An Exploration of Ethnomathematics in The Cultural Value of Traditional Wedding Equipment of The Bugis Macassar Tribe at Fort Rotterdam

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ABSTRACT

It is important for every individual to permeate and understand the values, norms, and traditions rooted in culture to enrich perspectives and respect human diversity. The purpose of this research is to explore and analyze ethnomathematics in the cultural value of Makassar Bugis traditional wedding equipment at Fort Rotterdam. The method used in this research is an exploratory method with an ethnographic approach. Data collection techniques were carried out using observation, interview and documentation methods, which were then analyzed and identified mathematical concepts in the traditional wedding equipment of the Bugis Makassar tribe. The data analysis technique used is an interactive model that classifies data analysis in the following three steps; (1) Data reduction, (2) Data presentation, (3) Conclusion drawing. The ethnomathematics concepts in question are: (1) The concept of circles in bosara equipment, (2) The concept of octagonal flat shapes in traditional fans, (3) The concept of rectangular flat planes in lamming foundations or poles and (4) The concept of blocks in Tudangeng botting (bridal seats).

Keywords: Ethnomathematics, Wedding Supplies, Bugis Tribe

1). INTRODUCTION

As a country rich in cultural diversity, Indonesia has a strong reason to teach the younger generation about the importance of appreciating diversity as a national treasure. Culture encompasses a complex symbolic heritage such as knowledge, beliefs, art, morals, laws, customs and skills acquired by individuals (Pertiwi & Budiarto, 2020). Understanding culture should not be limited to knowledge of its origins or visual beauty, but also includes recognizing the hidden dimensions of the culture (Wahyuni & Suherman, 2023). This ethnic diversity has an impact on rich cultural diversity, because each tribe has a unique cultural heritage (Busrah, Buhaerah, & Aras, 2023). Therefore, it is important for each individual to permeate and understand the values, norms, and traditions rooted in the culture to enrich perspectives and respect human diversity.

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However, cultural elements are often not integrated in the education curriculum, including in mathematics learning. In fact, the introduction of cultural elements in learning has the potential to motivate students and improve their understanding of mathematical concepts (Nuraini, 2019). This can result in learners who understand the importance of preserving culture. In addition, mathematics in a cultural context can also be a mesmerizing and memorable learning medium due to its appeal, which in turn can motivate and influence learners' learning outcomes.

The introduction of cultural elements and formal mathematics can be integrated through an ethnomathematics approach that can provide multiple benefits for learners. Ethnomathematics as part of multicultural education can be effectively integrated with formal mathematics education, not only improving learners' mathematical understanding but also enriching their experience with local wisdom (Herawaty et al., 2018). This approach provides an opportunity to improve learners' overall cognitive and sociomathematical abilities (Irmayanti, Islamiah, & Syarifuddin 2021). Therefore, culture-based mathematics learning is a positive step in fostering inclusive and effective multicultural education through an ethnomathematics approach.

Ethnomathematics is a mathematical concept related to culture or in the form of cultural studies. According to (Wahyuni & Suherman, 2023), Ethnomathematics is a science that pays attention to the relationship between mathematics and culture. Sardjiyo also stated that ethnomathematics-based mathematics learning can create a pleasant learning environment for teachers and students (Supriyanti & Mastur, 2015). This allows for active participation based on the familiar culture of the teacher and learners, with the aim of achieving optimal learning outcomes.

The importance of including cultural aspects in mathematics learning can increase the meaning of learning, increase students' interest in learning, and recognize the role of the teacher as a determinant of learning success. According to Surat (2018) The ethnomathematics learning model has a number of advantages, such as being a medium for learning mathematics that facilitates students' understanding, increases students' motivation and collaboration, trains communication skills and logical thinking, adds experience in organization, analysis, and allocation, helps students in improving culture, and presents different and more solutive learning materials. With ethnomathematics-based learning, students will better understand the real application of the material studied. Math becomes more relevant to learners' lives, not just as a separate subject from their daily activities (Hartanti & Ramlah, 2021). Therefore, ethnomathematics-based mathematics concepts are very important to be

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applied in the learning process in order to help students realize the relevance of mathematics in everyday life.

Pictures 1.

Makassar Bugis Tradition Wedding Equipment (Personal Documentation, 2023)

One of the cultural heritages that can be a source of creative mathematics learning is the traditional wedding equipment of the Bugis Makassar tribe. Through analyzing patterns, symmetry, and calculating the number of wedding decorations or elements, students can understand the concept of mathematical geometry. According to (Fauzi & Setiawan, 2020), geometry is one of the materials that are closely related to everyday life that always exist at the level of education from elementary school to college. In this geometry itself there is a measurement process that can be used to practice an integration of elements in Bugis tribal wedding equipment with the aim of creating a learning experience that is relevant to everyday life.

Based on observations, there are traditional wedding equipment of the Bugis Macassar tribe in Fort Rotterdam including bosara, traditional fans, lamming poles, and tudangeng botting. Bosara can be associated with flat geometric shapes because it is circular, traditional fans can also be associated with geometric shapes because they are octagonal flat shapes. In addition, the lamming pole can be associated with flat geometric shapes because it is rectangular. While tudangeng botting can also be attributed to the shape of the geometry of space because it is shaped like a block. These wedding

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paraphernalia are usually used to beautify and enliven traditional ceremonies and symbolize the wealth and social status of the family concerned.

Pictures 2. Observation at Fort Rotterdam

There are previous studies that have successfully explored ethnomathematics studies by exploring geometry concepts that are relevant to mathematics learning, including research conducted by (Mu'asaroh & Noor, 2021) which shows that there is a concept of geometry in the form of tambourine musical instruments that can be used as a learning resource in school learning. In line with research conducted by (Bito & Fredy, 2020) and (Sitanggang, 2021) who successfully explored the concept of geometry in musical instruments that can be used as a math learning resource.

Furthermore, this study also aims to explore the mathematical concepts contained in the traditional equipment in the wedding tradition of the Bugis Makassar community. Through the exploration of ethnomathematics-based knowledge systems in the context of Bugis Makassar wedding traditions, it is hoped that this research can open our understanding of the diversity of mathematical knowledge systems that develop in culture, especially in Bugis Makassar society. In addition, this research is expected to encourage the development of new mathematical knowledge. Thus, this research involves exploring the cultural values that exist in the community through the wedding paraphernalia of the Bugis Makassar tribe to be applied in mathematics learning materials.

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2). METHODS

This research is exploratory research with an ethnographic approach. According to Arikunto in (Rahmawati Z & Muchlian, 2019) explains that exploratory research is carried out with the aim of broadly investigating the factors or things that influence the occurrence of a phenomenon. Meanwhile, exploratory research in this study is an effort to explore the characteristics and mathematical concepts in the traditional wedding equipment of the Bugis Makassar tribe at Fort Rotterdam Jl. Ujung Pandang, Bulo Gading, Ujung Pandang District, Makassar City. The ethnographic approach is used to describe, explain and analyze the mathematical concepts contained in the traditional wedding equipment of the Bugis Makassar tribe.

Data collection techniques were carried out using observation, interview and documentation methods, which were then analyzed and identified mathematical concepts in the traditional wedding equipment of the Bugis Makassar tribe. The observation method was carried out by making direct observations of the form of traditional wedding equipment of the Makassar Bugis tribe at Fort Rotterdam. Interviews were conducted to obtain detailed information related to the mathematical concepts contained in the traditional wedding equipment of the Makassar Bugis tribe. Meanwhile, the documentation method was carried out by collecting a number of data in the form of recordings of interview results, pictures, and videos for data analysis purposes. The data analysis technique used is an interactive model that classifies data analysis in the following three steps; (1) Data reduction, (2) Data presentation, (3) Conclusion drawing. (Akbar, 2021).

3). RESULTS AND DISCUSSION

Based on the results of data collection on traditional wedding equipment in the Makassar Bugis community at Fort Rotterdam, it can be seen that the shape and size have an ethnomathematics concept. In addition to wedding equipment, Bugis Makassar wedding customs are also relevant to the development of ethnomathematics studies. In line with research conducted by (Nurannisa, Asfar, & Asfar 2020) The tradition of Maddawa-dawa, Ma'manu'-manu', Mappaettuada' is a wedding custom of the Bugis Makassar tribe that can be designed to achieve the basic objectives of ethnomathematics which focus on learning mathematics in the context of formal education.

In this study, the discussion is focused on exploring the ethnomathematics concepts contained in the traditional wedding equipment of Bugis Makassar which have similarities and relevance to the

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concept of geometry in the form of formal mathematics flat and spatial shapes taught at the elementary school (SD) and junior high school (SMP) levels.

The results of the exploration of ethnomathematics in the traditional wedding equipment of the Bugis Makassar tribe at Fort Rotterdam contain mathematical concepts in the form of: (1) The concept of a circle in bosara equipment, (2) The concept of octagonal flat shapes in traditional fans, (3) The concept of rectangular flat planes in lamming foundations or poles and (4) The concept of blocks in Tudangeng botting (bridal seats). The four traditional wedding equipment of the Bugis Makassar tribe are explained in detail as follows:

1. *Bosara*

Pictures 3. Bosara

Bosara is the Makassar Bugis language term for a container or place used to serve cakes in a celebration or traditional traditional events of the local community. Bosara is used as a container filled with a variety of typical traditional cakes such as bannang-bannang, katirisala, cucuru bayao, jackfruit seeds, bolu pece and others that can be found at certain traditional events such as weddings, thanksgiving and others in South Sulawesi (Lestari et al., 2023). Bosara is a round, slightly tall plate with legs and a lid (Pattongko), generally made from woven rattan, bamboo, and palm leaves (Handayani, Marzuki, & Natsir 2024)

Bosara which has existed from ancient times is used by the Bugis Makasar royal people. Without using the Bosara, the elders feel that it is not good to give directly in the form of food, or invitations to someone older without Bosara. This culture is maintained and still exists in the millennial era.

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2. Traditional Fan

Gambar 4. Traditional fan

South Sulawesi province has a lot of traditional arts. With one of them, the traditional fan of the Bugis Makassar custom which is quite popular for the community. Traditional traditional fans are usually used when there is an event that is entertaining or as a complement when there is a traditional ceremony. In addition to being used as an event, traditional traditional fans are also performed as a form of tourism promotion in the South Sulawesi region. traditional fans of Bugis Makassar customs are usually octagonal in shape and are usually made using woven bamboo. while the octagonal shape contains elements of mathematics, namely the circumference of the building.

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3. *Lamming*

Pictures 5. Lamming

The people of South Sulawesi have a variety of different cultures in each region, so it is not surprising that many people want to know about these cultures. This culture is not only applied in daily life but also in the aisle, traditional clothing and music (Wirawan & Arifin 2022).

All kinds of beautiful decorations are attached to the walls or poles of the house. However, you may not know what this decoration is called, where it comes from, and who made it. Lamming is the name of the decoration, lamming itself is a sewing art originating from the South Sulawesi region, where this art is made by the local community.

The main purpose of lamming is actually to beautify the room or place to be used. Usually lamming is used when going to hold a wedding process, celebration, wedding, and the graduation of the Quran for Muslims.

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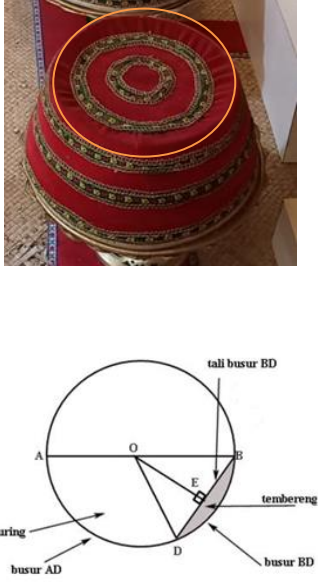760 | ICONETT-2024

4. *Tudangeng Botting*

Pictures 6. Tudangeng Botting

A traditional wedding has a series of long processions from wedding preparations to receptions and events after the wedding. Botting or marriage in the Bugis tradition has quite a long stage and many stages as well. When the marriage ceremony has been held, the groom immediately joins the bride. After that, they are directed to the aisle where they sit side by side. In the Makassar Bugis tribe, the place where the bride and groom sit is called Tudangeng Botting.

Daytime receptions are usually held at the bride's place to welcome the groom's entourage, which is often an open banquet. The evening reception can be either an open banquet or a formal reception. During the reception, guests continue to arrive and make their way to the aisle seats (tudangeng botting) where the bride and groom sit side by side. The bride and groom then rise from their seats to greet the guests while giving greetings (Famauri et al., 2021).
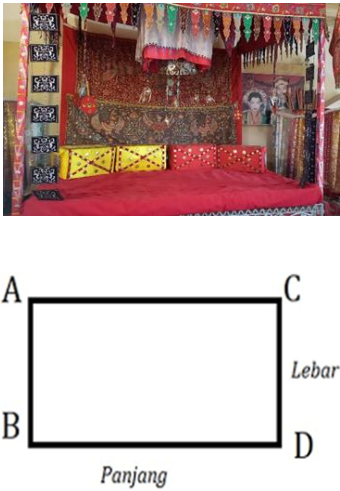
Tudangeng botting is an aisle seat located inside the lamming and is one of the important pieces of equipment in a Bugis Makassar wedding. tudangeng botting is usually in the form of a regular block with precise side length, width and height.

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Mathematical Concept of Makassar Bugis Traditional Wedding Supplies
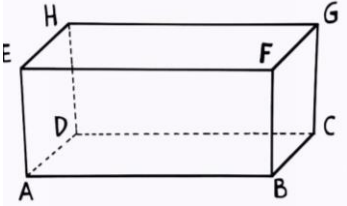
Pictures of Wedding Supplies	Ethnomathematics Concept	Questions and Answers
  Pictures 7. Bosara Math Concept	Based on the exposure to the research results, it can be seen that there is a concept of geometry in the shape of the bosara. From Figure 7, it can be seen that the Bosara is circular in shape. A circle is a curved line whose two ends meet each other and all points contained in the curved line have the same distance from the center point. Based on the analysis of the picture on the side, the properties and formulas of the circle contained in the Bosara shape are obtained, namely : a. circle has only one side A circle has only one sid	*Quetion:* Aura and Naura are twin sisters of Bugis descent who were born in Soppeng Regency. One day, Aura and Naura attended their cousin's wedding in Makassar. There they saw a circular Bosara which is one of the wedding equipment used to serve food filled with various traditional cakes. Bosara is generally made of thatch, rattan, or bamboo. If the diameter of the bosara is 28 cm. Calculate the area and perimeter of the bosara! *Answer:* Dik: $d = 22\ cm$ $$r = \frac{1}{2}d = \frac{1}{2}28 = 14 \text{ cm}$$ $$\pi = \frac{22}{7} \text{ atau } 3{,}14$$ Asked: Calculate the area and perimeter of the bosara! Completion : **The area of bosara** $$L = \pi \times r^2$$ $$L = \frac{22}{7} \times (14)^2$$

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	A circle has only one side	$L = \dfrac{22}{7} \times 196$
	b. Has no corner points	$L = 22 \times 28$
	c. The distance between the center point and any side is always the same	$L = 616 \; cm^2$
	d. The formula for the area of a circle is $\pi \times r^2$	**Around Bosara** $K = 2\pi r$ $K = 2 \times \dfrac{22}{7} \times 14$
	e. The formula for the circumference of a circle is $2\pi r$	$K = 2 \times 22 \times 2$ $K = 88 \; cm$
	f. Diameter Formula (d) is $2r$ and radius formula (r) is $\frac{1}{2}d$.	So, the area of the bosara is $616 \; cm^2$ and the perimeter of the bosara is $88 \; cm.$

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  Pictures 8. Math Concepts Traditional fan	Based on the exposure to the research results, it can be seen that there is a geometry concept in the shape of the traditional fan. From Figure 8, it can be seen that the traditional fan is in the form of an octagonal flat shape. An octagon is a quadrilateral that has eight sides. Based on the analysis of the picture on the side, the properties and formulas of octagonal flat shapes found in traditional fan shapes are obtained, namely: a. It has 8 sides and 8 corners. b. It has an axis of symmetry with two	*Question:* On Sunday, Syafira went to the market to accompany her mother shopping. They passed by a shop selling a variety of traditional fans. Syafira accidentally saw a traditional fan used in Bugis Makassar weddings that was octagonal in shape. If the traditional fan has a long side $20\ cm^2$. Calculate the perimeter of the traditional fan! *Answer:* Dik: $s = 20\ cm^2$ Asked: Calculate the area and perimeter of the traditional fan! Completion : **Traditional fan roving** $K = 8s$ $K = 8 \times 20$ $K = 160\ cm^2$

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	axes of symmetry intersecting perpendicularly. c. A regular octagon has equal sides and angles. d. An irregular octagon has sides and angles that are not equal. e. The formula for the area of a regular octagon is $\frac{n}{2} \times r^2 \times \sin\left(\frac{360°}{n}\right), n = 8$ f. The formula for the perimeter of an octagon is 8s.	So, the circumference of the traditional fan is $160 \; cm^2$.
  Pictures 9.	Based on the exposure to the research results, it can be seen that there is a geometry concept in the shape of the lamming pole (aisle). From Figure 9, it can be seen that the lamming pole is in the form of a flat rectangle. Furthermore, researchers analyzed the properties of rectangular flat shapes	*Question:* On January 16, 2024, Arham will have a wedding in Makassar City. One month before the wedding she went to choose her preferred aisle decoration. In Makassar Bugis custom, it is commonly called lamming, which is one of the most important wedding equipment to beautify the room. Usually lamming itself is a sewing art originating from the South

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| Lamming Pole Math Concept | from the shape of the lamming pole, which are as follows :

 a. Has 2 sides of equal length, namely AC and BD

 b. Has 2 diagonals that intersect perpendicularly, namely AD and BC

 c. The formula for the area of a rectangle is $p \times l$

 d. The formula for the perimeter of a rectangle is $2 \times (p + l)$

 Description:

 $p = $ long
 $l = $ wide | Sulawesi region in the form of a rectangle, where this art is made by the local community. If the lamming has a length of 200 cm and a width of 50 cm. Calculate the area and perimeter of the lamming!

 Answer:

 Dik: $p = 200 \ cm$
 $\quad l = 50 \ cm$

 Asked:

 Calculate the area and perimeter of the lamming!

 Completion:

 Lamming area
 $L = p \times l$
 $L = 200 \times 50$
 $L = 10000 \ cm^2$

 Around Lamming
 $K = 2 \times (p + l)$
 $K = 2 \times (200 + 50)$
 $K = 2 \times 250$
 $K = 500 \ cm$

 So, the area of the lamming is $10000 \ cm^2$ and the perimeter of the bosara is $500 \ cm.$ |

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Pictures 10. Math Concept of Tudangeng Bottging	Based on the explanation of the research results, it can be seen that there is a concept of geometry in the form of tudangeng botting. From Figure 10, it can be seen that the tudangeng botting is in the form of a block. Furthermore, researchers analyzed the properties of the beam from the shape of tudangeng botting as follows : Has 6 square and rectangular sides Has 12 ribs consisting of 4 long ribs, 4 wide ribs and 4 high ribs a. Has 8 corner points b. Has 4 diagonals of space c. Has 12 diagonal planes d. The formula for the volume of a beam is $p \times l \times t$	*Question:* One day Putri, Nurul and Aeni observed Bugis Makassar culture about wedding equipment. They saw tudangeng botting which is one of the block-shaped wedding equipment commonly used by a groom and bride as a seat on the aisle. If the tudangeng botting is 50 cm long, 30 cm wide and 40 cm high. Calculate the volume of the tudangeng botting! *Answer:* Dik: $p = 50\ cm$ $l = 30\ cm$ $t = 40\ cm$ Asked: Calculate the volume of the tudangeng botting! Completion: **Volume of Tudangeng Botting** $V = p \times l \times t$ $V = 50 \times 30 \times 40$ $V = 1500 \times 40$ $V = 60000\ cm^3$ $V = 60\ m^3$ So, the volume of the tudangeng botting is $60\ m^3$.

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	e. The formula for the perimeter of a beam is $4 \times (p + l + t)$ Descriptions : $p = $ long $l = $ wide $t = $ height	

4). CONCLUSIONS

Culture-based mathematics learning is a positive step in fostering inclusive and effective multicultural education through an ethnomathematics approach. The traditional wedding equipment of the Bugis Makassar tribe in Fort Rotterdam is one example of a culture that can be used as a source of learning mathematics. In the wedding equipment can be found geometry concepts in the form of flat and spatial shapes. The concepts in question include: (1) The concept of a circle on the bosara equipment, (2) The concept of an octagonal flat shape on the traditional fan, (3) The concept of a rectangular flat plane on the foundation or lamming pole and (4) The concept of a beam on the Tudangeng botting (bridal seat).

REFERENCES

Akbar, A. (2021). *Eksplorasi Konsep Etnomatematika pada Alat Pertanian Tradisional Suku Bugis di Kabupaten Pinrang. 2020*, 121–128. https://doi.org/10.26418/pipt.2021.14

Bito, G. S., & Fredy, F. (2020). Ethnomathematics: Musical Instrumen in Ja'I Dances for Culturally Responsive Teaching in Elementary Schools. *PrimaryEdu - Journal of Primary Education*, *4*(2), 183. https://doi.org/10.22460/pej.v4i2.1853

Busrah, Z., Buhaerah, B., & Aras, A. (2023). Inteligensi Kultural Berbasis Etnomatematika pada Ragam Perlengkapan Tradisi Pernikahan Enis Konjo Sulawesi Selatan. *JTMT: Journal Tadris Matematika*, *4*(1), 76–93. https://doi.org/10.47435/jtmt.v4i1.1761

Famauri, A. T., Rastiawaty, Puspitasari, A., & Dimeng, A. N. A. W. (2021). Pluralisme Hukum Terhadap Perilaku Pernikahan di Bawah Tangan oleh Masyarakat Suku Bugis-Makassar. … *Justice and Society*, *1*, 17–31. https://journal.unhas.ac.id/index.php/hjns/article/view/18729

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Fauzi, A., & Setiawan, H. (2020). Etnomatematika: Konsep Geometri pada Kerajinan Tradisional Sasak dalam Pembelajaran Matematika di Sekolah Dasar. *Didaktis: Jurnal Pendidikan dan Ilmu Pengetahuan*, *20*(2), 118–128. https://doi.org/10.30651/didaktis.v20i2.4690

Handayani, P., Marzuki, K., & Natsir, N. (2024). *Pemberdayaan Masyarakat Melalui Keterampilan Membuat Anyaman Bosara Dari Daun Lontar Di Pkbm Arham Dusun Manrumpa Desa Turatea Timur Kecamatan Tamalatea Kabupaten Jeneponto. 2.*

Hartanti, S., & Ramlah, R. (2021). Etnomatematika: Melestarikan Kesenian dengan Pembelajaraan Matematika. *Ideas: Jurnal Pendidikan, Sosial, dan Budaya*, *7*(2), 33. https://doi.org/10.32884/ideas.v7i2.347

Herawaty, D., Widada, W., Novita, T., Waroka, L., & Lubis, A. N. M. T. (2018). Students' metacognition on mathematical problem solving through ethnomathematics in Rejang Lebong, Indonesia. *Journal of Physics: Conference Series*, *1088*. https://doi.org/10.1088/1742-6596/1088/1/012089

Irmayanti, I., Islamiah, N., & Syarifuddin, S. (2021). Analisis Sosiomatematika Berbasis Kearifan Lokal Dalam Pembelajaran Pada Siswa Sdn 224 Palae. *JTMT : Journal Tadris Matematika*, *1*(2), 27–34. https://doi.org/10.47435/jtm.v1i2.482

Lestari, A., Permata, S., Lestari, A., Permata, S., Islam, U., & Dahlan, A. (2023). *Pendampingan Pembuatan Produk Bosara Bersama Ibu Pkk Di Desa Barambang. 1*(2), 140–153.

Mu'asaroh, H. P., & Noor, N. L. (2021). Eksplorasi Etnomatematika Bentuk Alat Musik Rebana. *Jurnal Pendidikan Matematika (Kudus)*, *4*(1), 69. https://doi.org/10.21043/jmtk.v4i1.9908

Nuraini, L. (2019). Integrasi Nilai Kearifan Lokal Dalam Pembelajaran Matematika Sd/Mi Kurikulum 2013. *Jurnal Pendidikan Matematika (Kudus)*, *1*(2). https://doi.org/10.21043/jpm.v1i2.4873

Nurannisa, F. A. A., Asfar, A. M. I. T., & Asfar, A. M. I. A. (2020). Learning Design Based on Local Wisdom Maddawa-dawa, Mammanu-manu and Mappettuada. *JTAM (Jurnal Teori dan Aplikasi Matematika)*, *4*(2), 214. https://doi.org/10.31764/jtam.v4i2.2849

Pertiwi, I. J., & Budiarto, M. T. (2020). Eksplorasi Etnomatematika Pada Gerabah Mlaten. *Jurnal Cendekia : Jurnal Pendidikan Matematika*, *4*(2), 438–453. https://doi.org/10.31004/cendekia.v4i2.257

Rahmawati Z, Y. R., & Muchlian, M. (2019). Eksplorasi etnomatematika rumah gadang Minangkabau Sumatera Barat. *Jurnal Analisa*, *5*(2), 123–136. https://doi.org/10.15575/ja.v5i2.5942

Sitanggang, N. (2021). Etnomatematika: Eksplorasi Alat Musik Tradisional Khas Batak Toba. *Jurnal Peka*, *4*(2), 57–61. https://doi.org/10.37150/jp.v4i2.851

Paper presented at The 1st ICONETT on August 21st-22nd, 2024
Faculty of Teacher Training and Education
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Andi Kusumayanti, Nur Na'ilah Mallu, Muhamamad Rizky Ramadhan, Inayah Nurkhaidah, Lisnasari Andi Mattoliang

Supriyanti., Mastur, Z., & Sugiman. (2015). Keefektifan Model Pembelajaran Problem Based Learning Bernuansa Etnomatematika Terhadap Kemampuan Pemecahan Masalah Siswa Kelas VIII. *Unnes Journal of Mathematics Education*, *4*(3), 135–141. https://doi.org/10.15294/ujme.v4i3.9056

Surat, I. M. (2018). Peranan Model Pembelajaran Berbasis Etnomatematika sebagai Inovasi Pembelajaran dalam Meningkatkan Literasi Matematika. *Emasains: Jurnal Edukasi Matematika dan Sains*, *7*(2), 143–154. https://doi.org/10.5281/zenodo.2548083

Wahyuni, E., & Suherman. (2023). *Eksplorasi Nilai Budaya Mayarakat Suku Mandar Untuk Materi Matematika Sekolah Dasar. 06*(April), 53–65.

Wirawan, A., & Arifin, I. (2022). *Proses Pembuatan Lamming (Pelaminan) Oleh Dekorasi Styrofoam Forwart*.

Paper presented at The 1st ICONETT on August 21st-22nd, 2024
Faculty of Teacher Training and Education
Universitas Islam Negeri Alauddin Makassar
South Sulawesi-Indonesia

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