

Effectiveness of Ethnomathematics-Based Learning Media on Students' Understanding of Geometry Material Concepts in Grade IV

Nurul Fitria Utami¹, Ratna Kartika Irawati²

^{1,2}Universitas Islam Negeri Antasari Banjarmasin, nurulfitriautami046@gmail.com¹.

ABSTRACT

The mismatch between what students receive at school and outside school causes the majority of elementary school students to find mathematics difficult to understand. This research aims to determine differences in understanding of the concept of geometry material between classes that use ethnomathematics-based learning media and classes that do not use learning media as usual. This research uses a quantitative approach with experimental methods. The location of this research is at MI Al-Fitrah Tamiang Layang, Central Kalimantan. The sampling technique used is saturated sampling where all members of the population are used as research samples. Data collection techniques through test, observation and documentation. There are 2 data analysis techniques used, namely descriptive statistical analysis and statistical analysis. The findings show that the independent sample t-test with t count of 3.028 and a significance of 0.004 shows that H_0 is rejected and H_a is accepted, which means there is a significant difference in understanding the concept of geometric materials between classes that use ethnomathematics-based learning media and those that do not use learning media. Apart from that, the average score for classes that use ethnomathematics-based learning media is higher than classes that do not use learning media, so it can be concluded that the use of ethnomathematics-based learning media is effective in learning mathematics, geometry material.

Keywords: *ethnomathematics-based learning media, geometry concept understanding, elementary mathematics education, independent sample t-test.*

DOI: [10.70376/jerp.v2i3.203](https://doi.org/10.70376/jerp.v2i3.203)

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Journal of Educational Research and Practice

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INTRODUCTION

In modern society, mathematics considered as one of the eye the most important lesson in school. However, in system education, especially in Indonesia, students often see mathematics as something that is not important.¹ Although mathematics taught For teach student think analytical, logical, critical, systematic and creative, as well as ability For collaborate in society, many students at school base consider mathematics as difficult lesson. The teacher only convey material to students, giving example For finish question, then give new question to students.² This is cause perception student to mathematics only limited to numbers, theory, and operations.

Odd semester exam results student Class IV of MI Al-Fitrah shows that only 6 out of 49 students achieved mark ≥ 65 . This is show low understanding draft material geometry among students. Interview pre study done with the mathematics teacher at MI Al-Fitrah, that the learning media based on ethnomathematics Not yet Once used in material geometry. Generally teachers only use board write as a medium with consideration that material geometry more Lots use formula and structure flat or get up space that can depicted in a way straight to the board write. As a result, students only understand geometry limited to get up with forms and formulas diverse without know mark from learning the in activity daily life student.

The problem This one of them appears Because existence misalignment among those found students inside and outside the school area.³ So that required something that can connect between mathematics inside and out school. One of the alternatives that can done through approach deep ethnomathematics its implementation make culture as part from material lesson Mathematics. Learning mathematics based on culture for student school can implemented by elementary school/Islamic elementary school teachers.⁴ In addition, the stages think student age school base still at the stage operational concrete that requires learning media diverse and more Lots as reference study it.⁵

Media comes from from Latin "*medius*" which means "middle", "intermediary" or "introduction".⁶ *The Association for Education and Communication Technology* (AECT) said

¹ Cici Surmiyanti, Mutia Mutia, and Syarifah Nurhaliza, "Etnomatematika Dalam Budaya Berdompu Pada Permainan Tradisional Engklek Di Kalimantan Barat," *Juwara Jurnal Wawasan Dan Aksara* 1, no. 1 (May 25, 2021): 47–57, <https://doi.org/10.58740/juwara.v1i1.9>.

² Buhaerah Buhaerah, Kamarussaman Jusoff, and Muhammad Nasir, "Junior High School Students' Mathematical Communication in the Written Answers Problem," *Kreano, Jurnal Matematika Kreatif-Inovatif* 13, no. 1 (June 1, 2022): 14–32, <https://doi.org/10.15294/kreano.v13i1.35221>.

³ Elsi Oktarina, "Exploration of Traditional Game of Marbles in Maths Learning in Primary School," *Pedagogik Journal of Islamic Elementary School*, April 30, 2022, 161–70, <https://doi.org/10.24256/pijies.v5i1.3757>.

⁴ Zalizan M. Jelas et al., "Learning Support and Academic Achievement among Malaysian Adolescents: The Mediating Role of Student Engagement," *Learning Environments Research* 19, no. 2 (July 19, 2016): 221–40, <https://doi.org/10.1007/s10984-015-9202-5>.

⁵ Ferry Laurens Sampel Korompis, "Piaget's Theory in Mathematics Education in Elementary School," *International Journal of Research and Review* 10, no. 6 (June 5, 2023): 82–92, <https://doi.org/10.52403/ijrr.20230612>.

⁶ Noviarni Noviarni et al., "The Development of Mathematics Learning Media Course Modules Integrated with Riau Malay Culture on Mathematics Education Students of State Islamic University Sultan Syarif Kasim Riau," *JRPM (Jurnal Review Pembelajaran Matematika)* 8, no. 2 (December 31, 2023): 121–35, <https://doi.org/10.15642/jrpm.2023.8.2.121-135>.

that the media is all something that is used in the process of delivery information.⁷ Gerlach & Ely state "a medium, conceived is any person, material or event that establishes conditions which enable the learner to acquire knowledge, skills, and attitude".⁸ Statement the explain that the media can originate from every person, material, and events that can give knowledge, skills and attitudes. Pulungan stated that "Learning media is a tool or means that can facilitate delivery of messages from a learning resource to students".^{9,10} The meaning of statement the that learning media is tool in the form of physical that can used in convey material learning. So that can withdrawn conclusion that learning media is tool help in the learning process so that the material delivered by the teacher is more easy understood students are also expected to be able to increase interest student For Study.¹¹ Use of learning media will greatly assist the learning process, conveying messages and materials, growing interest and motivation students, and make it easier interpretation information.¹²

Ethnomathematics first put forward by someone Brazilian mathematician and mathematics teacher, namely Ubiratan D'Ambrosio.¹³ Ethnomathematics originate from the word "ethnomathematics" which comes from three syllables namely *ethno* (related to with culture), *mathematics* (related to with mathematics) and *tics* (art) or technique.¹⁴ Ethnomathematics is use culture certain For learn mathematics. The goal is For create atmosphere learning appropriate contextual and relevant with life daily student so that they can understand and remember draft abstract mathematics with easy.¹⁵ Ethnomathematics study in learning mathematics and life covers various fields, such as weaving, sewing, ornaments, architecture and so on.¹⁶ So that can concluded that ethnomathematics is

⁷ Muhammad Ediyani et al., "Study on Development of Learning Media," *Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences* 3, no. 2 (May 8, 2020): 1336–42, <https://doi.org/10.33258/birci.v3i2.989>.

⁸ Khasanah Khasanah and Rusman Rusman, "Development of Learning Media Based on Smart Apps Creator," *AL-ISHLAH: Jurnal Pendidikan* 13, no. 2 (August 14, 2021): 1006–16, <https://doi.org/10.35445/alishlah.v13i2.549>.

⁹ Anni Holila Pulungan, "The Use of Interactive Learning Media for Teachers in Rural Areas," *Budapest International Research and Critics in Linguistics and Education (BirLE) Journal* 4, no. 1 (February 8, 2021): 524–32, <https://doi.org/10.33258/birle.v4i1.1705>.

¹⁰ Sri Astatik, "Elaborasi Sistem Pembelajaran Daring Pada Pembelajaran PAI (Studi Kasus Sekolah Dasar Negeri Pakandangan Barat 1 Sumenep Tahun 2020-2021)," *Tarbawi Ngabar: Jurnal of Education* 2, no. 1 (January 19, 2021): 106–30, <https://doi.org/10.55380/tarbawi.v2i1.94>.

¹¹ Fatimatuzzahro Fatimatuzzahro, Zumrotus Sa'diyah, and Firda Zakiyatur Rofi'ah, "The Development of Smart Wheel Media For Reading Recognition to 1st Grade Students of MI Mamba'ul Huda," *Al-Adzka: Jurnal Ilmiah Pendidikan Guru Madrasah Ibtidaiyah* 12, no. 1 (July 3, 2022): 48, <https://doi.org/10.18592/aladzkapgmi.v12i1.5172>.

¹² Ediyani et al., "Study on Development of Learning Media."

¹³ Eka Cahya Sari Putra and Fitri Nur Mahmudah, "The Implementation of Ethnomathematics Based-Learning for Students," *SJME (Supremum Journal of Mathematics Education)* 5, no. 2 (July 28, 2021), <https://doi.org/10.35706/sjme.v5i2.4827>.

¹⁴ Sunila Thomas and Gibina Jacob, "ETHNOMATHEMATICS," *International Journal of Advanced Research* 9, no. 09 (September 30, 2021): 310–12, <https://doi.org/10.21474/IJAR01/13409>.

¹⁵ Yohanis Ndapa Deda et al., "Ethnomathematical Perspectives on Galah Asin: Investigating the Mathematical and Cultural Significance of a Traditional Game," *Jurnal Elemen* 10, no. 3 (September 14, 2024): 516–32, <https://doi.org/10.29408/jel.v10i3.25467>.

¹⁶ Siti Ramdhayani Litolily and Siti Raudhah Namasela, "EKSPLORASI ETNOMATEMATIKA GEOMETRI PADA SIMBOL DAN KEGIATAN ADAT SUKU NUAULU DI PULAU SERAM," *AKSIOMA: Jurnal Program Studi Pendidikan Matematika* 12, no. 1 (March 31, 2023): 436, <https://doi.org/10.24127/ajpm.v12i1.6158>.

technique connecting learning draft mathematics with culture local, such as use object culture in learning geometry, which provides context concrete for students. Ethnomathematics is very useful in learning mathematics and life.

learning media based on ethnomathematics used in study This there are 3, namely tool music the nest, Talawang or shield or Dayak shield and house Betang which originates from from Central Kalimantan. Kangkanung is tool music traditional from Central Kalimantan who was beaten with two pieces a bat made of from wood and stacked in a way lined up extending above receptacle box rectangle length made from wood.¹⁷ Talawang is shield or shield typical Dayak tribe made from wood ironwood with carvings that characterize culture Dayak. Its shape rectangle long with pointed at the part above and below.¹⁸ Betang House is legacy culture from Central Kalimantan. This house own size long 30-150 meters and 10-30 meters wide, with pillars tall between 3-4 meters from surface land.¹⁹ Betang house show view life Dayak community about balance macrocosm, which means that life will balanced If connection between man with natural the universe, God, and other creatures are guarded with God.²⁰

Comprehension according to Bloom's Taxonomy is ability somebody For understand or understand something after known and remembered. It can be said that understand is know something and can see it from diverse side.²¹ According to Kilpatrick, Swafford, and Findell, understanding draft is ability For understand concepts, operations, and relationships in a field, especially in mathematics.²² For know ability understanding draft student is with finish question with cognitive process reference Bloom's Taxonomy. Abilities cognitive child age ten year (class four elementary schools/Islamic elementary schools) in the C3 domain, namely apply and C4 namely analyze.²³ So that the cognitive domain is measured in the research This are C1 (remembering), C2 (understanding), C3 (applying) and C4 (analyzing).

¹⁷ Pisces Adam et al., "RANCANG BANGUN KANGKANUNG ELEKTRIK DENGAN SENSOR PIEZO BERBASIS MIKROKONTROLER," *Jurnal Teknika: Jurnal Teoritis Dan Terapan Bidang Keteknikan* 6, no. 1 (December 13, 2022): 74–83, <https://doi.org/10.52868/JT.V6I1.7894>.

¹⁸ Amelia Dwi Astuti et al., "Development of a 3D Ethnomathematics Model for the Dayak Tribe of Central Kalimantan with the Assistance of Virtual Reality Media," *Bitnet: Jurnal Pendidikan Teknologi Informasi* 9, no. 2 (September 30, 2024): 89–100, <https://doi.org/10.33084/bitnet.v9i2.8299>.

¹⁹ Laksmi K. Wardani, Ronald H.I. Sitindjak, and Poppy F. Nilasari, "Sustainability of Betang House's Cultural Wisdom in Central Kalimantan," *KnE Social Sciences*, September 2, 2020, <https://doi.org/10.18502/kss.v4i12.7582>.

²⁰ Hasby Assidiqi and Atiah Atiah, "Etnomatematika Rumah Adat Betang Suku Dayak Kalimantan Tengah," *JIPM (Jurnal Ilmiah Pendidikan Matematika)* 12, no. 2 (March 26, 2024): 321, <https://doi.org/10.25273/jipm.v12i2.18257>.

²¹ Abdur Rochim, Wiwin Sri Hidayati, and Faridatul Masruroh, "Students' Profiles with Interpersonal and Intrapersonal Intelligence in Solving Mathematical Problems," *Mosharafa: Jurnal Pendidikan Matematika* 12, no. 1 (January 31, 2023): 35–46, <https://doi.org/10.31980/mosharafa.v12i1.1948>.

²² Fatkhul Arifin and Dinda Muzdalifah, "The Use of Raktepel Media (Rainbow Egg Rack) to Improve Mathematical Concept Understanding of Grade II MI Students," *At-Tarbawi: Jurnal Pendidikan, Sosial Dan Kebudayaan* 10, no. 2 (September 18, 2023): 210–22, <https://doi.org/10.32505/TARBAWI.V10I2.6713>.

²³ Nafiah Nur Shofia Rohmah, Murfiah Dewi Wilandari, and Darsinah Darsinah, "Teori Perkembangan Jean Piaget Dan Implikasinya Dalam Perkembangan Anak Sekolah Dasar," *Jurnal Ilmiah Wahana Pendidikan* 8, no. 12 (July 31, 2022): 230–39, <https://doi.org/10.5281/ZENODO.6944543>.

Geometry introduced by Thales (624-547 BC) as branch mathematics first time related with relation space.²⁴ Geometry words originate from two syllables, namely "geo" which means earth, and "metric" which means measurement. In Language geometry It means measure earth.²⁵ Bird explained that geometry is part in mathematics that discusses points, lines, planes, and space.²⁶ The materials discussed are: in material geometry chapter get up flat Class IV in SD/MI is get up aspect many, square, square length and triangle. Research This aiming For test effectiveness of learning media based on ethnomathematics in increase understanding draft geometry, which is expected can become alternative on low understanding mathematics student level school base.

METHOD

This is study field with approach quantitative. The methods used is method purposeful experiment For look for influence from a treatment certain in controlled conditions. The design used is *quasi experimental design* with form *nonequivalent control group design* Where group experiments and controls No chosen randomly. This design selected Because condition the field that is not allow For done randomization full. For minimize bias, characteristics students in both group analyzed before get treatment For ensure similarity level knowledge beginning student.

This study held at MI Al-Fitrah, Jl. 45 RT. 15 Tamiang Layang, Dusun Timur sub-district, East Barito district, Central Kalimantan province on January 16-31, 2024. Population in study This is overall student Class IV consists of 49 people divided into into two classes namely IVA as many as 25 and IVB as many as 24. As for the technique taking sample used is *sampling* fed up Where all over member population made into as sample research. Class IVA as class experiment using learning media based on ethnomathematics on material geometry, while class IVB as class control using board media write on the material geometry.

Data collection techniques in study This through test, observation and documentation. *Pretest score* obtained from mark odd semester exam student class IV MI Al-Fitrah year 2023/2024 academic year. *Posttest scores* obtained through test shaped choice doubles consisting of 20 questions taken from instrument the question that has been through validity testing content by experts, as well as validity and reliability tests use Cronbach's Alpha coefficient with mark reliability of 0.899, indicating that the instrument own level high reliability. Documentation in study This in the form of photos and notes or required archives For support data in research. The results observation obtained through sheet implementation learning filled by eye teachers lesson as well as through observation five senses by researchers in a way direct during the learning process.

²⁴ Rahmah Rahmah, Fertilia Ikashaum, and Edo Dwi Cahyo, "PEMAHAMAN KONSEP DAN PERSPEKTIF SISWA TERHADAP GEOMETRI," *LINEAR: Journal of Mathematics Education*, February 10, 2021, 135, <https://doi.org/10.32332/linear.v1i2.2950>.

²⁵ Maxime Fairon, "Introduction to Graded Geometry," *European Journal of Mathematics* 3, no. 2 (June 27, 2017): 208–22, <https://doi.org/10.1007/s40879-017-0138-4>.

²⁶ James W. Pellegrino and Susan R. Goldman, "Information Processing and Elementary Mathematics," *Journal of Learning Disabilities* 20, no. 1 (January 1, 1987): 23–32, <https://doi.org/10.1177/002221948702000105>.

Analysis techniques used there are 2, the first one is analysis statistics descriptive in the form of presentation of value data *mean*, value maximum and minimum values. Second, the analysis statistics inferential in the form of normality test, homogeneity test and *Independent Sample t-Test* with level 5% significance is done with SPSS version 23 help. As stated explained by Royston because amount sample < 50 so in the normality test use *Shapiro Wilk* with data provisions are said normally distributed if sig. value > 0.05. Homogeneity test use *Levene Statistics* with data provisions are homogeneous If sig. value > 0.05. The *Independent Sample t-Test* test done For know There is whether or not difference understanding students in class experiments and classes control so that will obtained results expected research.

DISCUSSION

1. Results

Based on the results of descriptive analysis, it shows that *the mean* (average value) in the experimental class and the control class has a difference that is not far with a difference of 1.28. Then the normality and homogeneity tests were carried out on the *pretest data* of the experimental class and the control class.

Table 1. Descriptive Analysis of Pretest

Class	Analysis Descriptive		
	Mean	Minimum Value	Maximum Value
Class Experiment	41.64	17	83
Class Control	42.92	20	86

Table 2. Results of the Pretest Normality Test

Pretest Results	Shapiro Wilk		
	Statistic s	df	Sig.
Class Experiment	0.949	25	0.235
Class Control	0.920	24	0.059

Table 3. Results of the Pretest Homogeneity Test

Pretest Results	Levene Statistics	df1	df2	Sig.
Based on Mean	0.611	1	47	0.438

Pretest value data of the experimental class and the control class were normally distributed and homogeneous because they had a sig. value > 0.05. Then an *independent sample t-test* was conducted with the results in the following table.

Table 4. Results of Independent Sample t-Test Pretest

Student Pretest Results	Levene's Test for Equality of Variances	t-test for Equality of Means

	F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	0.611	0.438	- 0.250	47	0.804	-1,277	5,106	-11,548	8,995
Equal variances not assumed			- 0.249	45,823	0.804	-1,277	5,119	-11,581	9,028

Based on the table, it is known that the $t_{count\ value}$ is -0.250 with a sig. (2- tailed) value of 0.804. The $t_{table\ value\ obtained}$ with df 47 is 2.011, so the $t_{count\ value} < t_{table}$ (-0.250 < 2.011 and sig. 0.804 > 0.05). It can be concluded that there is no significant difference in the *pretest* scores of the experimental class and the control class. Good *pretest results* if No there is difference in a way significant between class experiments and classes control.²⁷ Then given different treatment in class experiment with using learning media based on ethnomathematics and class control No using learning media based on ethnomathematics. The results *posttest* in class experiments and classes control explained in table following.

Table 5. *Posttest* Descriptive Analysis

Class	Analysis Descriptive		
	Mean	Minimum Value	Maximum Value
Class Experiment	78.4	55	100
Class Control	66.04	35	95

Based on the results of descriptive analysis, it shows that *the mean* (average value) in the experimental class and the control class has a fairly large difference with a difference of 12.36. Then, normality and homogeneity tests were carried out on the *posttest data* of the experimental class and the control class.

Table 6. *Posttest* Normality Test Results

Posttest Results	Shapiro Wilk		
	Statistic s	df	Sig.
Class Experiment	0.965	25	0.534
Class Control	0.969	24	0.640

Table 7. Results of the *Posttest* Homogeneity Test

Posttest Results	Levene Statistics	df1	df2	Sig.
Based on Mean	0.507	1	47	0.480

²⁷ Sugiyono, Sugiyono, *Metode Penelitian Dan Pengembangan Pendekatan Kualitatif, Kuantitatif, Dan R&D* (Bandung: Alfabeta, 2015).

Post test value data of the experimental class and the control class were normally distributed and homogeneous because they had a sig. value > 0.05 . Then an *independent sample t-test* was conducted with the results in the following table.

Based on the Table 8, it is known that the $t_{count\ value}$ is 3.028 with a sig. (2- tailed) value of 0.004. The $t_{count\ value}$ with df 47 is 2.011, so the $t_{count\ value} > t_{table}$ ($3.028 > 2.011$) and sig. $0.004 < 0.05$. It can be concluded that there is a significant difference in the *posttest scores* of the experimental class and the control class.

2. Discussion

The results of the descriptive analysis of *the pretest* of the experimental class and the control class can be concluded that the average score of the experimental class and the control class is almost the same with a difference of 1.28. Then, the percentage value of learning completion results also shows that the experimental class and the control class are not classically complete. The *pretest values* in the experimental class and the control class are normally distributed and homogeneous.

Table 8. Results of Independent Sample *t-Test Posttest*

Posttest Results Student	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	0.507	0.480	3,028	47	0.004	12,358	4,081	4,148	20,568
Equal variances not assumed			3,014	43,788	0.004	12,358	4,101	4,093	20,624

The results of the *pretest t-test* using the *Independent Sample t-Test calculation* obtained a t-count value of -0.250 with a significance of 0.804. So it is concluded that there is no difference in the *pretest results* in the experimental class and the control class. Through the *pretest results*, it is known that the mathematical knowledge of students in class IVA (experimental) and class IVB (control) is at the same level, namely still low. The following is a description of ethnomathematics-based learning media along with concepts related to the geometry of polygonal and plane shapes.

(1) Musical instrument Kangkanung



Figure 1. Kangkanung Musical Instrument

On the tool music the nest there is various material geometry get up flat that is rectangle length on the part place put tool music kangkanung and circle on the tool music Both of them including to in material get up aspect Lots.

(2) Talawang or Dayak shield



Figure 2. Talawang or Dayak shield

In Talawang there is various material geometry get up flat that is rectangle length on the part middle kangkanung, circle in carved motif Kangkanung and triangle on the part end right and left or up and down talawang. Both of them including to in material get up aspect Lots.

(3) Betang Traditional House



Figure 3. Betang Traditional House

On the tool music the nest there is various material geometry get up flat that is rectangle length on the part wall, door windows and boards ladder House Betang. Then square on the part carvings on the door House Betang and triangle on the part the roof. Everything including to in material get up aspect Lots. In its implementation, learning media is used researcher in the form of artificial media made from base cardboard box Because

limitations use the original object or For invite student to location House Betang in a way direct.

Learning in classes that use learning media based on ethnomathematics show that interest and enthusiasm Study student during the learning process is very good. Students are also more active ask Good related knowledge they about learning media and also the media relations with the material being studied. Students are also like that enthusiastic when offered For finish examples questions on the board write. In line with research by Nugraha and Novaliyosi which explains that learning media based on ethnomathematics give very positive impact for participant educate in improve the learning process.²⁸

Then For increase mastery material, students given exercise in the form of LKPD. Students answer with spirit and enthusiasm without Lots ask Because understand with material that has been delivered. As mentioned by Fitri Umardiyah et al. that ethnomathematics have Power pull so that student enthusiastic For understand and complete question.²⁹ Through results *posttest* show more Lots students who have completed compared to with the not complete. This is show that use of learning media based on ethnomathematics give impact positive against understanding geometry student.

As for learning in classes that do not using learning media show lack of interest and enthusiasm Study student during the learning process. Students passive in ask even on materials that have not been understood with good. In addition, students also lack believe self For proceed to front answer examples questions on the board write Because worry will write wrong answer. This is show that the learning process is not given variation like use of learning media cause student tend slow in understand the material presented.

Through results analysis descriptive on *posttest* class experiments and classes control can withdrawn conclusion that average value of results Study class experiment more big than class control with difference of 12.36. As for mark percentage completeness results learning also shows that class experiment finished in a way classical whereas class control No finished in a way classical. This is show there is increase in knowledge and understanding mathematics student.

Post test scores in class experiments and classes control normally distributed and homogeneous. Based on *posttest* t test results with calculation *Independent Sample t-Test* known t_{count} of 3,028 with significance 0.004. Obtained t_{table} from df 47 at level significance of 5% is 2.011. So the value $t_{count} > t_{table}$ (3.028 > 2.011) and the value its significance not enough from 0.05 (0.004 < 0.05). It can be concluded that there is difference results *posttest* in class experiments and classes control.

Based on analysis mentioned, it is known that there is significant difference between use of learning media based on ethnomathematics and not using learning media to

²⁸ Nugraha Wirawan Nugraha and Novaliyosi Novaliyosi, "Media Pembelajaran Berbasis Etnomatematika : Systematic Literature Review," *Jurnal Lebesgue : Jurnal Ilmiah Pendidikan Matematika, Matematika Dan Statistika* 4, no. 1 (April 30, 2023): 477–90, <https://doi.org/10.46306/lb.v4i1.286>.

²⁹ Fitri Umardiyah, M. Qoyum Zuhriawan, and Wisnu Siwi Satiti, "Efektivitas Problem-Based Learning Berbantuan Media Pembelajaran Kartu Etnomatematika Batik Jombang Dalam Meningkatkan Motivasi Belajar Peserta Didik SMP," *Jurnal Tadris Matematika* 6, no. 2 (November 28, 2023): 263–74, <https://doi.org/10.21274/jtm.2023.6.2.263-274>.

understanding mathematics student class IV MI Al-Fitrah. Things that make use of learning media based on ethnomathematics get results more Good Because use of this media make student more active and enthusiastic in the learning process.

Although given same material and quantity the same meeting, but in use of learning media based on ethnomathematics student given examples real often found in the surrounding area. While in classes that are not using learning media, students only fixated on material so that student not enough active in learning. There is difference in results *posttest* class IVA (experimental) and class IVB (control) through *independent sample t-test* as well as average value and completeness class IVA which is higher tall compared to class IVB shows that use of learning media based on ethnomathematics effective.

In line with research by Dewi Yuli Setyoningrum et al. who mentioned that use of media based ethnomathematics is very effective so that if applied in activity learning can make it easier student in understand materials and provide motivation Study for students who result in results Study more maximum.³⁰ Likewise with research by Umar et al. which found results that approach mathematics realistic based ethnomathematics effective applied in learning mathematics at the level school base.³¹

CONCLUSION

Based on results data analysis, proven there is difference between use of learning media based on ethnomathematics and not using learning media to understanding material geometry students. Although given same material with amount the same meeting, but through ethnomathematics student given examples real often found in the surrounding area. While in the class without use learning media, students only fixated on material only. This shows that use ethnomathematics as a learning medium get results more Good Because student become more active and enthusiastic in the learning process.

Study This beneficial as information scientific in development learning mathematics with utilise culture as a medium for increase quality in activity teaching and learning at school basic. Research this is also expected can become reference for readers who will do study related with learning media based on ethnomathematics to learning elementary school geometry and expected reader can develop learning media ethnomathematics with more innovation and creativity Good.

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³⁰ Dewi Yuli Setyoningrum, Supriyono Supriyono, and Rintis Rizkia Pangestika, "Pengembangan Multimedia Berbasis Etnomatematika Pada Materi Bangun Datar Kelas IV Sekolah Dasar," *Jurnal Educatio FKIP UNMA* 8, no. 1 (January 22, 2022): 1–8, <https://doi.org/10.31949/educatio.v8i1.1419>.

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