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EXPLORATION OF ETHNOMATHEMATICS AS A MATHEMATICS LEARNING RESOURCE IN JUNIOR HIGH SCHOOL

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Abstrak
Tujuan dari penelitian ini untuk mengkaji persepsi guru terhadap penerapan etnomatematika sebagai sumber belajar, serta menggali unsur-unsur budaya Bali yang relevan untuk diintegrasikan ke dalam pembelajaran matematika di tingkat SMP. Pendekatan yang digunakan dalam penelitian ini adalah kualitatif deskriptif. Data dikumpulkan melalui penyebaran kuesioner dan pelaksanaan wawancara terhadap guru-guru matematika di sejumlah sekolah yang berada di wilayah Singaraja. Temuan dari penelitian ini mengindikasikan adanya persepsi guru terhadap penerapan etnomatematika sebagai sumber belajar berada dalam kategori sangat baik pada tiga aspek, yakni: aspek kognitif, aspek afektif, dan aspek konatif. Temuan ini menunjukkan bahwa guru memiliki sikap positif terhadap penerapan etnomatematika dalam pembelajaran matematika. Jenis kebudayaan Bali yang dinilai paling relevan sebagai sumber belajar adalah arsitektur Bali, diikuti oleh adat istiadat dan kerajinan tradisional. Sementara itu, seni pertunjukan dan permainan tradisional memperoleh skor paling rendah, meskipun masih termasuk dalam kategori baik. Hasil ini menegaskan bahwa pendekatan kontekstual berbasis budaya lokal memiliki potensi besar untuk diterapkan dalam pembelajaran matematika di tingkat SMP. Penelitian selanjutnya disarankan untuk mengeksplorasi budaya lokal dari wilayah lain dengan cakupan yang lebih luas, serta melakukan penelitian eksperimen guna menguji dampak etnomatematika terhadap hasil dan minat belajar siswa.

Kata Kunci: Etnomatematika; Budaya Bali; Persepsi Guru; Sumber Belajar Kontekstual; Pembelajaran Matematika.

Abstract
This study aims to examine teachers' perceptions of the implementation of ethnomathematics as a learning resource and to explore relevant elements of Balinese culture that can be integrated into mathematics learning at the junior high school level. The research employed a descriptive qualitative approach. Data were collected through the distribution of questionnaires and the conduction of interviews with mathematics teachers in several schools located in the Singaraja area. The findings indicate that teachers' perceptions of ethnomathematics as a learning resource fall into the very positive category across three aspects: cognitive, affective, and conative. These results suggest that teachers hold a positive attitude toward the application of ethnomathematics in mathematics instruction. The most relevant elements of Balinese culture identified as learning resources include traditional Balinese architecture, followed by customs and traditional crafts. Meanwhile, performing arts and traditional games received the lowest ratings, although still categorized as good. These results affirm that a contextual approach based on local culture holds great potential for application in junior high school mathematics learning. Future research is recommended to explore local cultures from other regions with a broader scope and to conduct experimental studies to examine the effects of ethnomathematics on student learning outcomes and interest.

Keyword*: Ethnomathematics; Balinese Culture; Teacher Perception; Contextual Learning Resources; Mathematics Learning.*

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INTRODUCTION

Mathematics plays a vital role in supporting various daily human activities. Therefore, this subject is an essential and inseparable component of the educational curriculum at various levels, from elementary school (SD), junior high school (SMP), to senior high school (SMA) (Zulaekhoh & Hakim, 2021). However, challenges in learning mathematics still frequently occur. Research conducted by (Abas Kue et al., 2022) through a written test on 19 students showed that 84.21% of students scored below the Minimum Completion Criteria (KKM), while only 15.79% of students met the passing criteria. This data reflects that mathematics remains a complex and difficult subject for the majority of students to understand. This difficulty is particularly experienced by junior high school students, indicating that the ideal conditions for conceptual understanding have not yet been fully achieved (Siregar, 2021). This often hinders the application of these concepts in practical situations. Several factors contributing to this obstacle include students' low interest in learning mathematics, which is often perceived as a difficult subject with many complex calculations. Furthermore, a lack of mastery of the prerequisite knowledge needed to understand advanced material contributes to low student learning outcomes (Anggreni, 2022).

In mathematics learning, the teaching methods used by teachers are often considered too monotonous, theoretical, lacking conceptual depth, and tending to be unrealistic (Prastika, 2021). The dominance of conventional approaches in mathematics learning in schools is one of the main causes of this condition. This approach is ineffective in capturing students' attention and lacks connection to students' real-life experiences, making the material presented feel unfamiliar and difficult to understand (Sherly & Sugeng, 2025). As a result, students' interest and understanding of mathematics decline. This demonstrates the gap between the expectations of 21st-century education and current mathematics learning, which is still too focused on theory, preventing students from connecting the benefits gained from learning in school with its application in real life. This approach needs to be updated to make mathematics more contextual and meaningful for students.

To address the various challenges of mathematics learning, strategic steps are needed to ensure the effective achievement of learning objectives. An example of a strategy that can be implemented is innovating the approach to mathematics learning, making it more relevant to students' needs and providing meaning to their learning process (Novitasari et al., 2023). Teachers play a crucial role in creating an engaging learning environment so that students view mathematics as a useful tool, not simply a difficult subject (Primasari, 2024). This approach is designed so that students not only understand mathematical concepts theoretically but also are able to apply them in real-life contexts. Mathematics, as a universal and logical science, plays a crucial role in education because it serves as the foundation for the development of various sciences and contributes to the development of critical thinking skills, which are essential in the modern era (Gayatri, 2022). Therefore, innovation in mathematics learning needs to be directed towards making it more relevant and connected to students' real-life experiences.

Ethnomathematics, the study of connecting mathematics with culture, describes how people from various sociocultural backgrounds understand, develop, and implement mathematical concepts in real life. In the context of learning, ethnomathematics offers a real and familiar context for students, thus facilitating the concrete and practical learning of mathematical concepts. By linking mathematical material to local cultural practices, students not only learn to calculate or solve problems but also understand the meaning and function of mathematics in their socio-cultural lives. Previous research has found that contextual approaches such as ethnomathematics can enhance conceptual understanding, motivate learning, strengthen reasoning skills, and foster students' interest in learning (Khaerani et al., 2024; Yudhi & Septiani, 2024). Integrating local culture has

also been shown to enrich the learning experience and increase the relevance of teaching materials to students' real-life situations. Furthermore, other research shows that exploring existing informal mathematical knowledge in students' real lives enables teachers to create learning that is aligned with their needs and meaningful (Hardiarti, 2017).

By integrating local culture into mathematics learning, students can connect learning materials to their real-life experiences. The use of culturally based learning media also offers various benefits that can enrich the learning process (Laksana, 2024). For example, in societies with specific traditions, such as handicrafts or traditional architectural patterns, students can learn geometric and measurement concepts through culturally based activities. Through this method, mathematics learning not only focuses on abstract theories but can also be applied to contexts that are more relevant and easier for students to understand. Indonesia, with its extraordinary cultural diversity, offers great potential for developing ethnomathematics-based learning. One region with great potential as a learning resource is the island of Bali. Balinese cultural traditions contain various mathematical concepts that can be integrated into mathematics learning, especially at the junior high school level. These cultural elements include customs, Balinese architecture, performing arts, traditional Balinese crafts, and traditional games (Isnanto, 2022). These cultural elements contain many mathematical concepts that can be adapted for learning. For example, research conducted by Diputra et al., 2023, shows that Balinese jejaitan (traditional Balinese clothing) contains ethnomathematic concepts, particularly geometric shapes such as squares, rectangles, triangles, and circles. These concepts can be utilized to increase student engagement and understanding, making it an effective learning resource. Furthermore, research conducted by Suharta et al., 2021, concluded that integrating ethnomathematics through traditional Balinese houses into geometric transformation learning positively impacted students' understanding of transformation concepts, such as reflection, rotation, and translation.

Based on the findings of the aforementioned research, the majority of previous studies have been limited to specific aspects of Balinese culture, such as Balinese jejaitan and traditional houses, but have not provided concrete guidance or examples for teachers on how to implement these cultural elements in mathematics learning in the classroom. Furthermore, the integration of ethnomathematics at the junior high school (SMP) level is increasingly important given the limited research systematically addressing its application at this level. Most previous research has focused on elementary school, while research on the application of ethnomathematics in junior high schools remains very limited. This creates a gap in the understanding and application of ethnomathematics at more complex levels of education. Therefore, this study is expected to make a significant contribution to filling this gap and offering new insights for educators to integrate local culture into mathematics learning as a resource.

METHOD

The type of research chosen in this study is descriptive qualitative research. According to Bahri (2017), a descriptive qualitative approach is used to present research findings as they are, without any manipulation of the variables studied, with data obtained through direct interaction with informants in the form of interviews (Hanyfah et al., 2022). This approach is used to describe teachers' perceptions of the application of ethnomathematics as a learning resource, as well as to explore relevant Balinese cultural elements to be integrated into mathematics learning at the junior high school level. Teacher perceptions in this study were analyzed through three aspects: (a) cognitive aspects, (b) affective aspects, and (c) conative aspects, based on the perception theory proposed by Steven M. Chaffe (Rakhmat, 1999). The subjects in this study were mathematics teachers teaching grades VII, VIII, and IX at five junior high schools in the Singaraja area: SMP

Negeri 1 Singaraja, SMP Negeri 2 Singaraja, SMP Negeri 3 Singaraja, SMP Negeri 4 Singaraja, and SMP Negeri 6 Singaraja, totaling 32 teachers. Data collection techniques included questionnaires, interviews, and documentation. The questionnaire used a Likert scale to measure respondents' perceptions of each statement. This scale consists of five response categories: "Strongly Disagree" (score 1), "Disagree" (2), "Neutral" (3), "Agree" (4), and "Strongly Agree" (5).

The data analysis techniques used were descriptive and qualitative analysis. Descriptive analysis was used to describe teachers' perceptions of the application of ethnomathematics as a learning resource. According to Irianto (2004) in (Suryani & Tripalupi, 2021), the steps in descriptive analysis are carried out based on the highest and lowest scores from all available answer alternatives. The questionnaire consists of eight items for each aspect, covering cognitive, affective, and conative aspects. Therefore, the maximum score is 40, and the minimum is 8. The assessment results are then grouped into five categories as follows: an average score of 8-14 is categorized as very poor, 15-21 as poor, 22-28 as fair, 29-35 as good, and 36-40 as very good (modified from Sugiyono, 2022).

Meanwhile, qualitative analysis was used to analyze the interview data, referring to the qualitative data analysis proposed by Miles & Huberman (2009). Interview data was analyzed using the stages of data reduction, data presentation, and drawing conclusions, in order to gain an in-depth understanding of teachers' perceptions of the application of ethnomathematics in the context of learning in schools.

RESULT

In this study, teachers' perceptions of the application of ethnomathematics as a source of mathematics learning in junior high schools were examined from three aspects: cognitive, affective, and conative. The results are presented in Table 1 below.

Table 1. Teacher Assessment Scores on the Application of Ethnomathematics

Aspect	Average Score	Score Range	Category
Cognitive	38,09	36-40	Very Good
Affective	36,00	36-40	Very Good
Conative	37,13	36-40	Very Good

Based on the data analysis in Table 1, it is known that teachers' perceptions of the application of ethnomathematics as a learning resource are very positive. From a cognitive perspective, teachers demonstrate a very good understanding of the concept of ethnomathematics and its application in mathematics learning. From an affective perspective, teachers demonstrate a positive assessment of the effectiveness of ethnomathematics application in learning. Meanwhile, from a conative perspective, teachers demonstrate the willingness and readiness to develop ethnomathematics-based learning innovations.

Furthermore, this study also identified five types of Balinese culture deemed to have high potential as learning resources in mathematics: customs, Balinese architecture, performing arts, traditional Balinese crafts, and traditional games. Each type of culture was analyzed based on its mathematical elements and its relevance to the context of mathematics learning in junior high schools. The results of the data analysis are presented in the form of a bar chart in graph 1.

The results of the data analysis in graph 1 show that all types of culture studied obtained an average score above 4.0. This indicates that mathematics teachers responded positively to the ethnomathematics potential contained in each of these cultural elements. The type of ethnomathematics that obtained the highest average score was Balinese architecture, with a score of 4.8. This finding indicates that Balinese architectural elements are considered the most relevant and

potential in teaching mathematical concepts. Furthermore, elements of Balinese customs and traditional crafts each obtained an average score of 4.7, indicating that both are also considered highly relevant for use in contextual mathematics learning. Meanwhile, elements of performing arts and traditional games, although obtaining an average score of 4.6, still show high values and are categorized as very suitable to be used as learning resources. Overall, these results indicate that all elements of Balinese culture studied have strong potential to be integrated into contextual and local culture-based mathematics learning. Some cultural elements that are included in the Balinese architectural type and received the highest assessment from teachers are Bale Dangin, Sanggah Kemulan, and Pelinggih Meru.

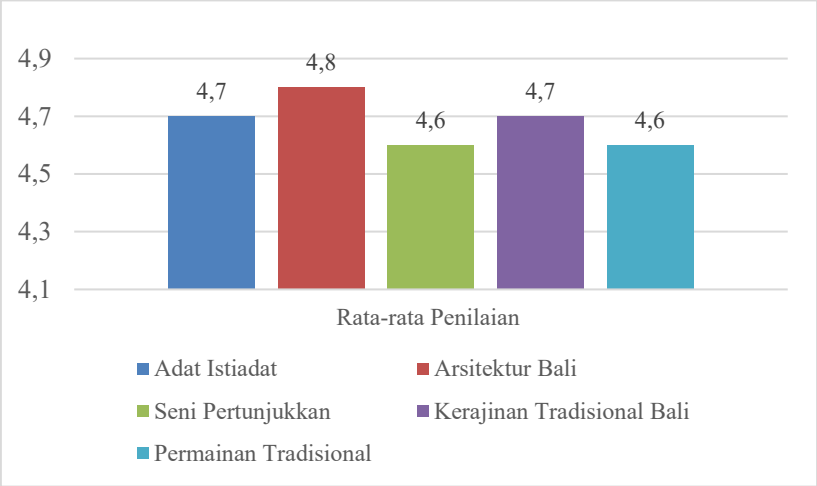

Chart 1. Teacher Assessment of Balinese Cultural Elements

The first cultural element is Bale Dangin, presented in Figure 1. Bale Dangin is a traditional Balinese house building that functions as a place for traditional ceremonies or religious ritual activities.

In an architectural context, Bale Dangin has a triangular prism-shaped roof and a block-like structure. Thus, in addition to its cultural value, Bale Dangin can also serve as a contextual learning tool for understanding geometric concepts. Here's an example of its application in mathematics learning.

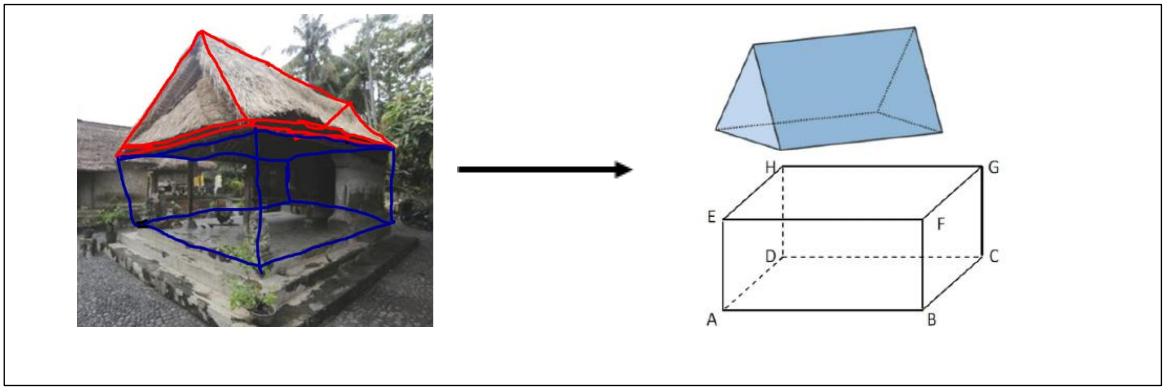

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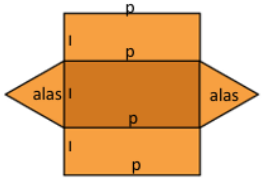
Figure 1. Bale Dangin

Table 2 Bale Dangin as a Learning Resource

Problem	Solving
Sebuah atap bale berbentuk menyerupai prisma segitiga. Jaring-jaringnya terdiri atas dua bidang alas berbentuk segitiga dan tiga bidang tegak berbentuk persegi panjang. Jika panjang setiap sisi tegak adalah 3 cm dan lebarnya 2 cm, berapakah luas total ketiga sisi tegak tersebut?	Ilustrasi gambar:  Karena ketiga sisi tegak memiliki bentuk persegi panjang, maka luas total dapat di hitung sebagai berikut: $L=3.p.l=3.3.2=18cm^2$

Another cultural element that is also highly valued is the Sanggah Kemulan which is shown in figure 2. Sanggah Kemulan is a sacred place that is usually owned by Balinese Hindus and is built in the northeastern part of the house yard.

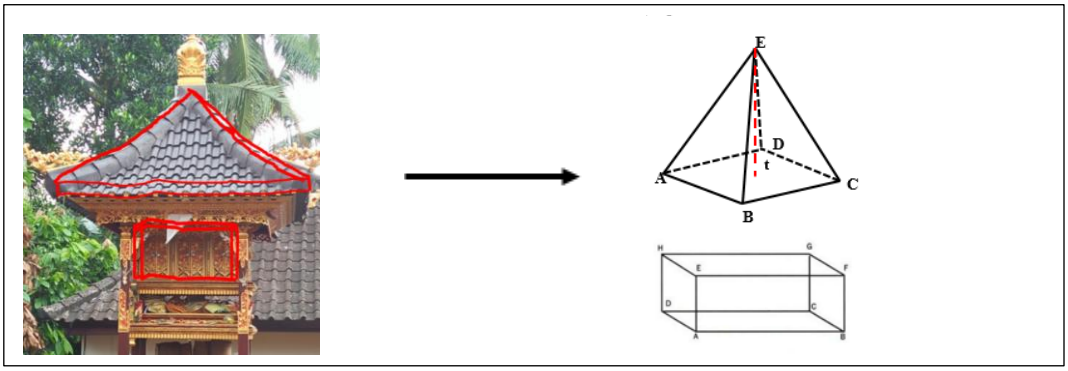


Figure 2. Sanggah Kemulan

Architecturally, the Sanggah Kemulan has a roof resembling a square pyramid and a cuboid-shaped building. Thus, in addition to its spiritual value, the Sanggah Kemulan can also serve as a contextual learning medium for mathematics. Table 3 below provides an example of its application in mathematics learning:

Tabel 2. Sanggah Kemulan Sebagai Sumber Belajar

Problem	Solving
Sebuah bangunan sanggah memiliki atap berbentuk limas segiempat. Seluruh permukaan atap tersebut akan dilapisi dengan bahan ijuk. Diketahui bahwa setiap sisi atap berbentuk segitiga dengan panjang alas 4 m dengan tinggi 3 m. jika harga ijuk per meter persegi adalah Rp. 15.000,00, berapakah total biaya yang dibutuhkan untuk menutupi seluruh permukaan atap tersebut?	Permukaan atap yang akan dilapisi ijuk terdiri atas empat bidang segitiga. Untuk menentukan total luas atap, terlebih dahulu dihitung luas satu bidang segitiga: $L=\frac{1}{2}.4.3=\frac{1}{2}.12=6\ m^2$ Karena terdapat empat sisi yang sama, maka: Luas total atap = $4 \times 6 = 24\ m^2$ Dengan harga ijuk Rp. 15.000,00/m^2, maka biaya total yang diperlukan adalah: Biaya = $24 \times 15.000 = 360.000$ Dengan demikian, total biaya yang diperlukan untuk menutupi seluruh atap sanggah dengan ijuk adalah Rp. 360.000,00

In addition to these two elements, the Pelinggih Meru is also an architectural element that holds significant potential for mathematics learning. A Pelinggih Meru is a multi-story structure commonly found in temples and boasts a distinctive architectural structure.

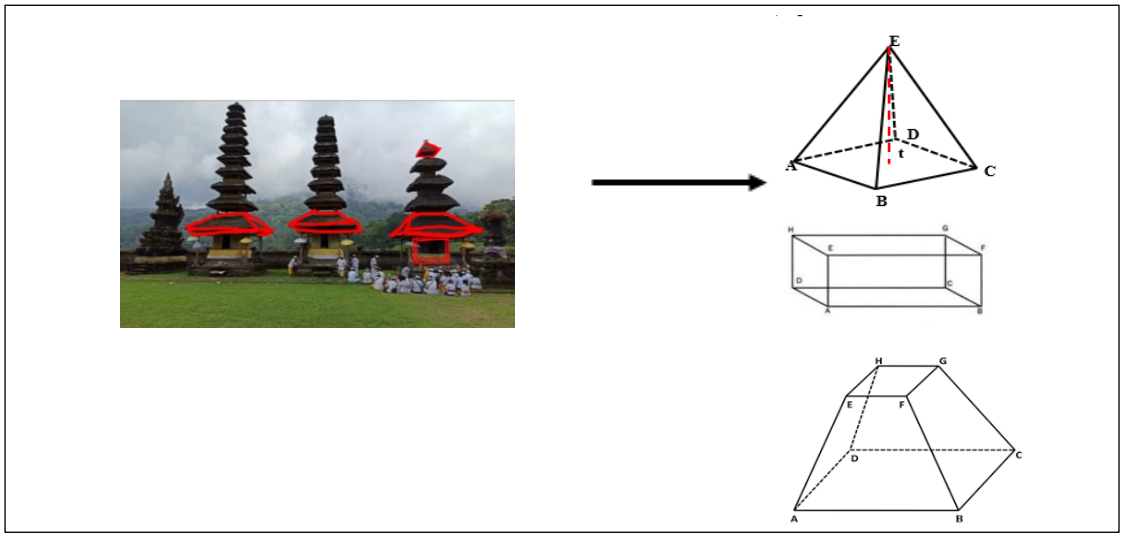


Figure 3. Pelinggih Meru

In an architectural context, the shape of the Pelinggih Meru can be linked to the concept of spatial construction, particularly through its roof structure, which resembles a truncated pyramid, and its cuboidal shape. This truncated pyramid shape can be utilized in mathematics learning as a tool for students to understand how to calculate surface area and volume. Thus, in addition to its spiritual value, the Pelinggih Meru can also serve as a contextual learning medium for understanding geometric concepts.

DISCUSSION

In general, teachers' perceptions of the application of ethnomathematics as a source for learning mathematics at the junior high school level are in the very good category, when viewed from the cognitive, affective, and conative aspects. To gain a deeper understanding, researchers also conducted interviews with several teachers to further explore their views regarding the application of ethnomathematics based on these three aspects. First, teachers' perceptions were viewed from the cognitive aspect. These interviews focused on teachers' knowledge and understanding of ethnomathematics and its potential application in mathematics learning. The results of the interviews indicated that most teachers had a good understanding of how to integrate local culture into the mathematics learning process.

Teacher A from SMP Negeri 3 Singaraja stated that linking mathematics learning with everyday life in learning is very important because it can motivate students to learn more enthusiastically. This approach makes learning more real and meaningful for students, because it links mathematical concepts with local culture that is familiar in their daily lives. Teacher B from SMP Negeri 6 Singaraja added that linking mathematics learning with real life is very important. According to him, current technological developments have the potential to cause the erosion of Balinese customs. Therefore, the application of ethnomathematics that connects learning with Balinese culture can be an effective strategy to maintain and preserve cultural heritage so that it remains known and appreciated by the younger generation, especially amidst the currents of modernization and globalization that have the potential to erode traditional values.

Furthermore, Teacher C from SMP Negeri 3 Singaraja emphasized that Balinese culture has great potential as a source for learning mathematics. For example, the flat-sided geometric shapes

found in the architecture of the bale bengong (house), the buying and selling activities in daily life that can be used to teach the concept of linear equations, and the motifs on kamen cloth that are relevant in learning geometric transformations. This shows that teachers have been able to identify the relationship between cultural objects and mathematical concepts contextually. However, challenges remain. Teacher D from SMP Negeri 1 Singaraja revealed that although she is aware of the potential of Balinese culture as a source for learning mathematics, she has never fully implemented it in her classroom. One of the main obstacles faced is the heterogeneity of student abilities, which necessitates a differentiation strategy in the implementation of ethnomathematics. This finding is in line with the opinion of Rua et al. (2025), who stated that ethnomathematics can be a bridge between local knowledge and formal mathematics. This approach not only increases student motivation and understanding but also makes the learning material more contextual, relevant, and closer to the realities of their lives. In line with this, Gesty (2025) emphasized that the integration of ethnomathematics into mathematics learning through e-modules has proven effective in creating learning that is tailored to students' needs, while strengthening the connection between local culture and the mathematical concepts taught.

Second, regarding teacher perceptions, the affective aspect of this interview focused on teachers' assessments of the implementation of the Merdeka Curriculum in supporting ethnomathematics, as well as the effectiveness and applicability of ethnomathematics as a learning resource. The interview results revealed a positive attitude. Teachers assessed that the Ministry of Education and Culture's policy regarding the implementation of the Merdeka Curriculum strongly supports the integration of ethnomathematics in learning. This aligns with research by Ahmad (2024), which states that the Merdeka Curriculum provides teachers with the flexibility to design and develop learning materials tailored to students' needs and contexts. This curriculum focuses on learning differentiation and strengthening student character, enabling teachers to connect mathematical concepts with local culture through ethnomathematics, thereby making the material more contextual, relevant, and meaningful for students.

In addition, the Independent Curriculum also promotes the Pancasila Student Profile Strengthening Project (P5), which emphasizes strengthening student character. In schools in Singaraja, the implementation of the Pancasila Student Profile Strengthening Project (P5) often focuses on local wisdom. Activities within the Pancasila Student Profile Strengthening Project (P5) include making klatkat (traditional clothing), visiting museums, performing Balinese dances, learning megambel (traditional clothing), and several other activities. These activities aim not only to preserve Balinese culture but also to introduce local cultural values to the younger generation.

Interviews with several informants further support these findings. Teacher E, from SMP Negeri 6 Singaraja, stated that through the Independent Curriculum and the implementation of the Pancasila Student Profile Strengthening Project (P5), students are not only encouraged to preserve and maintain Balinese culture but also to gain new and meaningful learning experiences. According to him, the connection between classroom learning and Balinese culture can enrich students' insights, including for students from outside Bali or who are not Hindu, so they can also recognize and appreciate Balinese culture. Furthermore, teacher F, who comes from SMP Negeri 2 Singaraja, added that the connection of local culture in learning can help students more easily understand the concepts taught. This is because learning becomes more contextual, real, and relevant to everyday life. Based on his experience in teaching, he said that students today are more enthusiastic about learning through real, concrete examples rather than imagining abstract objects that are difficult to understand. Furthermore, according to him, the integration of local culture into mathematics learning can also attract students' interest in learning, increase motivation and conceptual understanding, and

ultimately have a positive impact on their learning outcomes. This is in line with the findings (Panis et al., 2023) which revealed that the use of local cultural wisdom in the form of learning modules can be used by teachers as a means to improve students' conceptual understanding in the learning process.

Meanwhile, Teacher G from SMP Negeri 4 Singaraja emphasized that the application of ethnomathematics in learning provides a different learning experience compared to conventional mathematics instruction, which tends to focus on formulas and theorems. Based on his experience implementing ethnomathematics in learning, he stated that with an ethnomathematics approach based on local cultural contexts and the application of a problem-based learning model, students are encouraged to define mathematical concepts through real-life situations related to their daily lives. However, he also emphasized that the success of ethnomathematics implementation depends heavily on teacher preparedness, particularly in designing effective learning. Teachers need to prepare comprehensive learning tools such as student worksheets (LKPD), teaching materials, and learning modules. Without thorough preparation, the application of ethnomathematics in learning will be difficult to implement optimally in the classroom. This opinion aligns with research conducted by Arsal et al. (2023), which emphasized that teachers require creativity and innovation in preparing learning tools to create effective learning to achieve desired learning objectives and adapt them to the needs and characteristics of students in the learning provided. Third, teacher perceptions were examined from a conative perspective. These interviews focused on teachers' desires, intentions, and actions in implementing ethnomathematics in their learning. Based on the interview results, almost all teachers expressed interest and willingness to develop ethnomathematics-based learning innovations, particularly given the flexibility of the Independent Curriculum. Teacher H, from SMP Negeri 6 Singaraja, expressed his interest in linking mathematics learning with Balinese culture, particularly given his experience applying it to specific materials. He believes that implementing ethnomathematics can provide students with new insights and make learning more contextual. However, he emphasized that preparing learning materials is a key aspect before implementing ethnomathematics. Furthermore, it is crucial to ensure that the culture associated with the subject matter is truly relevant to effectively achieve learning objectives. Furthermore, Teacher I, from SMP Negeri 1 Singaraja, added that current teaching materials are flexible enough to integrate local Balinese culture, particularly due to the use of the Independent Curriculum. In this curriculum, teachers are not always tied to government textbooks, giving them the freedom to adapt teaching materials. According to him, if teachers want to add ethnomathematics elements to their lessons, one effective way is to incorporate them into teaching modules they have developed themselves. Furthermore, ethnomathematics can also be applied in practice exercises, so students can become accustomed to connecting mathematical concepts with local culture.

Teacher I further added that developing ethnomathematics-based learning materials requires collaboration between teachers and cultural experts or cultural communities. He believes this collaboration is crucial because it can produce learning materials that are more accurate and appropriate to the local cultural context. Cultural experts or communities have a deeper understanding of local culture, while mathematics teachers have a better grasp of mathematical concepts. With this collaboration, the development of culture-based learning materials can be more effective and result in a richer learning experience for students. This statement aligns with research by Abi (2017), which states that the integration of ethnomathematics in learning will be more effective if teachers collaborate with cultural communities. This collaboration not only improves the quality of teaching materials but also strengthens teachers' professionalism in developing contextual and innovative learning.

CONCLUSION

Based on the research results and discussions that have been conducted, it can be concluded that teachers' perceptions of the application of ethnomathematics as a source of mathematics learning at the junior high school level are very positive. This is shown through three aspects of perception, namely cognitive with an average score of 38.09, affective with an average score of 36.00, and conative with an average score of 37.13, all of which are in the very good category (score range 36–40). In addition, various types of Balinese culture are proven to have high relevance to be integrated into mathematics learning as a contextual and meaningful learning resource. The cultural elements studied, including customs, Balinese architecture, performing arts, traditional crafts, traditional games, and Balinese culinary specialties, all obtained assessment scores above 4.0. Balinese architecture is the most potential element with an average score of 4.8, followed by customs and traditional crafts (4.7), and performing arts, traditional games, and Balinese culinary specialties each with a score of 4.6. These findings indicate that all elements of ethnomathematics are suitable as contextual learning resources to enrich mathematics learning while preserving local culture. The results of this study recommend that future studies incorporate local cultural elements from other regions with a broader scope, as well as conduct experimental research to test the effect of ethnomathematics application on student learning outcomes and learning interests..

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