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Application of Ethnomathematics in Tumpi -Tumpi Food for Math Learning: Systematic Literature Review

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ABSTRACT

This research aims to apply the concept of ethnomathematics in mathematics learning through traditional Bugis-Makassar food, which is Tumpi-Tumpi. Ethnomathematics refers to understanding how mathematical concepts can be found in local cultures. The method used in this research is a literature study to review relevant literature on ethnomathematics in Bugis-Makassar typical food, especially Tumpi-Tumpi. The seventeen articles selected in this Systematic Literature Review (SLR) met the criteria of relevance to ethnomathematics in traditional foods, particularly Tumpi-Tumpi, having a focus on culture-based mathematics learning, using credible research methods, and coming from indexed journals in the last 6 years (2019-2024). The data obtained were then systematically synthesized, and analyzed within a systematic literature review (SLR) framework to identify trends, gaps, and existing understandings regarding the application of mathematical concepts in traditional foods such as Tumpi-Tumpi. The results showed that Tumpi-Tumpi contains mathematical elements that can be used as teaching tools, such as the pattern and size of the food. Through the concept of ethnomathematics in mathematics learning, it can increase students' engagement in mathematics learning by linking mathematical concepts to their local culture. These findings highlight the importance of integrating ethnomathematics into mathematics learning through Tumpi-Tumpi to not only enrich students' learning experiences that are more meaningful and relevant, but also strengthen their cultural identity and understanding of mathematics in everyday contexts.

Keywords: Ethnomathematics, Tumpi-Tumpi, Mathematics Learning.

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Introduction

Mathematics has long been recognized as the main foundation of various fields of science, playing an important role in the development of science and technology. Every modern technological advancement, from computers to telecommunications, cannot be separated from the use of mathematics as a tool for analysis, problem solving and prediction. In addition, math also plays a role in honing logical, critical, and analytical thinking skills. This is in line with (Irfan, 2020) that in the realm of education, mathematics plays a crucial role in honing students' cognitive abilities. From training logical thinking to increasing accuracy, mathematics provides a strong foundation for dealing with various problems. Therefore, learning mathematics is very important in education. This is reflected in its

position as a compulsory subject at all levels of education, from elementary school to university, with the aim of equipping each individual with systematic thinking skills that can be applied in real life.

However, many students view math as a difficult subject. According to (Fitriana & Aprilia, 2021) that difficulties in learning mathematics are often preceded by negative perceptions of students that are formed from the start. The assumption that math is difficult can hinder students' motivation and confidence in learning. This difficulty often arises due to the lack of connection between the concepts taught and students' daily experiences. The delivery of material that is not contextualized makes math seem far from their reality. The main challenge in mathematics education is how to make students feel involved and see the relevance of mathematics in their lives. As in the case of research conducted by (Solehah & Setiawan, 2023) that interactive mathematics learning that is relevant to real life can generate higher learning enthusiasm in students. This is where the ethnomathematics approach offers an innovative solution.

Ethnomathematics is an approach to learning mathematics that connects mathematical concepts with people's culture, traditions and daily lives. This approach emphasizes that mathematics is not just a discipline taught in the classroom, but can also be found in everyday activities connected to one's culture. Cultural practices provide a strong foundation for understanding mathematical concepts and recognizing the diversity of mathematical ways of thinking known as ethnomathematics (Fajriyah, 2018). Through ethnomathematics, students can learn mathematics through things they are already familiar with, such as woven bamboo crafts, special foods, architecture, and even traditional games (Ibrahim, 2021; Jainuddin et al., 2022; Karunia & Setianingsih, 2022; Pulungan & Adinda, 2023). This approach not only broadens students' horizons about math, but also helps them understand that math is part of the culture they live in. Thus, ethnomathematics can be used by teachers in conducting effective and fun learning and can increase students' love for understanding their own culture (Soebagyo et al., 2021).

Based on the results of research (Pathuddin & Raehana, 2019) traditional Bugis food can be used as a source of learning mathematics in schools, especially at the primary and secondary levels, because it contains mathematical concepts that are relevant for students to learn, one of which is tumpi tumpi. According to him, Tumpi-Tumpi is a traditional dish of the Bugis community which is processed from basic ingredients of fish and grated coconut. Tumpi-Tumpi is not only food, but also contains mathematical elements that can be utilized in mathematics learning. Concepts such as patterns, geometric shapes and proportions found in the process of making and serving Tumpi-Tumpi can be used to teach mathematics such as symmetry, measurement and comparison. By integrating mathematical concepts into local cultural contexts such as traditional food, students can better understand the

relevance of mathematics in everyday life and strengthen their sense of cultural identity (Werdiningsih, 2022).

Unlike previous research that primarily focuses on leveraging the mathematical elements of *tumpi-tumpi* as instructional tools in formal education, our study aims to delve deeper into the cultural and historical contexts that have shaped indigenous mathematical practices within the Bugis community. Understanding the origins of these mathematical ideas within traditional culinary practices can provide valuable insights into how mathematics naturally evolves within societies. This perspective aligns with (De Castro, 2024), who emphasized that ethnomathematics weaves together cultural heritage and mathematical understanding, thereby enriching both disciplines simultaneously.

However, the implementation of ethnomathematics in schools faces several challenges. One of the primary obstacles is the lack of structured teaching materials and well-defined learning models that integrate ethnomathematical concepts effectively into the curriculum (Mania & Alam, 2021). Additionally, students' perception of mathematics as a difficult and intimidating subject further complicates the adoption of this approach (Fitriana & Aprilia, 2021). These challenges highlight the need for further research on how traditional foods like *tumpi-tumpi* can be transformed into engaging and effective learning tools that make mathematics more accessible and relatable to students.

Ethnomathematical studies have explored various cultural artifacts as potential learning resources. Previous research has examined traditional games (Pulungan & Adinda, 2023), handicrafts (Ibrahim, 2021), and architecture (Karunia & Setianingsih, 2022) from an ethnomathematical perspective. However, studies that specifically analyze traditional food as a medium for mathematics learning remain limited. Fitriani & Putra, 2022, in their literature review, identified a significant gap in research related to the exploration of traditional food as a mathematics learning tool that aligns with modern educational curricula. This gap underscores the necessity of further investigations into the potential role of traditional foods in enhancing mathematics education.

To address this research gap, this study will conduct a **Systematic Literature Review (SLR)** on the application of ethnomathematics in *tumpi-tumpi* as a mathematics learning medium. The SLR approach enables researchers to systematically collect, analyze, and synthesize relevant findings, thereby providing a comprehensive understanding of the educational potential of *tumpi-tumpi*. By evaluating existing studies, this research aims to identify best practices and offer a structured framework for integrating *tumpi-tumpi* into mathematics learning. The SLR method has been recognized as an effective tool for summarizing scientific findings objectively and systematically (Triandini et al., 2019).

Thus, the primary objective of this research is to analyze the mathematical concepts embedded in tumpi-tumpi and explore how this traditional dish can be effectively utilized as a learning medium in

mathematics education. By shedding light on the intersection of culture and mathematics, this study aspires to encourage further exploration of how local wisdom can enrich educational practices. Ultimately, the findings from this research are expected to contribute to the broader discourse on culturally responsive teaching methods and support the ongoing efforts to make mathematics education more accessible, engaging, and relevant for diverse student populations.

Methods

This research uses a library research approach to examine the application of ethnomathematics concepts in mathematics learning through the analysis of traditional Bugis-Makassar food, namely Tumpi-Tumpi. This research uses the SLR method which aims to recognize, review, and evaluate all relevant research so as to answer a research question (Triandini et al., 2019). This research consists of several stages, namely searching for literature, determining inclusion and exclusion criteria, selecting literature, presenting data, processing data and drawing conclusions.

The research stage begins with a literature search conducted on the google scholar database. The keywords used were “Ethnomathematics, Tumpi-tumpi, and Mathematics Learning” by limiting articles from 2019 to 2024. After that, the inclusion criteria used in the literature search included studies related to mathematical concepts contained in Bugis-Makassar Traditional and research results that have been published in journals or national seminar proceedings. Furthermore, the literature obtained was selected and analyzed based on the inclusion criteria. Data related to keywords were obtained, namely 17 articles. The articles were selected based on the inclusion criteria into 5 articles. In the next stage, researchers recorded the articles into a table. Then the researcher reviewed and reviewed the article, especially the research results section. At the end of the study, the researcher compared the results of several articles.

Results and Discussion

Based on observations made at one of the secondary schools in Maros district, the teacher teaches flat building material by displaying Bugis food, namely tumpi-tumpi. Tumpi-tumpi is a Bugis culinary speciality found in the Makassar region of South Sulawesi. It is a fried dish similar to cakes made from grated coconut and fish, served in a triangular shape. The use of tumpi-tumpi as a teaching tool allows students to connect abstract mathematical concepts to concrete, familiar objects from their cultural heritage. This connection can significantly enhance their understanding and appreciation of both mathematics and their culture (Auw et al., 2023). Figure 1 shows the geometry of the tumpi-tumpi modelling.

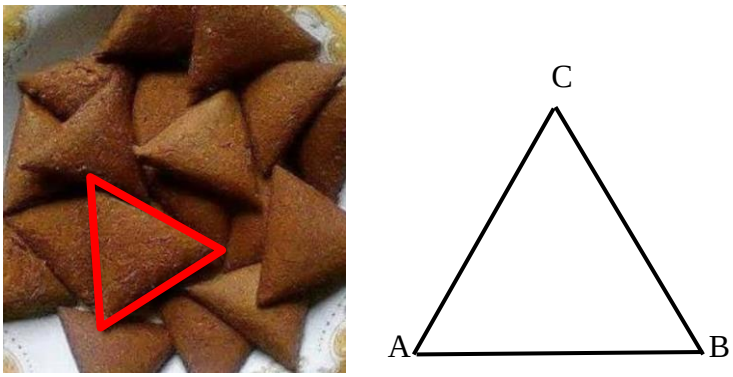

Figure 1. *Geometric Modelling of the Tumpi-Tumpi*

Based on the results of the analysis in Figure 1, it is known that in tumpi-tumpi there is a geometry concept that is an equilateral triangle. The properties of equilateral triangles based on Figure 1 are the three sides are equal in length, the three angles are equal in size, have 3 rotary symmetries, and have 3 folding symmetries (Pathuddin & Raehana, 2019).

In one of the secondary schools in Maros district, the teacher developed learning materials on the introduction of perimeter and area of flat shapes. The teacher asked questions related to traditional Bugis food to stimulate students' creative thinking. An example of the question is as follows: “In a traditional feast, a cook is asked to make a traditional food in the shape of an equilateral triangle, tumpi-tumpi. The tumpi-tumpi must be of equal size. If it is required that the perimeter of a tumpi-tumpi must be 18 cm, then what is the length of the side of the tumpi-tumpi that the cook must make?”. By engaging with tumpi-tumpi, students are not passively receiving information but actively constructing their understanding through hands-on exploration and analysis (Leonard, 2018).

Table 1 is presented to provide a detailed description of the results of the identification of geometry concepts in various types of traditional food. This research aims to reveal the presence of ethnomathematics in traditional food, tumpi-tumpi. The data in the table was obtained through a literature search through google scholar on the process of making traditional food. The geometric shapes found were then classified and associated with relevant mathematical concepts. This table presents data on food names, food parts that contain geometric shapes, types of geometric shapes found, and related math concepts.

Table 1. *Results of Ethnomathematics Research on Traditional Food*

No	Author name and year of publication	Title	Result
1	(Pathuddin & Raehana, 2019)	Ethnomathematics: Traditional Bugis Food as a Mathematics Learning	There is an element of ethnomathematics in traditional Bugis food, namely the concept of geometry which consists of flat and spatial shapes. There are eight types of traditional Bugis food that contain geometry concepts, namely tumpi-tumpi,

		Resource	jompo-jompo, burasa, barongko, onde-onde, doko-doko, paso, and putu coppa. The flat building concepts found are triangle (tumpi-tumpi), circle (jompo-jompo), and rectangle (burasa'), while the spatial concepts found include prism (barongko), sphere (onde-onde), pyramid (doko-doko), cone (paso), and tube (putu coppa).
2	(Fitriani & Putra, 2022)	Systematic Literature Review (SLR): Exploring Ethnomathematics in Traditional Foods	This research shows that traditional foods are highly related to geometry concepts such as flat and spatial shapes, and number patterns. The results of this literature review indicate to develop mathematics teaching materials that are more interesting and relevant to students.
3	(Choeriyah et al., 2020)	Ethnomathematics study on Cilacap traditional food	Research shows that people have long applied mathematical concepts in traditional food preparation, albeit intuitively. Although they may not realize it. For example, the shapes of food often involve complex geometry concepts.
4	(Werdiningsih, 2022)	Ethnomathematics Study on Traditional Food (Case Study on Lepet Ketan)	Research shows that people use mathematics when making traditional foods, although they may not realize it. For example, the shape of the food and how it is made often involves concepts such as geometry and comparison.
5	(Simanjuntak & Sihombing, 2020)	Exploration of ethnomathematics in traditional Batak cakes	Analysis revealed that traditional Batak pastries contain elements of ethnomathematics, especially on the concept of geometry.
6.	(Saniyah & Ardiansyah, 2023)	An in-depth Exploration of Ethnomathematics in Pekalongan Traditional Food and its Relationship to Mathematics Learning	This research proves that learning mathematics by combining the concept of linear equations and local cultural contexts such as Sego Megono can have a significant positive impact. Students not only understand math concepts more easily, but also feel more connected to the subject matter.
7.	(Nasution & Hasanah, 2023)	Exploration of Ethnomathematics in Alame and Kipang Panyabungan as Mandailing Specialties	This study reveals a strong ethnomathematics in the Mandailing food making tradition. Mathematical concepts such as comparison, measurement and geometry are naturally embedded in the process of making Alame and Panyabungan kipang.
8.	(Rusli & Azmidar, 2023)	Bugis Cultural Ethnomathematics: Mathematics Learning Innovation in Burasa'	This research shows that Burasa can be used as an effective mathematics learning media, especially for flat shapes. Students can learn about the properties of flat shapes concretely through observation and analysis of the shape of the Burasa.
9.	(Isnaningrum & Wahab, 2023)	Exploration of Ethnomathematics in Traditional Cakes in Magelang Region	The results of the data analysis revealed the application of the concept of comparison in the traditional Magelang cake recipe, as well as patterns of flat shapes such as circles and rectangles, and spatial shapes such as balls, blocks, and cylinders in the final shape of the cake.
10	(Della et al., 2024)	Exploration of Ethnomathematics in Kerak Telor Traditional Food as an Independent Curriculum Mathematics Learning Media	Data analysis showed that the egg crust contains broader geometry concepts, such as circles and various line patterns. This makes the crust an effective medium for learning mathematics, especially for geometry materials in primary and secondary schools. Thus, math learning can become more meaningful and relevant to students.

11	(Mania & Alam, 2021)	*Teachers' perception toward the use of ethnomathematics approach in teaching math*	The results showed that the ethnomathematics approach using traditional Bugis foods such as barongko and tumpi-tumpi can improve students' understanding of the concept of flat and spatial shapes. Students not only learn math, but also get to know more about their own cultural heritage, in line with the objectives of the national curriculum.
12	(Muk Minah & Izzati, 2021)	Ethnomathematics in traditional Daik Lingga Malay food as a learning resource	The results show that traditional Malay Daik Lingga food contains various mathematical elements that can be integrated into learning. The concepts of flat building, space building, geometry transformation, and angle measurement can all be learned through observation and analysis of the shapes of these traditional foods. This makes math learning more concrete and meaningful for students.
13	(Salsabila et al., 2022)	Exploration of Ethnomathematics in Traditional Foods in Depok City (Case Study: West Java's Kue Balok)	The results show that kue balok is not only a traditional food, but also a work of art that contains mathematical values. The distinctive rectangular shape, uniform size, and precise dough ratio are manifestations of the application of the concepts of geometry, comparison, and linear equations in the context of West Javanese culture.
14	(Jainuddin et al., 2022)	An ethnomathematical exploration of Toraja specialties	The results showed that traditional Toraja foods such as deppa tori', jipang, njo'deppa, pa'piong, and kaledo contain various geometric shapes that students can learn. By observing and analyzing the shapes of these foods, students can understand the concept of flat and spatial shapes more concretely and deeply.
15	(Rusmayanti & Sutirna, 2021)	Exploration of Ethnomathematics in Semprong Traditional Cake from Karawang	This research successfully uncovered the hidden mathematics learning potential in Karawang's typical kue semprong. This finding is very interesting because previously, neither the Karawang community nor the students had realized that the traditional food they knew had a connection with the concept of curved-sided space taught in grade IX SMP.
16	(Heriyati & Handayani, 2022)	Betawi Traditional Food Ketupat as Ethnomatics-Based Learning Media	By utilizing the traditional Betawi rhombus as a learning medium, students can learn about the elements of flat geometry, namely triangles, rectangles, kites and rhombuses in a more interesting and relevant way. Abstract concepts can be visualized easily through the shapes of the rhombus, making it easier for students to understand.
17	(Nengsih & Marlia, 2024)	Ethnomathematics Analysis on Traditional Minangkabau Food	This study reveals the existence of strong ethnomathematics in Minangkabau culture, particularly in the making of traditional foods. The concept of geometry integrated in these foods shows local wisdom in the utilization of mathematics in everyday life. This can be the basis for developing mathematics teaching materials rooted in local culture.

Based on the 17 articles selected, researchers found 5 articles containing mathematical concepts contained in traditional foods. The mathematical concepts contained in traditional foods are presented in table 2.

Table 2. *Mathematical Concepts Found in Traditional Foods*

Researcher and Year	Mathematical Concepts
(Pathuddin & Raehana, 2019)	Flat and Spatial Buildings
(Choeriyah et al., 2020)	Flat shapes

(Mania & Alam, 2021)	Build space and Build flat
(Heriyati & Handayani, 2022)	Flat building and Space building
(Nengsih & Marlia, 2024)	Flat and Spatial Buildings

Table 2 provides an overview of previous studies related to the presence of mathematical concepts, especially geometry, in traditional foods. From this table, it is found that:

1. All the studies listed in the table have the main focus on identifying mathematical concepts, especially flat and spatial shapes, found in various types of traditional foods.
2. The results show that geometry concepts such as flat shapes (e.g. triangle, square, circle) and spatial shapes (e.g. cube, block, tube) are commonly found in various types of traditional foods.
3. This study was conducted by various researchers in different years, indicating a continuing interest in the exploration of the relationship between mathematics and culinary culture.
4. The existence of mathematical concepts in traditional foods indicates great potential in the development of mathematics teaching materials that are more interesting and relevant to students' daily lives.

The results showed that the existence of mathematical concepts in tumpi-tumpi food has very significant implications for the practice of learning mathematics, among others:

1. Utilization of Local Context:
   a. Mathematics learning becomes more relevant and meaningful for students because it is associated with their culture and daily life.
   b. Students will be more motivated to learn math because the learning material feels closer and more interesting.
   c. Abstract mathematical concepts can be visualized through concrete objects such as tumpi-tumpi (See Figure 2), making it easier for students to understand.

Figure 2. *Tumpi-Tumpi Food*

2. Development of Teaching Materials:

a. Teachers can develop a variety of creative and innovative teaching materials by utilizing tumpi-tumpi as a learning medium.
b. Math learning is no longer monotonous, but becomes more varied and fun.
c. Students are trained to think critically in identifying and analyzing mathematical concepts contained in tumpi-tumpi.

3. Strengthening 21st Century Skills:
   a. Tumpi-tumpi-based learning can encourage students to work together in groups.
   b. Students can practice their communication skills in explaining math concepts to their peers.
   c. Students can develop their creativity in making different tumpi-tumpi designs.
4. Appreciation of Local Culture:
   a. Learning math using tumpi-tumpi can help preserve local culture.
   b. Students feel proud of their culture and have a sense of belonging to math learning.

The application of the concept of ethnomathematics in tumpi-tumpi food in learning mathematics can be done in various ways. Teachers can bring tumpi-tumpi to the classroom to directly show the geometric shapes contained in it. As a form of practice, students can make simple tumpi-tumpi models from easily available materials such as paper or plasticine, then identify and calculate various sizes and geometric shapes. To enhance creativity and deeper understanding, students can be given a project task to design tumpi-tumpi with a variety of sizes and shapes, then calculate the surface area or volume.

The application of ethnomathematics on tumpi-tumpi food in mathematics learning does have great potential, but it is not free from several challenges. One of the main challenges is the limited availability of tumpi-tumpi in all regions. To overcome this, teachers can make a simple tumpi-tumpi model using easily available materials such as paper, plasticine, or even pictures. Another challenge is the limited time allocation for learning. The application of ethnomathematics often takes longer than conventional learning methods. As a solution, teachers can integrate ethnomathematics concepts into existing learning themes, so it does not require significant additional time. Thus, learning mathematics can remain interesting and meaningful without sacrificing the subject matter that students must master. The application of ethnomathematics to tumpi-tumpi food has enormous potential to improve the quality of mathematics learning, ultimately improving their skills, motivation, and academic achievements in mathematics (Fouze & Amit, 2023). By utilizing the wealth of local culture, learning mathematics can be more meaningful, fun, relevant to students, and encouraging students to appreciate their cultural heritage (De Castro, 2024; Payadnya et al., 2024).

Conclusion

This systematic literature review investigated the application of ethnomathematics in mathematics learning through the traditional Bugis-Makassar food, Tumpi-Tumpi. The findings show that Tumpi-Tumpi, with different patterns and varying sizes, contains several mathematical concepts, one of which is flat building with the sub-topic of equilateral triangles. By integrating these concepts into the curriculum, educators can create more engaging and culturally relevant learning experiences for students. This approach not only improves mathematical understanding but also fosters a deeper appreciation of local traditions and the relevance of mathematics to everyday life, especially in the Maros district. The study emphasizes the potential of ethnomathematics to bridge the gap between abstract mathematical concepts and real-world applications, ultimately enriching the overall learning process. Therefore, teachers can utilise the results of this study to develop mathematics teaching materials based on local cultural contexts, particularly Tumpi-Tumpi food. These teaching materials can be in the form of worksheets, projects, or games that combine mathematical concepts with cultural elements.

References

Auw, D. N., Mungkabel, M., & Tang, M. I. P. (2023). Etnomatematika Melalui Inovasi Pembelajaran Matematika di Sekolah Dasar GMIT 034 Wolwal. *ABDIKAN: Jurnal Pengabdian Masyarakat Bidang Sains Dan Teknologi*, *2*(3), 361–369. https://doi.org/10.55123/abdikan.v2i3.2320

Choeriyah, L., Nusantara, T., Qohar, A., & Subanji, S. (2020). Studi etnomatematika pada makanan tradisional Cilacap. *AKSIOMA : Jurnal Matematika Dan Pendidikan Matematika*, *11*(2), 210–218.

De Castro, R. S. (2024). Weaving The Harmony of Cultures Into The Infinite Tapestry of Mathematics. *ARACÊ*, *6*(1), 219–230. https://doi.org/10.56238/arev6n1-013

Della, S. P., Rahmawati, E. Y., Luthfiyah, R. Z., Habiba, R. N., & Nafisa, S. (2024). Eksplorasi Etnomatematika Pada Makanan Tradisional Kerak Telor Sebagai Media Belajar Matematika Kurikulum Merdeka. *Jurnal Lebesgue : Jurnal Ilmiah Pendidikan Matematika, Matematika Dan Statistika*, *5*(3), 1361–1369. https://doi.org/10.46306/lb.v5i3.664

Fajriyah, E. (2018). Peran Etnomatematika Terkait Konsep Matematika dalam Mendukung Literasi. *PRISMA, Prosiding Seminar Nasional Matematika*, *1*, 114–119. https://journal.unnes.ac.id/sju/prisma/article/view/19589

Fitriana, D. N., & Aprilia, A. (2021). Mindset awal siswa terhadap pembelajaran matematika yang sulit dan menakutkan. *PEDIR: Journal of Elementary Education*, *1*(2), 28–40.

Fitriani, D., & Putra, A. (2022). Systematic Literature Review (SLR): Eksplorasi Etnomatematika pada Makanan Tradisional. *Journal of Mathematics Education and Learning*, *2*(1), 18–26. https://doi.org/10.19184/jomeal.v2i1.29093

Fouze, A. Q., & Amit, M. (2023). The Importance of Ethnomathematics Education. *Creative Education*, *14*(04), 729–740. https://doi.org/10.4236/ce.2023.144048

Heriyati, H., & Handayani, S. (2022). Ketupat Makanan Tradisional Betawi Sebagai Media Pembelajaran Berbasis Etnomatika. *Jurnal PEKA (Pendidikan Matematika)*, *5*(2), 105–111. https://doi.org/10.37150/jp.v5i2.1415

Ibrahim, N. S. W. (2021). Analisis Etnomatematika Pada Kerajinan Anyaman Bambu Terhadap Pemebelajaran Matematika di Kabupaten Sukabumi. *Jurnal PEKA: Jurnal Pendidikan Matematika*, *4*(2), 35–40. https://doi.org/10.37150/jp.v4i2.819

Irfan, I. (2020). Pengaruh Model Pembelajaran Kooperatif Tipe Scramble Terhadap Kemampuan Berpikir Kritis Matematis Siswa. *Zeta - Math Journal*, *5*(1), 26–31. https://doi.org/10.31102/zeta.2020.5.1.26-31

Isnaningrum, I., & Wahab, M. A. (2023). Eksplorasi Etnomatematika pada Kue Tradisional di Daerah Magelang. *Jurnal Ilmu Pendidikan Dan Sosial*, *1*(4), 499–508. https://doi.org/10.58540/jipsi.v1i4.113

Jainuddin, J., Rapa, L. G., Ramadhan, N. R., & Mubarik, M. (2022). Eksplorasi Etnomatematika Terhadap Makanan Khas Toraja. *Aksioma*, *11*(2), 123–131. https://doi.org/10.22487/aksioma.v11i2.2486

Karunia, A. D., & Setianingsih, R. (2022). Eksplorasi Etnomatematika Arsitektur Kuno Di Kediri. *Jurnal Penelitian Pendidikan Matematika dan Sains*, *5*(2), 71–83. https://doi.org/10.26740/jppms.v5n2.p71-83

Leonard, J. (2018). *Culturally Specific Pedagogy in the Mathematics Classroom: Strategies for Teachers and Students* (2nd ed.). Routledge. https://doi.org/10.4324/9781351255837

Mania, S., & Alam, S. (2021). Teachers' Perception toward the Use of Ethnomathematics Approach in Teaching Math. *International Journal of Education in Mathematics, Science and Technology*, *9*(2), 282–298. https://doi.org/10.46328/ijemst.1551

Muk Minah, M. S. A., & 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

Nasution, N., & Hasanah, R. U. (2023). Eksplorasi Etnomatematika Pada Alame dan Kipang Panyabungan Sebagai Makanan Khas Mandailing. *EMTEKA: Jurnal Pendidikan Matematika*, *4*(1), 14–25.

Nengsih, R., & Marlia, R. (2024). Analisis Etnomatematika pada Makanan Tradisional Minangkabau. *Jurnal Insan Peduli Pendidikan (JIPENDIK)*, *2*(1), 41–48. https://ejournal.lppinpest.org/index.php/jipendik/article/view/44

Pathuddin, H., & Raehana, S. (2019). Etnomatematika: Makanan Tradisional Bugis Sebagai Sumber Belajar Matematika. *MaPan*, *7*(2), 307–327. https://doi.org/10.24252/mapan.2019v7n2a10

Payadnya, I. P. A. A., Wulandari, I. G. A. P. A., Puspadewi, K. R., & Saelee, S. (2024). The significance of ethnomathematics learning: A cross-cultural perspectives between Indonesian and Thailand educators. *Journal for Multicultural Education*, *18*(4), 508–522. https://doi.org/10.1108/JME-05-2024-0049

Pulungan, N. A., & Adinda, A. (2023). Eksplorasi Etnomatematika Dalam Permainan Tradisional Kelereng Daerah Padangsidimpuan Selatan. *JURNAL MathEdu (Mathematic Education Journal)*, *6*(1), 21–28. https://doi.org/10.37081/mathedu.v6i1.4809

Rusli, F. & Azmidar. (2023). Etnomatematika Budaya Bugis: Inovasi Pembelajaran Matematika pada Burasa'. *Journal of Mathematics Learning Innovation (JMLI)*, *2*(1), 20–38. https://doi.org/10.35905/jmlipare.v2i1.5077

Rusmayanti & Sutirna. (2021). Eksplorasi etnomatematika pada kue tradisional semprong khas dari Karawang. *MAJU*, *8*(2), 76–83.

Salsabila, S. Z., Agustina, L., & Nurrahmah, A. (2022). Eksplorasi Etnomatematika pada Makanan Tradisional di Kota Depok (Studi Kasus: Kue Balok khas Jawa Barat). *Jurnal Pendidikan Dan Konseling (JPDK)*, *4*(6), 10364–10378. https://doi.org/10.31004/jpdk.v4i6.10044

Saniyah, S. M., & Ardiansyah, A. S. (2023). Eksplorasi Etnomatematika pada Makanan Tradisional Pekalongan dan Kaitannya dengan Pembelajaran Matematika. *Himpunan: Jurnal Ilmiah MahasiswaPendidikan Matematika*, *3*(1), 25–36.

Simanjuntak, R. M., & Sihombing, D. I. (2020). *Eksplorasi Etnomatematika pada Kue Tradisional Suku Batak*. Prosiding Webinar Ethnomathematics, Universitas HKBP Nommensen.

Soebagyo, J., Andriono, R., Razfy, M., & Muhammad, A. (2021). Analisis Peran Etnomatematika dalam Pembelajaran Matematika. *ANARGYA: Jurnal Ilmiah Pendidikan Matematika*, *4*(2), 184–190. https://doi.org/10.24176/anargya.v4i2.6370

Solehah, H., & Setiawan, D. (2023). Kurikulum Merdeka dan Penilaian Pembelajaran Matematika dalam Membangun Generasi Matematika yang Kompeten (Studi Literatur). *Jurnal Pendidikan Tambusai*, *7*(3), 23929–23940. https://doi.org/10.31004/jptam.v7i3.10406

Triandini, E., Jayanatha, S., Indrawan, A., Werla Putra, G., & Iswara, B. (2019). Metode Systematic Literature Review untuk Identifikasi Platform dan Metode Pengembangan Sistem Informasi di Indonesia. *Indonesian Journal of Information Systems*, *1*(2), 63–77. https://doi.org/10.24002/ijis.v1i2.1916

Werdiningsih, C. E. (2022). Kajian Etnomatematika Pada Makanan Tradisional (Studi Kasus Pada Lepet Ketan). *Jurnal PEKA (Pendidikan Matematika)*, *5*(2), 112–121. https://doi.org/10.37150/jp.v5i2.1433