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Ethnomathematics of Lahbako Dance Movement In The Perspective of Mathematical Literacy of Geometry Concept

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Abstract: Movement in a dance is a visual symbol full of meaning conveyed to be accepted by dance lovers from the whole dance performed. The selection of dance movements is related to the mathematical concept of illustrating its meaning (ethnomathematics). In addition, there is a mathematical literacy process of geometry concepts revealed in dance movements. This becomes a meaningful symbol that becomes a wealth of dance movements that are increasingly interesting to present. The purpose of this research is to identify the ethnomathematics of lah bako dance in the perspective of mathematical literacy of geometry concepts. qualitative research with a descriptive approach to explain the data and its discussion. Data collection methods of interviews, observation, and documentation with data validity test source triangulation. Subjects 2 people from Arutala dance studio and Hastarini. The results obtained are dance movements that come from different habits and interpretations of dancers but the actual meaning of the movements is the same. Ethnomathematics in lah bako dance successfully illustrates the meaning of the movements conveyed in lah bako dance through hand, finger, foot, and body movements that modify into lines, acute and obtuse angles, and triangular and rectangular fields. The mathematical literacy perspective of the geometric concepts of lines, angles, and fields is visualized conceptually, the application of real contexts of daily life, geometric thinking, and the delivery of mathematical language helps in illustrating the message conveyed in a lah bako dance, namely the activities of tobacco farmers. Further research recommendations for dance movements that jump or repeatedly back and forth and the count used by dancers in each movement.

Keyword: ethnomathematics, lah bako dance, mathematical literacy perspective, geometry concept

INTRODUCTION

Lahbako dance is a traditional dance that depicts the lives of tobacco farmers from East Java, precisely from Jember Regency. This dance is performed by several female dancers with movements that describe the activities carried out by farmers in the garden and in the tobacco fields. One of the traditional arts is the lah bako dance which is one of the icons of the city of Jember, East Java (Idris, 2020). Lahbako dance was created in the 1980s which was initiated by the Regent of Jember at that time. The inspiration of the lah bako dance is from the people of Jember itself where most work as tobacco farmers. The Jember area itself is one of the best and largest tobacco producing areas in Indonesia (Nabila, 2021). In addition, Lahbako Dance is also a form of recognition of the role of Jemberi women in the tobacco industry there. Because most of the work of tobacco production is done by women. Thus, Lahbako Dance was born, featuring the activities of local tobacco farmers. The name Lahbako Dance itself is a combination of two words, namely "Lah" and "Bako". The word "lah" itself is a fragment of the word "process" or "process". Whereas the word Bako itself is the meaning of the word "tobacco". Thus it can be interpreted that Lahbako dance is a dance that describes tobacco processing.

Ethnomathematics is a branch of science that studies the relationship between mathematics and culture. In ethnomathematics, mathematics is considered part of human culture and is applied to various aspects of life, including art, music, architecture, knowledge systems and daily life practices. As an evolving science, ethnomathematics continues to attract the interest of researchers and practitioners from various disciplines. In

the era of globalization, ethnomathematics is becoming increasingly relevant in understanding cultural diversity and promoting intercultural respect. Ethnomathematics is composed of the words ethno, mathema, and tics. The prefix ethno refers to the social and cultural context, such as language, jargon, and behaviors, myths, and symbols. The actual origin of mathema is difficult but tends to mean explaining, knowing, understanding, and performing activities such as counting, measuring, classifying, ordering, and modeling a pattern that appears in an environment. The suffix tics means art in technique and the roots of technique (Destrianti, 2019).

Literacy includes spatial literacy, numeracy and also quantitative literacy. These three literacies are included and connected to each other in mathematical literacy (Rahayu et al., 2023). The ability of a student in learning mathematics is not only in counting, but also in reasoning and critical skills in solving an existing problem. In solving and overcoming a problem, not only in the form of problems in the form of routine material, but also such as problems experienced in everyday life (Aisah et al., 2023). This mathematical ability can be called mathematical literacy. An educated person does not only understand mathematics, but also uses it to solve problems in everyday life. According to OECD (2014) literacy is an ability of a person to formulate, apply, and also interpret concepts from mathematics into various contexts that exist in everyday life. The achievement of mathematical literacy in students in Indonesia is currently still relatively low. Opinion by (Mufidah & Karso, 2020) that mathematical literacy is a mathematical ability that aims to enable students to apply learning in everyday life, especially in today's industrial competition (Auliah et al., 2020).

The mathematical literacy perspective in the context of geometry concepts refers to the understanding, selection, and use of geometry concepts in everyday life as well as in problem solving (Malasari et al., 2017). Mathematical literacy not only includes the ability to calculate and use formulas, but also involves understanding mathematical concepts and the ability to apply those concepts in real-world situations. Aspects of the mathematical literacy perspective in geometry concepts are as follows (Kolar & Hodnik, 2021).

1. Understanding Geometry Concepts, Mathematical literacy involves a deep understanding of geometry concepts such as points, lines, planes, angles, shapes, geometry transformations, and more. Mathematically literate individuals can explain the meaning and properties of these geometry elements.
2. Application in Real Context, mathematical literacy requires one to be able to apply geometry concepts in everyday life. For example, calculating land area, designing buildings, or planning room layouts. Mathematically literate individuals are able to identify and solve geometry problems in real contexts.
3. Geometric Thinking Ability, mathematical literacy builds geometric thinking ability, which is the ability to visualize and manipulate geometric objects in the mind. This ability helps in solving problems involving geometry concepts without having to physically draw or calculate.
4. Use of Tools, mathematical literacy involves the ability to use tools such as computers, software, or traditional geometry tools appropriately. Individuals who are literate in mathematics can take advantage of technology to model, measure or calculate more efficiently.
5. Mathematical Language, mathematical literacy involves mastering the language of mathematics, including the terms and symbols used in the context of geometry. The ability to read, write and communicate using the language of mathematics is important in mathematical literacy.

By developing a mathematical literacy perspective in the context of geometry concepts, one can apply their mathematical knowledge more broadly and relevantly in everyday life and in problem-solving situations. Therefore, learning innovations are needed to support

mathematical literacy, especially in Indonesia. One of them is by identifying and describing Lahbako Dance which is combined in mathematical concepts to be developed and utilized so that it can produce embedded and more meaningful knowledge. In this way, it is expected to support the achievement of mathematical literacy in Indonesia. So that the author was inspired to conduct a study entitled "Ethnomathematics of Lahbako Dance Movement in the Perspective of Mathematical Literacy of Geometry Concept". This study aims to identify and describe the ethnomathematics of Lahbako dance movement in the perspective of mathematical literacy of geometry concept. This study limits the use of geometry concepts discussed to lines, angles, and planes.

METHOD

This research uses qualitative research with a descriptive approach. This research was conducted in Jember City which was located in Sembagi Arutala Dance Studio and Hastarini Dance Studio. The source of data in this study are subjects (dancers) as many as 2 people from the two studios with several criteria. The subject criteria are dancers who master lah bako dance. Preliminary research using the interview method on each dance teacher from the studio. After determining the data source, the researcher determines the research subject in accordance with the criteria. Furthermore, research subjects from Hastarini dance studio are called STH and subjects from Arutala Dance studio are called STA. The data collection methods used are interviews, observation, documentation (video). Interviews were used for initial data collection related to determining subjects. Observation and documentation are used to mutually reinforce the results of the data obtained. The data validity test in this study uses source triangulation techniques.

RESULTS AND DISCUSSION

Researchers at the beginning of the research activities identified Lahbako dance movements with dance teacher informants at the Arutala dance studio. The following identification of Lahbako dance movements is presented in Table 1 below.



Table 1. Lahbako Dance Movements



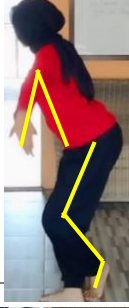

No.	Movement Name	Meaning of Movement
1.	Walking motion	A farmer walking to his rice field.
2.	Right and left walking movements	Farmers look at tobacco that is ready for harvest
3.	Movement <i>petik</i>	The work of harvesting tobacco leaves that are due and starts with picking the top, middle, bottom leaves.
4.	Movement <i>ngeset</i>	Farmers walk to clean their dirty feet before entering the warehouse.
5.	Movement <i>mbuka' bopongan</i>	After arriving at the warehouse, the pile of tobacco in the hand is opened.
6.	Movement <i>ndeleh mbako</i>	The meaning is to put the pile of tobacco on the floor of the warehouse slowly.
7.	Position <i>mbopong</i>	The shape of the hand carrying a pile of tobacco with both hands like being hugged
8.	Movement <i>sortir</i>	he process of selecting and sorting tobacco leaves, from good to medium, bad, and discarding damaged ones.
9.	Flower movement	Tobacco plants that have flowers with 5 petals and tobacco leaves






10. Movement <i>ngukur</i>	Tobacco workers measure the width of tobacco leaves using a measuring tool made of plywood
11. Movement <i>nata 1</i>	Workers arrange the tobacco leaves that have been measured for the <i>sujen</i> .
12. Movement <i>nyujen</i>	The meaning contained in this movement is the process of stringing tobacco leaves using wooden needles and raffia.
13. Movement <i>glanhang</i>	After the leaves are assembled, they are hung or aerated on the roof of the warehouse for a few days and then opened.
14. Movement <i>ngelus</i>	Workers unroll open tobacco leaves smoothly and carefully
15. Lungguh position	This movement is an imitation of the sitting position of tobacco workers in a warehouse.
16. Movement <i>nata 2</i>	After being stroked, the tobaccos are laid out
17. Movement <i>nggogroki regetan</i>	Tobacco workers' habit of cleaning tobacco leaf debris
18. Movement <i>keset</i>	The process of cleaning feet and mopping the warehouse floor after work
19. Movement <i>ngangkat mbako</i>	Position of workers who lift or carry tobacco for delivery to the next process

Based on Table 1. There are 19 kinds of movements performed by dancers in lahbako dance. Each movement contains its own meaning which describes the activities of tobacco farm workers. Furthermore, researchers used the results from Table 1. as material for observing and identifying ethnomathematics in lahbako dance movements. The next activity, data collection on STA and STH subjects has been determined. Data collection related to movement in lahbako dance at different places and times. Located at the Arutala Dance studio on September 26, 2023 with STA dancers performing Lahbako dance documented on video by researchers. Furthermore, through the video the researcher observes each dance movement. The following are the results of the identification of Lahbako dance movements on STA.

Table 2: Identification of Lahbako Dance Movements at STA

No.	Movement Name	Image	Geometry Concept Context
1.	Walking motion		a) Lines: arms, legs, and fingers are moved to form lines b) Angles: Arm and fingers form an acute angle ($<90^\circ$) Arm and body form an acute angle ($<90^\circ$) Both feet form an acute angle ($<90^\circ$)
2.	Right and left walking movements		a) Line: the hand, arm, and fingers are moved to form a line b) Angles: Arm and fingers form an acute angle ($<90^\circ$)

	<p>Arm and body form an acute angle ($<90^\circ$) Both feet form an acute angle ($<90^\circ$)</p> <p>c) Plane The hand and fingers form a plane (triangle)</p>
<p>3. Movement <i>petik</i></p>	 <p>a) Line: the hand, arm, and fingers are moved to form a line</p> <p>b) Angles: Arm and body form an acute angle ($<90^\circ$) Both legs form an acute angle ($<90^\circ$) and an obtuse angle ($>90^\circ$)</p> <p>c) Plane Arms and fingers form a plane (triangle)</p>
<p>4. Movement <i>ngeset</i></p>	 <p>a) Line: the hand, arm, and fingers are moved to form a line</p> <p>b) Angles: Arm forms an acute angle ($<90^\circ$) Legs form an acute angle (dotted line indicates there is Movement forms a backward angle)</p> <p>c) Planes Arm and fingers form a plane (triangle)</p>
<p>5. Movement <i>mbuka' bopongan</i></p>	 <p>a) Lines: arms, legs, and fingers are moved to form lines</p> <p>b) Angles: The hand arm forms an acute angle ($<90^\circ$) Legs form an acute angle ($<90^\circ$) i.e. thigh and calf, calf and sole of foot</p>
<p>6. Movement <i>ndeleh mbako</i></p>	 <p>a) Lines: arms, legs, and fingers are moved to form lines</p> <p>b) Angles: The hand arm forms an acute angle ($<90^\circ$) Legs form an acute angle ($<90^\circ$) i.e. thigh and calf, calf and sole of foot</p>

<p>7. Position <i>mbopong</i></p>		<p>a) Line: the hand, arm, and fingers are moved to form a line</p> <p>b) Angles: Arm forms an acute angle ($<90^\circ$) Feet form an acute angle ($<90^\circ$)</p> <p>c) Plane Hand arm and fingers form a plane (triangle)</p>
<p>8. Movement <i>sortir</i></p>		<p>a) Line: the hand, arm, and fingers are moved to form a line</p> <p>b) Angles: Hand arm forms an acute angle ($<90^\circ$)</p> <p>c) Plane The foot forms a rectangular plane with 2 acute angles and 2 obtuse angles</p>
<p>9. Flower movement</p>		<p>a) Line: the hand, arm, and fingers are moved to form a line</p> <p>b) Angles: Hand arm and fingers form an obtuse angle ($>90^\circ$)</p>
<p>10. Movement <i>ngukur</i></p>		<p>a) Lines: arms, legs, and fingers are moved to form lines</p> <p>b) Angles: Hand arm and fingers at an acute angle ($<90^\circ$) Foot position forms an acute angle ($<90^\circ$)</p>
<p>11. Movement <i>nata 1</i></p>		<p>a) Line: the hand, arm, and fingers are moved to form a line</p> <p>b) Angles: The hand arm forms an acute angle ($<90^\circ$) Both feet form an obtuse angle ($>90^\circ$)</p>

12. Movement *nyujen*



- a) Lines: arms, legs, and fingers are moved to form lines
- b) Angles:
Hand arms and fingers form an acute angle ($<90^\circ$)
Foot position forms an obtuse ($>90^\circ$)

13. Movement *glanhang*



- a) Line: the hand, arm, and fingers are moved to form a line
- b) Angles:
Feet form an obtuse angle ($>90^\circ$)
- c) Field
Body and hands form a pentagon plane

14. Movement *ngelus*



- a) Line: the hand, arm, and fingers are moved to form a line
- b) Angles:
Both Feet form an obtuse angle ($>90^\circ$)
Hand arm, obtuse angle ($>90^\circ$)
hand fingers form an acute angle ($<90^\circ$)

15. Lungguh position






- a) Line: the hand, arm, and fingers are moved to form a line
- b) Angles:
Both Feet form an acute angle ($<90^\circ$)
Hand arm, obtuse angle ($>90^\circ$)
hand fingers form an acute angle ($<90^\circ$)

16. Movement *nata*
2



- a) Line: the hand, arm, and fingers are moved to form a line
- b) Angles:
Both Feet form an obtuse angle ($>90^\circ$)
The hand arm forms an obtuse angle ($>90^\circ$)

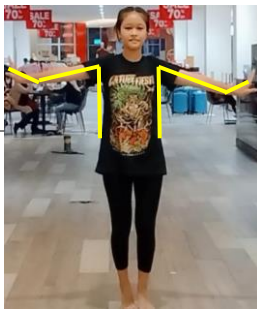
		<p>c) Plane: Both feet form a rectangular plane with 2 acute angles and 2 obtuse angles</p>
<p>17. Movement <i>nggogroki regetan</i></p>		<p>a) Line: the hand, arm, and fingers are moved to form a line</p> <p>b) Angles: Hand arm forms an acute angle ($<90^\circ$)</p> <p>c) Plane: Both feet form a rectangular plane with 2 acute and 2 obtuse angles</p>
<p>18. Movement <i>keset</i></p>		<p>a) Line: the hand, arm, and fingers are moved to form a line</p> <p>b) Angles: Hand arm and fingers form an acute angle ($<90^\circ$)</p>
<p>19. Movement <i>ngangkat mbako</i></p>		<p>a) Line: the hand, arm, and fingers are moved to form a line</p> <p>b) Angles: Hand arm forms an obtuse angle ($>90^\circ$) Legs form an obtuse angle ($>90^\circ$)</p>

Based on Table 2. above can be obtained data related to geometry concepts that appear, namely lines, angles, and fields in 19 dance movements with lines as the basis of concepts that always appear, acute angles and obtuse angles that appear, and there are only a few triangular and rectangular fields.

The next data collection was at Hastarini dance studio on November 9, 2023 with STH dancers who danced Lahbako dance. The following results of the identification of Lahbako dance movements on STH are shown in Table 3 below.





Tabel 3. Identification of Lahbako Dance Movements at STH


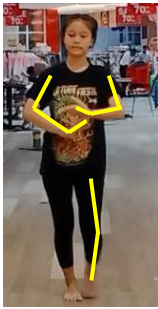
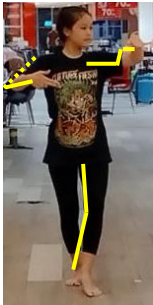

No.	Movement Name	Image	Geometry Concept Context
1.	Walking motion		<p>a) Lines: arms, legs, and fingers are moved to form lines</p> <p>b) Angles: Arm and fingers form an acute angle ($<90^\circ$)</p>



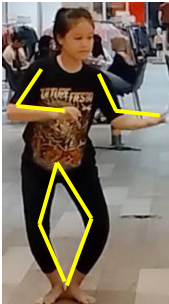





(Ethnomathematics of Lahbako Dance Movement)

			<p>Arm and body form an acute angle ($<90^\circ$)</p>
2.	Right and left walking movements		<p>a) Line: the hand, arm, and fingers are moved to form a line b) Angles: Arm and fingers form an acute angle ($<90^\circ$) Arm and body form an acute angle ($<90^\circ$) Both feet form an acute angle ($<90^\circ$) c) Plane The hand and fingers form a plane (triangle)</p>
3.	Movement <i>petik</i>		<p>a) Line: the hand, arm, and fingers are moved to form a line b) Angles: Arm and body form an acute angle ($<90^\circ$) Both legs form an acute angle ($<90^\circ$) and an obtuse angle ($>90^\circ$) c) Planes Arms and fingers form a plane (triangle)</p>
4.	Movement <i>ngeset</i>		<p>a) Line: the hand, arm, and fingers are moved to form a line b) Angles: Arm forms an acute angle ($<90^\circ$) Legs form an acute angle (dotted line indicates there is Movement forms a backward angle)</p>
5.	Movement <i>mbuka' bopongan</i>		<p>a) Lines: arms, legs, and fingers are moved to form lines b) Angles: The hand arm forms an acute angle ($<90^\circ$) Legs form an acute angle ($<90^\circ$) i.e. thigh and calf, calf and sole of foot</p>

6.	Movement <i>ndeleh mbako</i>		<p>a) Lines: arms, legs, and fingers are moved to form lines</p> <p>b) Angles: The hand arm forms an acute angle ($<90^\circ$) Legs form an acute angle ($<90^\circ$) i.e. thigh and calf, calf and sole of foot</p>
7.	Position <i>mbopong</i>		<p>a) Line: the hand, arm, and fingers are moved to form a line</p> <p>b) Angles: Arm forms an acute angle ($<90^\circ$) Feet form an acute angle ($<90^\circ$)</p> <p>c) Plane The hand arm and fingers form a plane (triangle)</p>
8.	Movement <i>sortir</i>		<p>a) Line: the hand, arm, and fingers are moved to form a line</p> <p>b) Angles: Hand arm forms an acute angle ($<90^\circ$)</p> <p>c) Field The foot forms a rectangular plane with 2 acute angles and 2 obtuse angles</p>
9.	Flower movement		<p>a) Line: the hand, arm, and fingers are moved to form a line</p> <p>b) Angles: Hand arm and fingers form an obtuse angle ($>90^\circ$)</p>
10.	Movement <i>ngukur</i>		<p>a) Lines: arms, legs, and fingers are moved to form lines</p> <p>b) Angles: Hand arm and fingers at an acute angle ($<90^\circ$) Foot position forms an acute angle ($<90^\circ$)</p>

			
11.	Movement <i>nata 1</i>		<p>a) Line: the hand, arm, and fingers are moved to form a line</p> <p>b) Angles: The hand arm forms an acute angle ($<90^\circ$) Both feet form an obtuse angle ($>90^\circ$)</p>
12.	Movement <i>nyujen</i>		<p>a) Lines: arms, legs, and fingers are moved to form lines</p> <p>b) Angles: Hand arms and fingers form an acute angle ($<90^\circ$) Foot position forms an obtuse ($>90^\circ$)</p>
13.	Movement <i>glanhang</i>		<p>a) Line: the hand, arm, and fingers are moved to form a line</p> <p>b) Angles: Feet form an obtuse angle ($>90^\circ$) Arms and fingers form an acute angle ($<90^\circ$)</p>

14.	Movement <i>ngelus</i>		<p>a) Line: the hand, arm, and fingers are moved to form a line</p> <p>b) Angles: Both Feet form an obtuse angle ($>90^\circ$) Hand arm, obtuse angle ($>90^\circ$) hand fingers form an acute angle ($<90^\circ$)</p>
15.	Lungguh position		<p>a) Line: the hand, arm, and fingers are moved to form a line</p> <p>b) Angles: Both Feet form an acute angle ($<90^\circ$) Hand arm, obtuse angle ($>90^\circ$) hand fingers form an acute angle ($<90^\circ$)</p>
16.	Movement <i>nata 2</i>		<p>a) Line: the hand, arm, and fingers are moved to form a line</p> <p>b) Angles: Both Feet form an obtuse angle ($>90^\circ$) The hand arm forms an obtuse angle ($>90^\circ$)</p> <p>c) Plane Both feet form a rectangular plane with 2 acute angles and 2 obtuse angles</p>
17.	Movement <i>nggogroki regetan</i>		<p>a) Line: the hand, arm, and fingers are moved to form a line</p> <p>b) Angles: Hand arm forms an acute angle ($<90^\circ$)</p> <p>c) Plane: Both feet form a rectangular plane with 2 acute and 2 obtuse angles</p>
18.	Movement <i>keset</i>		<p>a) Line: the hand, arm, and fingers are moved to form a line</p> <p>b) Angles: Hand arm and fingers form an acute angle ($<90^\circ$)</p>

19.	Movement <i>ngangkat mbako</i>		<p>a) Line: the hand, arm, and fingers are moved to form a line</p> <p>b) Angles: Hand arm forms an obtuse angle ($>90^\circ$)</p>
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Based on Table 3. it can be obtained data related to geometry concepts that appear, namely lines, angles, and planes in 19 dance movements with lines as the basis of concepts that always appear, acute angles and obtuse angles that appear, and there are only a few triangular and rectangular planes.

Source triangulation was carried out by aligning the results of STA and STH with the result that out of 19 movements there were only 3 movements that had differences including ngeset movement, glantang movement, mbako lifting movement. In the STA ngeset motion, the hands and fingers form a plane attached to the body, but in the STH subject the hands and fingers only form an angle and do not form a plane attached to the body. This difference occurs because of the different styles of dance movement development. The glantang movement in STA hands and fingers form a rectangular shape, but in STH it only forms an angle. This difference in movement occurs due to differences in the level of angle formation by the dancer so that it looks as if it is different. Motion *ngangkat mbako* STA leg position forms an obtuse angle, but in STH straight legs do not form an angle. The difference in the position of the feet is due to the level of leaning of the body to slightly press on the body which is different, so it looks different but actually only the level of habit of the dancer is different.

The discussion of all the data that has been obtained related to the perspective aspects of mathematical literacy in geometry concepts is as follows.

1. Understanding Geometry Concepts, STA and STH involve lines, angles, and planes in their dance movements formed from hands, fingers, feet, and bodies. These results are in line with the results of research on plate dance movements also involving angles, lines, flat shapes, distances, and coordinate points. (Gazanofa & Wahidin, 2023). Maryati & Pratiwi (2023) the results of research related to the concept of geometry, namely flat shapes that exist in dance movements. The concepts of line, angle, and flat shapes are also elements of geometry that exist in dance movements of Naja et al. (2021).
2. Application in Real Context, by illustrating the Movement formed in accordance with the meaning of the Movement in question. The movements carried out are real life on tobacco farm workers. Jemamun et al. (2023) conveyed the results of similar research on the context of daily life that is poured into a dance is an illustration of Community activities that have meaning. In Wulan & Handayani (2020) it is stated that dance movements in dance in Indonesia describe a lot of daily life carried out by the community. This is an attraction for dance lovers.
3. Geometric Thinking Ability, dancers are able to visually interpret and manipulate movement through objects of thought that are expressed in meaningful movement. In accordance with the research results Salsabilah (2021) who conveyed the results of his research that visual motion activities in measuring and calculating in dance are the result of thought process described in dance movements. Dancers are able to represent geometric concepts in a dance. (Naja et al., 2021).

4. The use of tools, in dance movements have not used tools in visualizing the meaning of each movement.
5. Mathematical Language, mathematical literacy involves mastering the language of mathematics with differences in the movements displayed and the body movements performed by dancers as a language conveyed can be used as learning material. This is in line with the research results Andin et al.(2020) who said that dance can help the learning process and increase student activity in learning in the classroom.

CONCLUSIONS

The ethnomathematics of lahbako dance movements in the perspective of mathematical literacy of geometric concepts of lines, angles, and planes is visualized conceptually, the application of real contexts of daily life, geometric thinking, and the delivery of mathematical language helps in illustrating the message conveyed in a lahbako dance, namely the activities of tobacco farmers. There are some differences in dance movements that come from the habits and interpretations of different dancers but the actual meaning of the movements is the same. Ethnomathematics in lahbako dance succeeds in describing the meaning of the movements conveyed in lahbako dance through hand, finger, foot, and body movements that modify into lines, acute and obtuse angles, and the resulting triangular and rectangular fields into movements full of meaning.

Research recommendations that can be made are to explore more deeply the dance movements that jump or repeat back and forth and the counts used by dancers in each movement. This will also lead to the mathematical concepts applied to compose the harmony of dance movements to be more beautiful and dynamic.

REFERENCES

- Aisah, S., Panglipur, I. R., & Sujiwo, D. A. C. (2023). Analisis Pembelajaran Problem Based Learning(Pbl) Dengan Pemecahan Masalah Berbantuan Komik Literasi Numerasi Dan Etnomatematika. *Prismatika:JurnalPendidikandanRisetMatematika*, 6(1), 211-220. <https://doi.org/https://doi.org/10.33503/prismatika.v6i1.3569>
- Andin, J. O., Asi, Y. E., Afrom, I., & Kurniawan, Y. (2020). Peningkatan Kreativitas Tari Melalui Penciptaan Ragam Gerak Tari Kreasi Pada Siswa Kelas VIII SMPN 1 Kapuas Murung. *Jurnal Tambuleng, Pendidikan Seni Drama, Tari Dan Musik*, 1(1), 83-91.
- Destrianti, S. (2019). Etnomatematika dalam Seni Tari Kejei Sebagai Kebudayaan Rejang Lebong. *Jurnal Equation: Teori Dan Penelitian Pendidikan Matematika*, 2(2), 116. <https://doi.org/10.29300/equation.v2i2.2316>
- Gazanofa, F. S., & Wahidin, W. (2023). Eksplorasi Etnomatematika pada Gerak Tari Piring. *Jurnal Cendekia : Jurnal Pendidikan Matematika*, 7(3), 3162-3173. <https://doi.org/10.31004/cendekia.v7i3.2679>
- Idris, M. (2020). (*STUDI KASUS PESANTREN SALAFIYAH PASURUAN*) SKRIPSI diajukan kepada Institut Agama Islam Negeri Jember untuk memenuhi salah satu persyaratan memperoleh Fakultas Tarbiyah dan Ilmu Keguruan Jurusan Pendidikan Islam Program Studi Pendidikan Agama Islam FAKU (Issue November).
- Jemamun, M. U., Blegur, I. K. S., & ... (2023). Etnomatematika pada Tarian Tradisional Nusantara dan Perannya dalam Pembelajaran Matematika. *SANTIKA: Seminar ...*, 529-542. <https://proceeding.uingusdur.ac.id/index.php/santika/article/view/1495>
- Kolar, V. M., & Hodnik, T. (2021). Mathematical literacy from the perspective of solving contextual problems. *European Journal of Educational Research*, 10(1), 467-483. <https://doi.org/10.12973/EU-JER.10.1.467>
- Malasari, P. N., Herman, T., & Jupri, A. (2017). The Construction of Mathematical Literacy Problems for Geometry. *Journal of Physics: Conference Series*, 895(1).

- <https://doi.org/10.1088/1742-6596/895/1/012071>
- Maryati, & Pratiwi, W. (2023). ETNOMATEMATIKA: EKSPLORASI DALAM TARIAN TRADISIONAL PADA PEMBUKAAN ASIAN GAMES 2018. *Jurnal Fibonacci*, 5(1), 23–28. <https://doi.org/https://doi.org/10.24853/fbc.5.1.23-28>
- Nabila, L. (2021). *Eksplorasi Etnomatematika Tari Lahbako Di Sanggar Tari Cemara Biru Patrang Jember*. 72.
- Naja, F. Y., Mei, A., & Sa'o, S. (2021). Eksplorasi Konsep Etnomatematika Pada Gerak Tari Tradisional Suku Lio. *AKSIOMA: Jurnal Program Studi Pendidikan Matematika*, 10(3), 1836. <https://doi.org/10.24127/ajpm.v10i3.3885>
- Rahayu, N., Wardah, P., Murtinasari, F., & Panglipur, I. R. (2023). *Pendampingan Adaptasi Teknologi, Numerasi, Literasi, dan Administrasi Informasi Artikel Abstrak Pendahuluan*. 2, 49–56.
- Salsabilah, D. I. Q. N. (2021). Eksplorasi Tari Remo untuk Literasi Matematika Sekolah Dasar. *Jpgsd*, 9(8), 3134–3144.
- Wulan, P., & Handayani, W. (2020). Pesona Tari sebagai Aset Pariwisata Budaya Indonesia. *SALAM; Jurnal Sosial & Budaya Syar-I*, 7(4), 283–298. <https://doi.org/http://dx.doi.org/10.15408/sjsbs.v7i4.14925>