot and hand movements, circular and embracing movements, as well as spinning movements. The educational meaning and moral message of this dance is to symbolize equality, togetherness, and teach society about living harmoniously, peacefully, as well as unity and solidarity without considering any existing differences.

The difference between previous research and this research can be viewed from the research object. Based on the description above, this research aims to explore mathematical concepts and cultural values found in the *Fala foka*, *Lopo*, *Moko*, and *Lego-lego* dance houses.

2. METHODS

The type of research used in this study is qualitative research with an ethnographic approach. This research was conducted in West Lembur Village, North Central Alor District, Alor Regency in July - August 2023. The instruments used in this research are interviews, observations, and documentation. The participants in this study were 3 people, including the Village Head as the leader in west Lembur Village, the Chairman of the Cultural Center as one of the individuals selected and trusted by the Takpala community to manage the Takpala cultural center, and residents as representatives of the Takpala community.

This research utilized three stages in the field process: observation stage, where the researcher directly observed the forms of traditional houses, *Moko*, and the *Lego-lego* dance. Then, the researcher conducted interviews consisting of question, and answer sessions with informants. Documentation was carried out to strengthen the data obtained, both from literature studies and data obtained during the research.

The data analysis technique according to Spradley (1997) consists of four stages: domain analysis, taxonomic analysis, componential analysis, and cultural themes. The domain analysis stage is conducted to obtain an overall picture of the situation of the researched object, the obtained picture is not yet in-depth. The taxonomic analysis stage is carried out to determine the research focus, and the researcher

will deepen the data collection process. The data collection process can be continuous through observation, interviews, and documentation until the researcher obtains more data. Meanwhile, in the componential analysis stage, the researcher breaks down the established domain into the research focus, and the researcher begins to search for similar elements through focused interviews, observations, and documentation. Cultural themes are analyzed to find common threads so that the researcher can link the mathematical concepts and cultural values found in the research object.

3. RESULTS AND DISCUSSION

Some artifacts that are the objects in this research are the *Fala foka* house, *Lopo*, *Moko*, and the *Lego-lego* dance. In the traditional *Fala Foka* and *Lopo* house, several parts can be examined, including the roof, pillars, attic, and walls. The mathematical concepts and cultural values found in the research can be explained in the following sections.

The mathematical concepts

1. Traditional *Fala Foka* and *Lopo* house

Traditional houses of *Fala Foka* and *Lopo* have the same building structure, so their discussions merge into one unity, as described below. The mathematical concepts at the traditional *Fala Foka* and *Lopo* house can be describe the following.

a. Roof.

The documentation results of the roofs of the *Fala Foka* and *Lopo* houses are as shown in the figure 1.



Figure 1. Roof frame of *Fala Foka* and *Lopo*

Next, an interview was conducted between the researcher (R) and the subject (S) as follows:

R : If we observe, what the roofs of the *Fala foka* and *Lopo* houses have the same shape?

S : Yes, if observed from all sides, the roofs of both buildings have the same shape, which is a triangle.

R : Then, what kind of wood is vertically tied to the roof? What is its function?

S : The type of wood used is bamboo, and it is used to arrange the thatched roof.

Based on the interview results, the roofs of *Fala foka* and *Lopo* have the mathematical concept of a triangle because they have three sides. This is supported by Nurfadilah's statement (2022) that a triangle is a flat shape bounded by three sides, three corner points, and has a base. It is also consistent with Kehi, Son & Simarmata (2022) definition that a triangle is a flat shape with sides whose three ends meet and form three angles totaling 180 degrees, and has three corner points. The roofs also feature square pyramids because there are four triangular sides combined. This corresponds to the definition of a square pyramid as a spatial structure formed by a quadrilateral area and four congruent triangular areas. The roofs also have a vertical arrangement of wood resembling straight lines. This aligns with opinion Tas'au, Son & Maifa (2023) that a line is a

geometric shape drawn by a moving point, and the dimension possessed by a line is only one, which is length. Types of lines include straight lines and curved lines.

b. Pillars

The documentation results of the Pillars of the *Fala Foka* and *Lopo* houses are as shown in the figure 2.

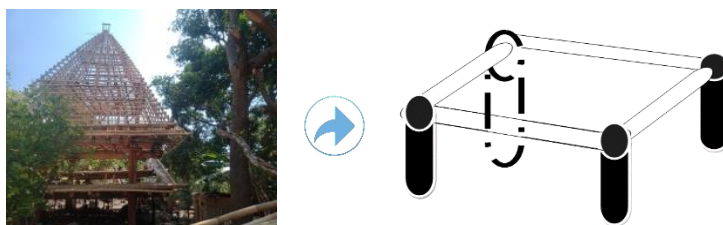


Figure 2. The Pillars of *Fala Foka* and *Lopo*

Next, an interview was conducted between the researcher and the subject as follows:

R : What type of wood is used for the posts of *Fala Foka* and *Lopo* buildings?

S : The wood used is redwood, with a large diameter or size, thus used as posts to support the *fala foka* and *Lopo* buildings.

R : How deep is required to plant the posts?

S : The required depth is between 75 cm to 1 m.

Based on the interview results, there is a mathematical concept in the posts of *Fala foka* and *Lopo* houses in the form of a solid figure, namely a cylinder, because it has two identical or parallel circles and a rectangular prism as its surface, thus forming a three-dimensional space. This aligns with Djara's opinion (2021) that a cylinder is a solid figure in the shape of a regular right prism with its base in the form of a circle. It also aligns with Kehi, Son & Simarmata's (2022) statement that a cylinder is a solid figure bounded by two parallel circles (same shape and size) and a surface.

c. Attic

The documentation results of the attic of the *Fala Foka* and *Lopo* houses are as shown in the figure 3.

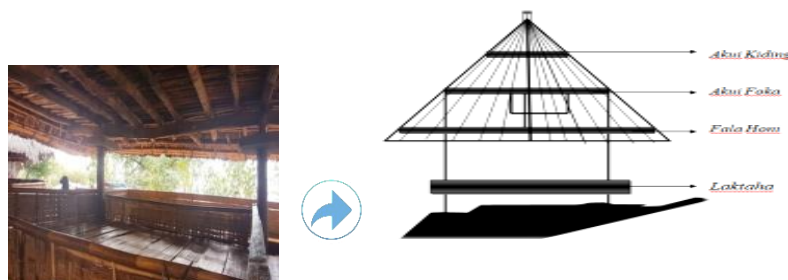


Figure 3. The Attic of *Fala Foka* and *Lopo*

Next, an interview was conducted between the researcher and the subject as follows:

R : Does this attic have the same length and width measurements?

S : Yes, this attic follows the building's shape with the same length and width measurements

Based on the interview results, the mathematical concept found in the attic is a square because the attic's dimensions follow the building's shape, namely having the same length and width measurements. Because of the equal length and width, its four angles are also equal, thus it is called a square. This is in line with opinion of Yuningsih, Nursuprianah & Manfaat (2021) that a square is a flat shape with sides that are parallel and equal in length, and it has four right angles. Similarly, Kehi, Son & Simarmata (2022) states that a square is a flat plane with four sides of equal length and four angles of equal size.

d. Walls

The documentation results of the walls of the *Fala Foka* and *Lopo* houses are as shown in the figure 4.

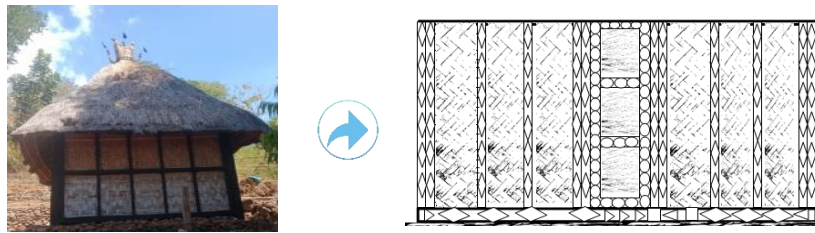


Figure 4. The Walls of *Fala Foka* and *Lopo*

The mathematical concept in the wall is examined based on the motif on the wall. The following is an interview was conducted between the researcher and the subject as follows:

R : How is this bamboo weaving embroidered to form such a shape?

S : The bamboo pieces are split in such a way that they are of equal size. Then they are woven to form a motif like this.

R : Does this motif occur because of the equal size of the bamboo pieces?

S : Yes, that's right.

Based on the interview results, it was found that the motif on the wall is in the form of a rhombus. It is called a rhombus because it has four sides of equal length. This is in line with opinion of Padafing (2019) that a rhombus is a two-dimensional flat shape formed by four sides of equal length and has two pairs of non-right angles, each of which is equal to the angle opposite it. A rhombus is a flat shape with four sides of equal length, opposite angles of equal size, and intersecting diagonals.

2. *Moko*

Another folklore that is the object of study in this research is *Moko*. The documentation results of the *Moko* as shown in the figure 5.



Figure 5. *Moko*

Next, an interview was conducted between the researcher and the subject as follows:

R : If observed, does the *Moko* resemble two upside-down bowls stacked together?

S : Yes, that's correct, child, and the *Moko* is known as the *Malaitana Moko*, which resembles an upside-down bowl.

Based on the interview results, the shape of the *Moko* contains a mathematical concept, namely a truncated cone or an upright cone because the top and bottom parts of the *Moko* resemble upside-down bowls stacked together. This is in line with Setiawan's opinion (2019) that a truncated cone is an upright cone with its upper tip cut off, which when observed will resemble an inverted bucket. Additionally, on the surface of the *Moko*, there are circular shapes, and in the middle part of the *Moko*, there is a cylindrical shape, while on the body of the *Moko*, there are diamond-shaped motifs.

3. *Lego-lego* Dance

The last folklore that is the object of study in this research is the *Lego-lego* dance. The documentation results of the *Lego-lego* dance as shown in the figure 6.



Figure 6. The *Lego-lego* dance

Next, an interview was conducted between the researcher (R) and the subject (S) as follows:

R : *Why is the Lego-lego dance formation always circular?*

S : *Because the main focal point of this dance is the Mesbah, so the dance formation takes a circular shape surrounding the Mesbah.*

Based on the interview results, the *Lego-lego* dance contains a mathematical concept in the form of a circle. The *Lego-lego* dance is a dance performed by holding hands while encircling the Mesbah to form a circle. This aligns with Minah's (2021) definition that a circle is a collection of points on a curved line that are equidistant from the center of the circle. It is also consistent with Tas'au Son & Maifa (2023) assertion that a circle is a set of points equidistant from a specific point, namely the center point, on a flat plane. In the *Lego-lego* dance, there is also a concept of a set, as there is a collection of objects that can be defined (humans, sacred objects). This is in line with Outang's (2023) opinion that a set is a collection of specific objects that have a defined criteria and are considered as a unit.

The cultural values

1. Traditional *Fala Foka* house

The cultural values at the *Fala Foka*, can be describe the following.

a. Roof

The documentation results of the roofs of the *Fala Foka* houses are as shown in the figure 1. For get the cultural values at the *Fala Foka*, an interview was conducted between the researcher (R) and the subject (S) as follows:

R : *What the meaning found in the roofs of Fala foka?*

S : *The meaning found in the roofs of Fala foka lies in the presence of crowns. This symbolizes a request or supplication.*

Based on the research findings, it was found that the meanings or cultural values contained in the roofs of *Fala foka* houses, which resemble open hands, signify that the Abui tribe constantly seeks protection and prosperity from the gods and also symbolize the sacredness of the building. The roof also serves to protect whatever is inside from the heat of the sun and the rainy season. This is consistent with the opinion of Muhammad, et al. (2023) that the roof is the head of a building and serves as protection for its inhabitants.

b. Pillars

The documentation results of the Pillars of the *Fala Foka* houses are as shown in the figure 2. For get the cultural values at the Pillars of the *Fala Foka*, an interview was conducted between the researcher (R) and the subject (S) as follows:

R : Does the 4 pillars on Fala foka have a specific meaning?

S : The 4 pillars on Fala foka are used as foundation and represent the four directions.

Based on the interview results, the meaning or cultural values contained in the main pillars of *Fala foka* depict the four cardinal directions (east, west, north, south). Additionally, the function of these 4 pillars is as supports. This is consistent with the statement by Muhammad, et al. (2023) that pillars serve as the foundation and main support of a building.

c. Attic

The documentation results of the Attic of the *Fala Foka* houses are as shown in the figure 3. For get the cultural values at the Attic of the *Fala Foka*, an interview was conducted between the researcher (R) and the subject (S) as follows:

R : Why do Fala foka have 4 levels?

S : Fala foka has 4 levels and symbolizes the three lives in the belief of the Abui tribe.

R : What are the names of the four levels of Fala foka? And what are their functions?

S : On the first level, it is called Laktaha, which serves as a place for receiving guests. On the second level, it's called Fala honi, used as a kitchen and resting place. The third level is called Akui foka, which serves as a storage place for food reserves, and the fourth level is called Akui kiding, used as a storage place for sacred objects.

R : What is meant by the three lives in the belief of the Abui tribe?

S : The three lives referred to are the life of pets, human life, and the highest for Gods or Spirits.

Based on the interview results, cultural values are found in the attic, which symbolizes the three lives in the belief of the Abui tribe, where the lowest space is used for pets, the second level is used for family activities, and the top level is used for offerings to spirits or ancestors. The third level of the attic is the highest level, so it is used as a place to store sacred objects, recognized as a space and form to seek assistance. This is in line with the opinion of Lede & Dapa (2021) that the attic serves as a storage space for sacred objects that provide assistance.

Lopo holds its own cultural values because of its unique shape, and not everyone is allowed to enter it, only certain individuals. Therefore, *Lopo* is always closed and only opened at specific moments. Due to its uniqueness, there is a desire to understand the cultural values contained within it, obtained through interviews between researchers and subjects as follows.

R : What is the meaning contained in the Lopo building?

S : The Lopo building symbolizes sacredness, so on the roof of the Lopo, there is a crown, surrounded by bamboo walls, and it has a door that is opened at certain times, thus Lopo is considered a sacred building.

Based on the interview results, *Lopo* symbolizes purity or sacredness, so the *Lopo* building is tightly closed, surrounded by walls, has a door, and the roof section has a crown. The walls of the *Lopo* building are made of woven bamboo, supported by six pillars, and have two colors, white representing daytime and black representing nighttime. This is in line with the belief of the Abui community that says a house is a small world. This is in line with Vindianingsih's opinion (2018) that the kolwat and kanurwat buildings are the most sacred traditional houses in the Abui tribe's tradition because they play a crucial role in ceremonial rituals and serve as storage for heirloom objects such as *Moko*, pots, spears, and other ceremonial equipment passed down through generations.

Another folklore that is the object of study in this research is *Moko*. The documentation results of the *Moko* as shown in the figure 5. For get the cultural values at the *Moko*, an interview was conducted between the researcher and the subject as follows:

R : What is the meaning of Moko?

S : Moko is interpreted as the identity of the Alor community.

R : Why is Moko interpreted as identity?

S : Because besides being a dowry, Moko can indicate someone's social status.

Based on the interview results, *Moko* symbolizes the identity of the people of Alor. Because *Moko* is not only a dowry for the people of Alor, but *Moko* can also determine someone's social status and serve as a means of exchange. Until now, *Moko* as a dowry is only found on the island of Alor. For the people of Alor, *Moko* is considered a divine gift that can emerge from the sea or from the ground because until now, no *Moko*-making place has been found on the island of Alor. This makes *Moko* very important, so it is used as a dowry by the people of Alor. Another reason *Moko* is used as a dowry is because *Moko* is considered a worthy price to replace a daughter who will leave her parents and extended family to join her husband. This is in line with the opinion of Juliawati (2016) that dowry or *belis* is not a purchase price but rather an exchange, so it can be said that the dowry is the entire customary transfer procedure from the groom's side to the bride's side according to their respective social layers or positions.

The last folklore that is the object of study in this research is the *Lego-lego* dance. The documentation results of the *Lego-lego* dance as shown in the figure 6. For get the cultural values at the *Moko*, an interview was conducted between the researcher and the subject as follows:

R : What is the meaning of the Lego-lego dance?

S : The Lego-lego dance symbolizes unity because in the circle of the Lego-lego dance, we hold hands regardless of status.

Based on the interview results, the *Lego-lego* dance is a dance that symbolizes unity, because in the formation of the *Lego-lego* dance, all people hold hands or embrace each other without regard to ethnicity, religion, or race, while circling the Mesbah. This is in line with Gini et al. (2022) that the *Lego-lego* dance is a dance of unity or brotherhood, and this dance is performed collectively. The Mesbah itself symbolizes holiness or sanctity, because of its round shape and formation from a arrangement of stones, forming a Mesbah. This is in line with the opinion of Satyananda et al. (2017) that the Mesbah is a formation of andesite stones or slab stones arranged in an oval or ring shape, and in the middle, several upright stones are erected, which are then called *Menhi*.

4. CONCLUSION

Based on the research findings and discussions, it can be concluded that the traditional village of Takpala has various uniqueness, one of which is the uniqueness in architecture such as *Fala Foka*, *Lopo*, traditions such as *Moko*, and the *Lego-lego* dance. These findings consist of mathematical concepts and cultural values found in *Fala Foka*, *Lopo*, traditions such as *Moko*, and the *Lego-lego* dance. The mathematical concepts found include plane figures such as squares, circles, rectangles, rhombuses, triangles, and spatial figures such as square pyramids, cylinders, pointed cones, as well as lines and sets. Meanwhile, the cultural values found include, among others, the roof of *Fala Foka* symbolizing supplication to the gods, Attic symbolizing the three realms of existence: animals, humans, and gods or ancestral spirits, *Lopo* symbolizing purity, *Moko* symbolizing the identity of the Alor people, and the *Lego-lego* dance symbolizing unity.

It is recommended for further researchers to conduct similar research on ethnomathematics and explore more about the relationship between culture and mathematics in the Abui tribe. It is also recommended for mathematics teachers to use the results of this research as a source for teaching mathematics in schools.

REFERENCES

- D'Ambrosio, U. (2007). *Peace Social Justice and Ethnomathematics*. The Montana Mathematics Enthusiast, Monograph 1, pp. hlm.26.
- Djara, E., Peni, N., & Wondo, M. T. S. (2021). Eksplorasi Etnomatematika Ngadhu Dan Bhaga Dalam Kaitannya Dengan Pembelajaran Matematika Pada Masyarakat Desa Ubedolumolo Kabupaten Ngada. *Jupika: Jurnal Pendidikan Matematika*, 4(1), 92-107. <https://doi.org/10.37478/jupika.v4i1.846>.
- Gini, F., & Kasim, A. (2022). Promosi Kearifan Lokal Dalam Pengembangan Pariwisata (Studi Pada Kampung Adat Takpala Kecamatan Alor Tengah Utara Kabupaten Alor). *Administrasi Bisnis*, 103.
- Hardiarti, S. (2017). Etnomatematika: Aplikasi Bangun Datar Segiempat pada Candi Muaro Jambi. *Aksioma*, 8(2), 99-110.
- Juliawati, P. E. (2016, December). Moko sebagai Mas Kawin (Belis) pada Perkawinan Adat Masyarakat Alor. *In Forum Arkeologi*, 26 (3).
- Kehi, S., Son, A. L., & Simarmata, J. E. (2022). Studi Etnomatematika: Makna Simbolik dan Konsep Matematika Pada Rumah Adat Hamanas Malaka. *PRISMA*, 11(2), 585-594. <https://doi.org/10.35194/jp.v11i2.2587>.
- Lede, Y.K., & Dapa, Y.J. (2021). Etnomatematika Berbasis Geometri Pada Rumah Adat di Desa Reda Mata Kabupaten Sumba Barat Daya. *Asimtot: Jurnal Kependidikan Matematika*, 3(1), 67-76.
- Ly, P. (2022). Makna Edukasi Dari Simbol Dan Gerak Pada Tarian Tradisional Lego-Lego Masyarakat Alor Kampung Takpala Di Desa Lembur Barat Kecamatan Alor Tengah Utara Kabupaten Alor. *Jurnal Gatranusantara*, 20(1), 18-25.
- Minah, M. S. A. M., & Izzati, N. (2021). Etnomatematika pada makanan tradisional melayu Daik Lingga sebagai sumber belajar. *Jurnal Eksakta Pendidikan (JEP)*, 5(1), 1-7. <https://doi.org/10.24036/jep/vol5-iss1/552>.
- Muhammad, A., Baruadi, M. K., Fatsah, H., & Djou, D. N. (2023). Makna Simbolik Istilah Konstruksi Bangunan Adat Bantayo Poboide Gorontalo. *Aksara: Jurnal Ilmu Pendidikan Nonformal*, 9(1), 355-372. <http://dx.doi.org/10.37905/aksara.9.1.355-372.2023>.
- Nurfadilah, A., Hakim, A. R., & Nurropidah, R. (2022). Systematic Literature Review: Pembelajaran Matematika pada Materi Luas dan Keliling Segitiga. *Polinomial: Jurnal Pendidikan Matematika*, 1(1), 1-13. <https://doi.org/10.56916/jp.v1i1.33>.
- Outang, M., Loban, J. M., Molina, J. I., Hinadang, E. A., & Mowata, Y. A. (2023). Pendampingan Belajar Himpunan Matematika Untuk Siswa-Siswi Kelas VII SMP Kristen 03 Kalabahi. *ABDIKAN: Jurnal Pengabdian Masyarakat Bidang Sains dan Teknologi*, 2(1), 90-95. <https://doi.org/10.55123/abdikan.v2i1.1685>.
- Padafing, A. (2019). Eksplorasi Etnomatematika dalam Mokodan Kain Tenun Motif Kui pada Kebudayaan Masyarakat Alor Suku Abui. *MATH-EDU: Jurnal Ilmu Pendidikan Matematika*, 4(1), 1-8. <https://doi.org/10.32938/jipm.4.1.2019.1-8>.
- Sarwoedi, Desi, O.M., Peni, F., & Inyoman, W. (2018). Efektifitas Etnomatematika dalam Meningkatkan Kemampuan Pemahaman Matematika Siswa. *Jurnal Pendidikan Matematika Raflesia*, 3(2), 171-176. <https://doi.org/10.33369/jpmr.v3i2.7521>.
- Satyananda, I. M., dkk. (2017). *Investasi Karya Budaya Tarian Lego-lego di Kabupaten Alor Nusa Tenggara Timur*. Bali: Balai Pelestratian Nilai Budaya Bali
- Setiawan, S. (2019). Rancang Bangun Alat Pengukur Tinggi Pohon Tegak Berbasis Mikrokontroler At-Mega 16. *Jurnal Keteknikan dan Sains (JUTEKS)*, 2(1), 14-19.
- Spradley, J. P. (1997). *Metode Etnografi*. (Penerjemah: Misbah Zulfa Elizabeth). Yogyakarta: Tiara Wacana.
- Tas'au, M. F., Son, A. L., & Maifa, T. S. (2023). Exploration of Ethnomathematics in the Traditional House of Sonaf Maubes-Insana. *Indonesian Educational Research Journal*, 1(1), 1-9. <https://doi.org/10.56773/ierj.v1i1.11>.
- Vindianingsih, V. (2018). Analisis Kearifan Lokal Kampung Tradisional Takpala Sebagai Daya Tarik Wisatawan di Kabupaten Alor Nusa Tenggara Timur. *Jurnal sains terapan parawisata*, 3(1), 85-104. Retrieved from <https://journal.polteksahid.ac.id/index.php/jstp/article/view/67>.

Yuningsih, N., Nursuprianah, I., & Manfaat, B. (2021). Eksplorasi Etnomatematika pada Rancang Bangun Rumah Adat Lengkong. *Jurnal Riset Pendidikan Matematika Jakarta*, 3(1), 1-13. <https://doi.org/10.21009/jrpmj.v3i1.19517>.