DEVELOPMENT OF AN ETNOMATHEMATICS-BASED LKPD ON LOCAL CULTURAL OF JIHAT NINEK DEPATI INTAN KEMALO SARI ON THE MATERIAL FLAT SHAPES

(PENGEMBANGAN LKPD BERBASIS ETNOMATEMATIKA PADA BUDAYA LOKAL JIHAT NINEK DEPATI INTAN KEMALO SARI PADA BAHAN BENTUK DATAR)

ARTIKEL

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FAKULTAS TARBIYAH DAN ILMU KEGURUAN

PROGRAM STUDI TADRIS MATEMATIKA

2026 M/1447 H

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ARTIKEL

Diajukan Untuk Memenuhi Salah Satu Syarat guna Memperoleh Gelar Sarjana Pendidikan (S.Pd) pada jurusan Tadris Matematika

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2026 M/1447 H

Rilla Gina Gunawan, M.Pd

Dosen Institut Agama Islam Negeri
(IAIN) Kerinci

Sungai Penuh, ...April 2026

Kepada Yth,
Bapak Dekan Fakultas Tarbiyah dan
Ilmu Keguruan IAIN Kerinci
di
.....Sungai Penuh

AGENDA
NOMOR : 61
TANGGAL : 08 04 2026
PARAF :

NOTA DINAS

Assalamulaikum Wr, Wb.

Dengan hormat, setelah membaca dan mengadakan perbaikan seperlunya, maka kami berpendapat bahwa Artikel mahasiswa **NOVITA SARI, NIM 2210205017** yang berjudul **Development Of An Etnomathematics-Based LKPD On Local Cultural Of Jihat Ninek Depati Intan Kemalo Sari On The Material Flat Shapes (Pengembangan LKPD Berbasis Etnomatematika Pada Budaya Lokal Jihat Ninek Depati Intan Kemalo Sari Pada Bahan Bentuk Datar)** dapat diajukan untuk dipresentasikan guna memperoleh Sarjana Pendidikan (S.Pd.) Jurusan Tadris Matematika fakultas Fakultas Tarbiyah Dan Ilmu Keguruan Institut Agama Islam Negeri Kerinci. Maka dengan ini kami ajukan artikel tersebut, kiranya diterima dengan baik.

Demikian disampaikan, semoga bermanfaat bagi agama, bangsa dan negara.

Wassalamualaikum Wr. Wb.

Dosen Pembimbing 1

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SURAT PERNYATAAN KEASLIAN ARTIKEL

Saya yang bertanda tangan dibawah ini:

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NIM	: 2210205017
Jurusan	: Tadris Matematika
Fakultas	: Tarbiyah dan Ilmu Keguruan
Alamat	: Desa Sungai Asam, Kecamatan Kayu Aro Barat, Kabupaten Kerinci, Provinsi Jambi.

Dengan ini menyatakan dengan sesungguhnya bahwa artikel saya yang berjudul "*Development Of An Etnomathematics-Based LKPD On Local Cultural Of Jihat Ninek Depati Intan Kemalo Sari On The Material Flat Shapes* (Pengembangan LKPD Berbasis Etnomatematika Pada Budaya Lokal Jihat Ninek Depati Intan Kemalo Sari Pada Bahan Bentuk Datar)", adalah karya saya sendiri. Artikel ini tidak mengandung unsur plagiasi, baik sebagian maupun keseluruhannya, kecuali kutipan yang telah dicantumkan dengan jelas beserta sumbernya dalam dafar pustaka.

Artikel ini saya susun dengan bimbingan dari Ibu Rilla Gina Gunawan, M.Pd selaku dosen pembimbing saya. Segala arahan dan masukkan dari beliau telah saya gunakan untuk menyempurnakan artikel ini tanpa mengurangi orisinalitas karya saya. Apabila dikemudian hari ditemukan adanya pelanggaran terhadap pernyataan ini, saya bersedia menerima konsekuensi sesuai dengan ketentuan yang berlaku.

Sungai Penuh, April 2026

Yang Menyatakan

NOVITA SARI

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LEMBAR PENGESAHAN

Artikel oleh **Novita Sari, NIM. 2210205010** dengan judul **"*Development Of An Etnomathematics-Based LKPD On Local Cultural Of Jihat Ninek Depati Intan Kemalo Sari On The Material Flat Shapes* (Pengembangan LKPD Berbasis Etnomatematika Pada Budaya Lokal Jihat Ninek Depati Intan Kemalo Sari Pada Bahan Bentuk Datar)".** Telah di Presentasikan pada hari Selasa, tanggal 21 April 2026.

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MOTTO DAN PERSEMBAHAN

MOTTO

"Maka sesungguhnya bersama kesulitan ada kemudahan. Maka apabila engkau telah selesai (dari suatu urusan), tetaplah bekerja keras (untuk urusan yang lain). Dan hanya kepada Allah lah engkau berharap"

(QS. Al-Insyirah, 6-8)

"Pendidikan merupakan senjata paling ampuh yang bisa kamu gunakan untuk merubah dunia"

(Nelson Mandela)

PERSEMBAHAN

Alhamdulillahi Rabbil 'Alamin. Dengan ridha Allah SWT yang telah memberikan kemudahan, sehingga karya ini dapat diselesaikan dengan baik.

Karya dan keberhasilan ini saya persembahkan kepada kedua orang tua tercinta, Bapak Riyanto dan Ibu Susi Susanti, yang telah berjuang tanpa henti serta melangitkan doa-doa terbaik demi kesuksesan saya. Mereka menjadi sumber motivasi saya untuk terus berjuang dan tidak menyerah. Terima kasih atas kasih sayang, dukungan, dan pengorbanan yang tulus. Semoga karya sederhana ini dapat menjadi sedikit penawar atas segala lelah. Dengan penuh hormat, karya tulis ini beserta gelar yang saya raih saya persembahkan untuk Bapak dan Ibu.

Kepada adik tersayang, Ashalina Fadheela, terima kasih atas perhatian dan dukunganmu yang selalu menghibur saat penulis lelah. Kehadiranmu memberi warna dalam setiap proses yang dilalui.

Dan yang terakhir, untuk diri saya sendiri, Novita Sari. Terima kasih telah bertahan dan terus berjuang hingga saat ini. Terima kasih karena tetap kuat menghadapi tekanan dan tidak menyerah dalam setiap proses. Tetap berdiri meskipun banyak rintangan, karena ini baru awal dari perjalanan panjang. Tetap semangat, kamu pasti bisa. Karya ini menjadi bukti nyata perjuangan yang patut disyukuri dan dibanggakan.

KATA PENGANTAR

Bismillahirrahmanirrahim

Puji syukur ke hadirat Allah SWT atas segala limpahan rahmat dan hidayah-Nya sehingga penulis dapat menyelesaikan artikel yang berjudul *"Development of an Ethnomathematics-Based LKPD on the Local Culture of Jihat Ninek Depati Intan Kemalo Sari on Flat Shapes Material* (Pengembangan LKPD Berbasis Etnomatematika pada Budaya Lokal Jihat Ninek Depati Intan Kemalo Sari pada Materi Bangun Datar)*"*. Artikel ini disusun sebagai salah satu syarat untuk menyelesaikan studi guna memperoleh gelar Sarjana Pendidikan pada Program Studi Tadris Matematika, Fakultas Tarbiyah dan Ilmu Keguruan.

Penulis menyadari bahwa artikel ini masih jauh dari sempurna. Namun demikian, penulis telah berusaha semaksimal mungkin agar penyusunan artikel ini dapat terselesaikan dengan baik. Dalam proses penyusunannya, penulis memperoleh banyak bantuan, bimbingan, dukungan, serta arahan dari berbagai pihak, baik secara langsung maupun tidak langsung.

Oleh karena itu, dengan segala kerendahan hati, penulis menyampaikan ucapan terima kasih yang sebesar-besarnya kepada

1. Yang paling berjasa dalam hidup penulis adalah kedua orang tua tercinta, Bapak Riyanto dan Ibu Susi Susanti (semoga senantiasa mendapatkan rahmat dan hidayah dari Allah SWT), yang telah merawat dan mendidik penulis sejak kecil dengan penuh cinta dan kasih sayang serta tidak henti memberikan doa, semangat, dan dukungan hingga penulis berada pada tahap ini. Ucapan terima kasih juga saya sampaikan kepada adik tersayang, Ashalina Fadheela, yang selalu memberikan dukungan dan semangat serta mewarnai perjalanan ini dengan kebahagiaan.
2. Bapak Dr. Jafar Ahmad, M.Ag. sebagai Rektor Institut Agama Islam Negeri (IAIN) Kerinci.
3. Bapak Dr. Faizin, M.Ag. sebagai Wakil Rektor I, Bapak Prof. Dr. Ahmad Jamin, M.Ag. sebagai Wakil Rektor II, dan Bapak Dr. Halil Khusairi, M.Ag. sebagai Wakil Rektor III Institut Agama Islam Negeri (IAIN) Kerinci.

4. Bapak Dr. Eva Ardinal, M.A sebagai Dekan I Fakultas Tarbiyah dan Ilmu Keguruan Institut Agama Islam Negeri (IAIN) Kerinci.
5. Bapak Dr. Eko Sujadi, M.Pd., Kons. sebagai Wakil Dekan I Fakultas Tarbiyah dan Ilmu Keguruan, Bapak Dr. Rimin, M.PdI. sebagai Wakil Dekan II, Bapak Dr. Rodi Hartono, S.Pd., M.Pd. sebagai Wakil Dekan III Institut Agama Islam Negeri (IAIN) Kerinci.
6. Bapak Noperta, M.Pd. selaku Ketua Jurusan Tadris Matematika, yang telah memberikan arahan dan dukungan dalam penyusunan karya ilmiah ini.
7. Ibu Rilla Gina Gunawan, M.Pd. selaku dosen pembimbing yang telah meluangkan waktu, tenaga, dan pikiran dalam memberikan bimbingan, arahan, serta saran yang bermanfaat sehingga artikel ini dapat terselesaikan dengan baik.
8. Ibu Dr. Nur Rusliah, S.Si. M.Si. selaku Penasehat Akademik (PA) yang telah memberikan bimbingan, arahan, serta masukan berharga sehingga penulis dapat menjalani perkuliahan di Institut Agama Islam Negeri (IAIN) Kerinci dengan baik.
9. Bapak/Ibu Dosen Program Studi Tadris Matematika yang telah dengan penuh dedikasi memberikan ilmu, bimbingan, dan pengalaman berharga kepada penulis selama menempuh pendidikan di Institut Agama Islam Negeri (IAIN) Kerinci.
10. Pihak SMP Negeri 14 Kerinci, Bapak Helmisal Karim, S.Pd. selaku Kepala Sekolah beserta guru dan staf tata usaha yang telah memberikan izin, menerima dengan baik, dan bekerja sama dalam pelaksanaan penelitian.
11. Untuk diri saya sendiri, terima kasih telah bertahan dan berjuang sampai titik ini. Tetap kuat dan tidak menyerah dalam proses yang dilalui. Terus semangat, karena ini baru awal perjalanan. Karya ini menjadi bukti perjuangan yang patut disyukuri.
12. Kepada seseorang yang tak kalah penting kehadirannya, Arif Widiyanto sebagai partner sejak 2022. Terima kasih telah menjadi bagian dari perjalanan ini, tempat berbagi cerita, serta atas segala dukungan, doa, waktu, dan bantuan yang diberikan hingga artikel ini dapat terselesaikan.

13. Kepada sahabat seperjuangan penulis, Silvia Neltiana, Ratu Hadissya, Elin Zulfiani, Kiara Arfia, dan Popy Fahira, terima kasih atas kebersamaan selama ±4 tahun perkuliahan, atas dukungan, semangat, dan bantuan dalam suka maupun duka. Kehadiran kalian menjadi penyemangat hingga terselesaikannya artikel ini. Semoga persahabatan ini tetap terjaga dan membawa kebaikan bagi kita semua.
14. Anindya Sela Pratiwi dan Annisa Rahmawati, sahabat sejak masa PLP hingga saat ini. Terima kasih atas kebersamaan, perhatian, dan ketulusan yang telah diberikan. Terima kasih karena selalu bersedia mendengarkan keluh kesah penulis, serta memberikan dukungan, semangat, dan motivasi dalam setiap proses yang dilalui. Kehadiran dan bantuan kalian sangat berarti bagi penulis.
15. Teman-teman seangkatan 2022 Jurusan Tadris Matematika yang telah bersama-sama berjuang dan saling mendukung selama menempuh perkuliahan. Terkhusus sahabat-sahabat Lokal A yang selalu membersamai dalam suka dan duka, memberikan semangat, serta menjadi bagian penting dalam perjalanan meraih tujuan bersama.
16. Dan semua pihak yang tidak dapat penulis sebutkan satu per satu, yang telah berkontribusi, memberikan dukungan, serta bantuan baik secara langsung maupun tidak langsung dalam penyusunan karya tulis ilmiah ini.

Penulis berharap penelitian ini dapat bermanfaat bagi pengembangan ilmu, khususnya Tadris Matematika, serta menjadi referensi penelitian selanjutnya. Terima kasih kepada Bapak/Ibu dan rekan-rekan atas bimbingan dan dukungannya. Semoga menjadi amal ibadah dan mendapat pahala dari Allah SWT.

Sungai Penuh, April 2026

Penulis

NOVITA SARI

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Jurnal Pendidikan Matematika Universitas Lampung ISSN: 2715-856X
Vol. 14, No. 1, 2026, pp. 1 – 19
https://jurnal.pbs.fkip.unila.ac.id/index.php/jpm/

Development of an Etnomathematics-Based LKPD on Local Cultural of Jihat Ninek Depati Intan Kemalo Sari on the Material Flat Shapes

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ARTICLE INFO

Article history
Received: 10 March, 2026
Revised: 21 March, 2026
Accepted: 22 March, 2026
Published: 31 March, 2026

Keywords
ethnomathematics;
geometric shapes;
local culture;
student worksheet;

ABSTRACT

This study aims to develop an ethnomathematics-based LKPD based on the local culture of Jihat Ninek Depati Intan Kemalo Sari on material flat shapes and to determine its level of validity and practicality. The method used in this study was Research and Development with the Plomp development model, which consists of the stages of initial investigation, development, and evaluation. A limited trial was conducted with 26 ninth-grade students at State Junior High School 14 Kerinci in the 2025/2026 academic year. The instruments used in this study included a validation sheet prepared by experts and a practicality questionnaire for teachers and students. The data were analyzed using the Aiken index to measure validity and percentage analysis to assess practicality. The results of this study indicate that the developed LKPD demonstrated a high level of validity, with an average score of 0.84, and a practicality level of 81%. However, this study is limited to the validity and practicality evaluation stages and does not include effectiveness testing. This limitation is due to time constraints and the scope of the research, which focuses on product development. Therefore, further research is recommended to examine the effectiveness of the developed LKPD in improving students' learning outcomes and mathematical understanding through broader implementation. The findings of this study suggest that ethnomathematics-based LKPD can serve as an alternative teaching material that is relevant and meaningful, as it integrates mathematical concepts with local cultural values, while also supporting the strengthening of the Pancasila Student Profile in mathematics learning.

How to Cite: Sari, N., & Gunawan, R. G. (2026). Development of Ethnomathematics-Based (LKPD) Based on Local Cultural of Jihat Ninek Depati Intan Kemalo Sari on the Material Flat Shapes. *Jurnal Pendidikan Matematika Universitas Lampung*, *14*(1), 1-19. http://dx.doi.org/10.23960/mtk/v14i1.pp1-19

INTRODUCTION

Mathematics is a subject taught from elementary school to university and plays a significant role in various aspects of life. Besides being a tool for solving quantitative problems, mathematics is also embedded in cultural practices. However, many students view mathematics as a difficult and uninteresting subject, which ultimately results in low motivation to learn (Monalisa et al., 2023). Difficulty understanding mathematical concepts often results in shallow understanding that is easily forgotten (Cholid et al.,

2022; Rohim & Prayogi, 2023).

Problems in mathematics learning today are still characterized by the use of irrelevant learning resources and the failure to connect mathematical concepts to students' daily experiences. Mathematics learning, especially in the field of plane geometry, is often presented in a non-concrete manner, emphasizing formulas and procedures. This makes it difficult for students to understand the meaning of the concepts being studied (Nasution et al., 2024). This condition has an impact on low learning motivation and conceptual understanding of mathematics material (Mirna et al., 2023). Furthermore, One of the learning tools commonly used in schools is the *Lembar Kerja Peserta Didik* (LKPD), which in English is equivalent to a student worksheet. LKPD is a teaching material that contains structured tasks and activity guidelines designed to help students actively construct their understanding through step-by-step learning processes. However, in practice, many LKPD used in schools are still general in nature and have not utilized the potential of local culture as a contextual learning resource that is close to students' lives (Meika et al., 2025). In fact, the integration of local culture in mathematics teaching through the ethnomathematics method can make learning more meaningful and contextual. According to D'Ambrosio (2001), ethnomathematics is a way of connecting mathematical ideas with the cultural customs of a society. This helps students understand abstract concepts through real and relevant experiences (Marlissa et al., 2024).Therefore, it is necessary to develop of an ethnomathematics-based LKPD by utilizing the local culture of Jihat Ninek Depati Intan Kemalo Sari on the material flat shape as an effort to increase students' understanding, involvement, and motivation in learning mathematics.

One local tradition that can be adapted in the mathematics learning process is Jihat Ninek Depati Intan Kemalo Sari, a cultural concept that developed in Siulak Mukai Hamlet, Kerinci Regency, Jambi. This historical site, which has existed for approximately 300 years, carries spiritual values in the form of respect for ancestors and the community's belief in the balance of interactions between humans, nature, and the Creator (Sunliensyar, 2018). In addition, Jihat Ninek Depati Intan Kemalo Sari also reflects the philosophy of life of the local community that highly values order, togetherness, and harmony within society. These values are seen in the traditional geometric patterns present in the spatial structure, building shapes, and ornaments on the site, such as squares, rectangles, and the idea of symmetry that demonstrates order and balance (Turyani et al., 2024). These geometric patterns can be studied through an ethnomathematics approach as a context for teaching geometry about plane shape, thereby making the learning process more relevant and meaningful for students (Aini et al., 2025; Gunawan et al., 2022).

Figure 1. Jihat Ninek Depati Intan Kemalo Sari from Siulak Mukai in

mathematics learning can create a relevant and impactful learning process for students. Jihat Ninek Depati Intan Kemalo Sari is a cultural and spiritual site in the form of a luhah (tomb) of the ninek ancestors or first ancestors who hold an important position in the local community's customary system. The elements of local wisdom integrated within it, such as the layout of the customary area, geometric symbols on buildings and ornaments around the site, and the measurement and spatial division systems within the customary area, can be utilized as a context for mathematics learning activities focused on plane shapes in geometry (Widyaningrum & Prihastari, 2021). Through this approach, students not only learn abstract mathematical concepts, but are also able to understand the cultural and spiritual meanings inherited from their ancestors, so that learning mathematics becomes a means to foster an attitude of respect for local culture and maintain harmony between modern science and traditional traditions (Lubis et al., 2024).

Figure 1. Jihat Ninek Depati Intan Kemalo Sari from Siulak Mukai

To implement ethnomathematics in geometry teaching related to plane shapes, appropriate and contextually relevant learning tools are required. One highly useful learning tool, the Student Worksheet, serves as a teaching tool that provides guidance for activities and structured steps for completing assignments, thus helping students build a gradual and meaningful understanding of geometric concepts (Said et al., 2023). For effective implementation, the development of the student worksheet must be aligned with the Learning Objectives to be achieved and designed based on pedagogical principles that support active student engagement in the learning process.

The ethnomathematics-based *Lembar Kerja Peserta Didik* (LKPD), which integrates local culture into the material of plane shapes through the cultural context of Jihat Ninek Depati Intan Kemalo Sari, is one of the innovative efforts to connect mathematics learning with students' real-life experiences. LKPD, as a learning resource designed to guide students through structured activities, plays an important role in facilitating students' understanding of mathematical concepts. In this context, LKPD is

equivalent to a student worksheet, as both refer to instructional materials that contain tasks, instructions, and activities aimed at supporting the learning process (Saltifa et al., 2023; Sari et al., 2023). Other research also shows that integrating local culture into student worksheet plays a crucial role in connecting abstract mathematical concepts with students' real-life experiences, thereby making the learning process more meaningful (Zahra et al., 2025). Furthermore, research on regional culture-based teaching materials confirms that utilizing cultural context can enrich the learning experience and enhance appreciation of local wisdom (Luthfi & Rakhmawati, 2022).

However, previous studies still tend to emphasize general cultural contexts and have not specifically explored the richness of meaning contained in the Jihat Ninek Depati Intan Kemalo Sari cultural site. Most studies only use cultural elements as contextual examples and have not transformed them into a structured LKPD design that systematically integrates cultural philosophy, spatial organization, and geometric patterns into plane geometry learning (Pratiwi & Pujiastuti, 2020). In addition, these cultural elements have not been aligned with clear pedagogical frameworks and learning objectives, resulting in a lack of coherence in supporting students' conceptual understanding (Armanza & Asyhar, 2020).

Moreover, the context of Jihat Ninek Depati Intan Kemalo Sari is not only important from a local perspective but also holds significant scientific value. This cultural site represents a complex system of spatial structures, geometric patterns, symmetry, and proportional reasoning, which are fundamental concepts in mathematics, particularly in plane geometry (Asdar et al., 2025). The philosophical values embedded within it, such as balance, harmony, and order, reflect universal mathematical principles that can be studied academically. Therefore, this context provides an authentic representation of how mathematical concepts are embedded in real-life cultural practices and offers a meaningful way to bridge abstract mathematical ideas with students' experiential understanding (Utama et al., 2024).

Therefore, this study aims to Development of an Ethnomathematics-based LKPD on Local Cultural of Jihat Ninek Depati Intan Kemalo Sari on the Material Flat Shapes. By linking the concept of plane figures with geometric elements in the philosophy of the tradition, it is hoped that students will not only be able to understand mathematical concepts more deeply, but also experience a more meaningful learning process through the use of the local cultural contexts as a learning resource.

METHOD

This research employed the Research and Development (R&D) method with the Plomp development model, which consists of three main stages: preliminary

investigation, development, and evaluation (Plomp, 2013). This model was chosen because it is suitable for producing valid and practical learning tools through systematic steps.

The research was conducted in the odd semester of the 2025/2026 academic year, with a limited trial of the learning tools at SMP Negeri 14 Kerinci (State Junior High School 14 Kerinci), located in Kayu Aro Barat District, Kerinci Regency, Jambi. The initial investigation phase was conducted in Siulak Mukai Hamlet, Kerinci Regency, Jambi, specifically to gather information related to the Jihat Ninek Kemalo Sari culture through interviews with local traditional leaders and educators. The research subjects in the limited trial included 26 ninth-grade students of SMP Negeri 14 Kerinci in the 2025/2026 academic year.

Research Procedure

This research procedure uses the Plomp development model, which consists of three main stages: Preliminary Investigation, Development, and Evaluation (Plomp, 2013), as described below.

1. Preliminary Investigation: The initial investigation stage analyzes learning needs and examines the cultural philosophy of Jihat Ninek Kemalo Sari and its relationship to the concept of geometric shapes. The results of this stage are used as the basis for designing ethnomathematics-based worksheet to suit student characteristics and the local cultural context.
2. Development: The development stage includes the preparation and design of an ethnomathematics-based worksheet prototype. The worksheet is designed by integrating geometric concepts of geometric shapes with the values of balance and order inherent in the Jihat Ninek Kemalo Sari culture. At this stage, expert validation is conducted as part of the development process to assess the feasibility of the worksheet before its pilot testing. The validation process was conducted by three validators: two mathematics education lecturers acting as subject matter experts and one learning media expert, and one mathematics teacher who provided assessments based on practical classroom learning experiences. The validation results were used as the basis for revisions before the limited trial.
3. Evaluation: The evaluation phase aims to assess the validity and practicality of the student worksheet. The validity of the student wokrsheet was determined through expert assessment using a validation sheet covering didactic aspects, material or content, language, and presentation, with indicators developed based on teaching materials development theory and LKPD characteristics. The practicality of the LKPD was determined through questionnaires administered to both teachers and students. The results were then analyzed in the form of percentages to assess the

level of practicality of the LKPD.

This study is limited to the stages of validity and practicality testing and does not include effectiveness testing. This limitation is due to the focus of the research, which is on developing and refining the learning product using the Plomp development model, particularly in ensuring the feasibility and usability of the developed LKPD. Effectiveness testing requires broader implementation, longer classroom intervention, and the use of an experimental research design to measure its impact on students' learning outcomes. Therefore, effectiveness testing is beyond the scope of this study and is recommended for future research.

Data Analysis Techniques

Data analysis techniques were carried out using validity and practicality tests for the student wokrsheet, as follows:

a. Validity Test

Data from the instrument validation were analyzed using quantitative descriptive methods using the Aiken index. The student wokrsheet assessment criteria were obtained based on a validation sheet using a scoring guideline with a 4-category Likert scale: 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree. The formula used is:

$$V = \frac{\sum s}{n(c-1)}$$

where:

V = assessor agreement index regarding item validity
s = assessor score minus the lowest score in the category
n = number of assessors
c = number of assessment categories

After calculations using this formula, conclusions were drawn based on the results obtained. The percentage criteria from these calculations are presented in Table 1 below (Putri et al., 2025).

Table 1. Validity Criteria

NO	Score	Criteria
1	$V > 0{,}8$	High validity
2	$0{,}4 \leq V < 0{,}8$	Moderate validity
3	$V < 0{,}4$	Low validity

b. Practicality Test

Practicality data were determined based on the questionnaire completed by teachers and students using a scoring guideline with a 4-category Likert scale: 1 =

strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree. The data obtained were then analyzed using the percentage formula:

$$P = \frac{R}{SM} \times 100\%$$

where

P = practicality percentage

R = total score obtained

SM = maximum score

After calculations using this formula, conclusions were drawn based on the results. The percentage criteria from these calculations are presented in Table 2 (Milala et al., 2022).

Table 2. Practicality Criteria

No	Achievement Level (%)	Criteria
1	$85 \leq P \leq 100$	Very practical
2	$75 \leq P < 85$	Practical
3	$60 \leq P < 75$	Quite practical
4	$55 \leq P < 60$	Not very practical
5	$0 \leq P < 55$	Not very practical

RESULTS AND DISCUSSION

Results

This research resulted in a learning tool in the form of ethnomathematics-based *Lembar Kerja Pesera Didik* (LKPD) that highlight the local culture of Jihat Ninek Depati Intan Kemalo Sari on Material of plane shapes. The developed an LKPD not only aims to facilitate students' understanding of abstract mathematical concepts but also to link learning to local wisdom values, thus making the learning process more meaningful. This integration of culture into learning aligns with D'Ambrosio's (2001) view that ethnomathematics can be a means of connecting school mathematics with community cultural practices, so that students feel closer to the material being learned (Gunawan, Mukhaiyar, et al., 2022).

Initial Investigation Phase

The initial investigation phase is the first stage in the Plomp development model. It aims to identify learning needs and formulate the foundation for designing learning tools that align with the curriculum, student characteristics, and the local cultural context. In this phase, information was gathered through analysis of curriculum documents, observations of the teaching and learning process, and direct observation with mathematics teachers at SMPN 14 Kerinci. The results are described as follows:

1. Curriculum Analysis: The curriculum analysis was conducted by reviewing the Independent Curriculum documents, particularly the Learning Outcomes (CP) and Learning Objectives (TP) in ninth-grade mathematics related to plane geometry. The analysis shows that the learning objectives highlight students' abilities to understand the basic principles of plane geometry, calculate the perimeter and area of various geometric shapes, and relate these concepts to problems frequently encountered in everyday life. Furthermore, the learning process aims to strengthen the Pancasila Student profile, particularly in critical and creative thinking. Considering these learning objectives, it is crucial to have teaching materials that support active, contextual, and meaningful learning activities for students.
2. Student Analysis: The student analysis focused on general characteristics related to student worksheet creation, rather than evaluating individual cognitive abilities. Based on observations of the learning process and information from teachers, ninth-grade students at SMP Negeri 14 Kerinci exhibit diverse academic abilities and require gradual support to understand mathematical concepts. Students are more likely to understand material better when presented with concrete examples, images, and relevant situations, as well as through activities that encourage exploration and discussion. Therefore, student worksheets are designed with structured steps and empower students to construct their own understanding.
3. Material Analysis: The material analysis covered the topic of plane geometry, which includes isosceles triangles, rectangles, rhombuses, and semicircles, with an emphasis on the concepts of shape, perimeter, and area. Research on local culture indicates that the Jihat Ninek Depati Intan Kemalo Sari site possesses various ethnomathematic elements, including geometric patterns in roof and door carvings, symmetry, and ideas about spatial order and balance. These elements are directly related to the concept of plane geometry and can be used as context for mathematics learning. Integrating local culture aligns with the principles of contextual education, which emphasize the relationship between mathematics and everyday life (Habibi, 2025), and the concept of ethnomathematics, which considers mathematics as a cultural product of value to students (Gustia & Putra, 2024). Therefore, the material on plane shapes is considered suitable for development in an ethnomathematics-based worksheet format.

Based on the results of the initial investigation phase, it can be concluded that the development of an LKPD (*Lembar Kerja Peserta Didik*) based on the local ethnomathematics of Jihat Ninek Depati Intan Kemalo Sari culture in plane geometry material is essential to support relevant, meaningful, and student-centered mathematics learning for grade IXB students. Curriculum analysis indicates that mathematics

learning in the Independent Curriculum emphasizes conceptual understanding, contextual problem-solving skills, and strengthening the Pancasila Student Profile, thus requiring teaching materials that encourage active student involvement (Nurani & Susanti, 2025). The results of the student analysis indicate diverse characteristics. The diverse characteristics of students, which require gradual guidance through visual activities, demonstrate the importance of worksheets with structured activity steps. Furthermore, the analysis of the local culture of Jihat Ninek Depati Intan Kemalo Sari revealed ethnomathematics elements relevant to the concept of plane shapes, such as geometric patterns, symmetry, and the principles of balance and spatial order, which can make learning more meaningful and relevant to students' experiences. Therefore, the results of this initial investigation phase serve as the foundation for entering the development phase, namely the design and development of ethnomathematics-based student worksheets in accordance with the research objectives.

Development

1. Initial Design: The initial design phase of the LKPD included the preparation of the cover design and layout using Microsoft Word, showcasing the cultural elements of Jihat Ninek Depati Intan Kemalo Sari, an ancestral site in Siulak Mukai Hamlet, Kerinci. The initial design also included an introduction on each page linking local culture to ethnomathematics, such as geometric patterns in plane shapes, to connect cultural heritage with modern mathematical concepts. The design of the front page of the LKPD and the layout of each page can be seen in Figure 2.

Figure 2. Front Cover and Pages

2. Format Selection: The developed LKPD format includes a front cover and an introduction that presents an overview of the local culture of Jihat Ninek Depati

Intan Kemalo Sari. Material related to plane shapes is developed by connecting geometric ideas with the ethnomathematics context of Jihat Ninek Depati Intan Kemalo Sari, thus reinforcing relevant and meaningful learning.

Evaluation

This evaluation involved two steps: product validation by lecturers and mathematics teachers, and practicality testing by students and teachers.

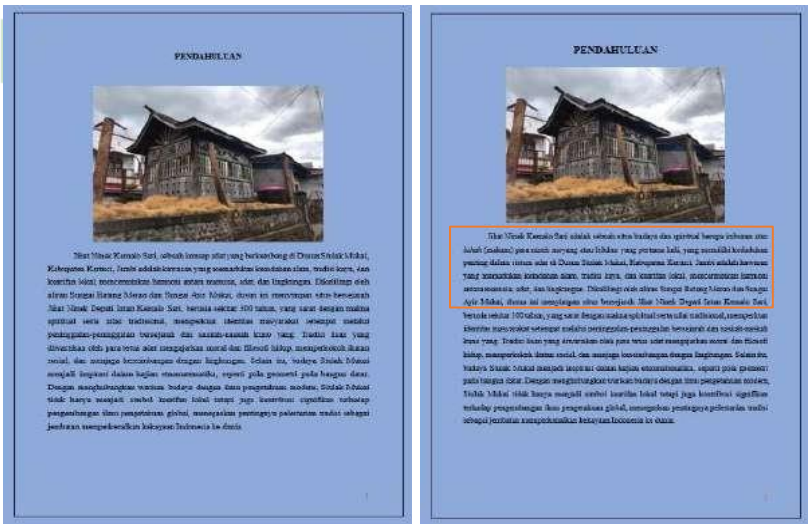
1. Expert Validation: The validation process involved three expert validators. The validation results are shown in Table 3.

Table 3. Validation Test Results

Assessment Items	Lecturer 1	Lecturer 2	Teacher	∑s	V
Didactic Aspect	3	3	4	7	0,78
Material/Content Aspect	3	4	4	8	0,89
Language Aspect	4	3	3	7	0,78
Presentation Aspect	3	4	4	8	0,89
Average					**0,84**

Based on the validation sheet analysis, the average score for all aspects of the Kerinci culture-based LKPD was 0.84, based on the high validity criteria used (Putri et al., 2025). This score falls within the high validity category; therefore, the developed LKPD can be declared valid and feasible for use. After the validation process conducted by the validators, several suggestions and recommendations were obtained, which were then used as references to revise and improve the LKPD before proceeding to the trial phase.

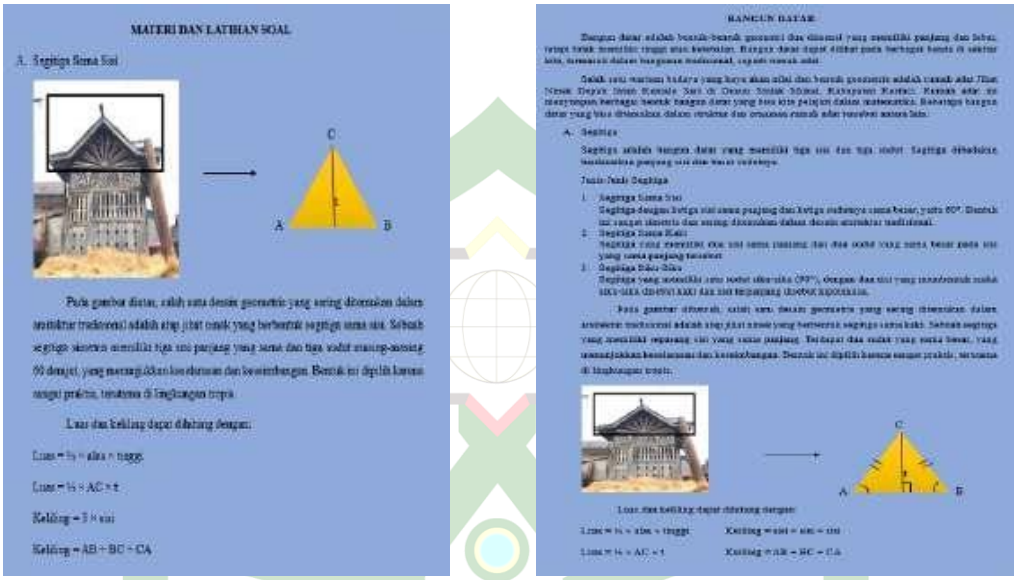
a. Improvements to the introduction still do not include an explanation of Jihat Ninek Depati Intan Kemalo Sari. A brief description should be added to help readers understand the cultural context being addressed. An example of the improvements can be seen in Figure 3.



(a) (b)

Figure 3. (a) Introduction Before Revision and (b) Introduction After Revision

b. Improvements to the material and practice questions were made by replacing or adding topics on plane shapes, along with an introduction to the concept of triangles, including equilateral triangles, isosceles triangles, and right triangles. An example of the improvements can be seen in Figure 4.



(a) (b)

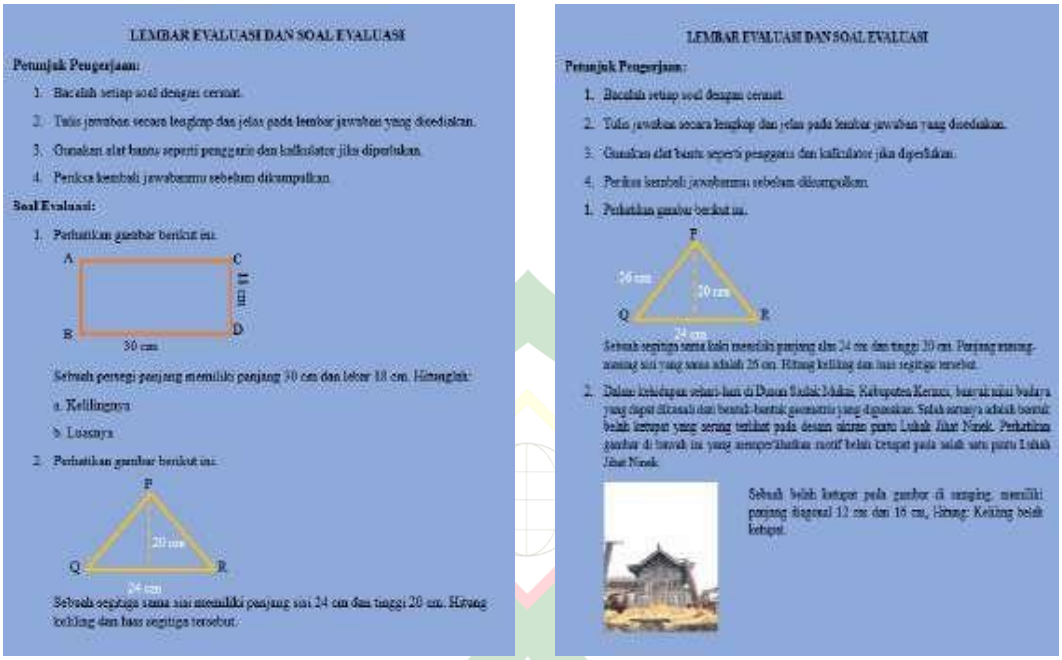
Figure 4. (a) Plane Shape Before Revision and (b) Plane Shape After Revision

c. Improvements to the flat shape of an equilateral triangle need to be taken into account, whether it really is an equilateral triangle or was originally an arbitrary triangle or isosceles. Apart from that, in Let's practice, realistic measurements should be used and presented in full so that it is clearer. An example of improvement can be seen in Figure 5.

(a) (b)

Figure 5. (a) Let's Practice Before Revision and (b) Let's Practice After Revision

d. Improvements were made by replacing the word problems with just two problems on the evaluation sheet. An example of the improvements can be seen in Figure 6.



(a) (b)

Figure 6. (a) Evaluation Questions Before Revision and (b) Evaluation Questions After Revision

Practicality Test

After the product was declared valid, the subsequent stage involved conducting a pilot test with students. The pilot test was conducted in a single class consisting of 26 students over two meetings. Each meeting addressed two subtopics, and the student response questionnaire was administered at the end of the second meeting. This practicality test aimed to examine students' perceived benefits after using the ethnomathematics-based LKPD. The results of the practicality test, derived from the student response questionnaire, are presented in Table 4.

Table 4. Practicality Test Results

Respondents	Total Score	Ideal Score	$P = \frac{R}{SM} \times 100\%$
Students	1.260	1.456	87%
Teachers	42	56	75%
Practicality Results			81%

Based on the results in Table 2, the practicality level of the LKPD reached 81%, which falls into the "practical" category (Milala et al., 2022). Furthermore, based on the results

presented in Tables 1 and 2, it can be concluded that the ethnomathematics-based LKPD on local culture of Jihat Ninek Depati Intan Kemalo Sari on material flat shapes has met the criteria of validity and practicality.

Discussion

The study shows that the validity of the student worksheet (LKPD) based on the local cultural ethnomathematics of Jihat Ninek Depati Intan Kemalo Sari on the material of flat shapes was obtained from the validator's assessment with an average validation score of 0.84, which is included in the high validity category. This validity indicates that this worksheet has met the eligibility standards in terms of didactic aspects, material content, language, and presentation (Ariani et al., 2025). The learning activities contained in the worksheet are arranged systematically and contextually by connecting the concept of plane geometry with local culture, so that it is in line with the learning objectives set in the Independent Curriculum and encourages active and student-centered learning. Improvements made based on suggestions from validators, such as adding explanations regarding the cultural context and improvements to the triangle material, further strengthen the conceptual accuracy and clarity of the worksheet presentation in accordance with the criteria for valid learning tools (Putri et al., 2025). The revised LKPD developed in this study is feasible to be used and can be accessed through the following Google Drive link. https://drive.google.com/drive/folders/1-NH8GjK7lkKkZuagmScwS2_AgXH9JLXU.

Furthermore, the validity of the student wokrsheet also demonstrates the application of the principle of constructive alignment, namely the alignment between learning objectives, activities, and assessments. The assessments contained in the LKPD are designed to authentically assess students' conceptual understanding, while learning activities encourage students to construct knowledge through real-life experiences and social interactions (Armanza & Asyhar, 2020). The design of this student wokrsheet is based on the constructivist theory of Piaget and Vygotsky, which asserts that effective learning occurs when students actively develop knowledge from meaningful contexts (Arafah et al., 2023). Thus, the student wokrsheet is not only valid in terms of content but also pedagogically and theoretically valid in supporting relevant and culturally relevant mathematics learning.

Furthermore, the practicality test showed that the student worksheet achieved a practical score of 81%. The practicality of the LKPD was reflected in the positive responses from both teachers and students, indicating that it was easy to use, provided clear activity instructions, presented a systematic learning sequence, and featured an attractive and comprehensible design, thereby supporting the learning process (Pangestuti et al., 2025). A learning tool can be considered practical if it is easy to

implement in the classroom and helps teachers and students conduct the teaching and learning process effectively (Ulya et al., 2025). Furthermore, the presentation of contextual problems that connect the concept of plane shapes with the cultural traditions of Jihat Ninek Depati Intan Kemalo Sari makes the learning process more meaningful and increases student motivation and participation. This aligns with research findings showing that ethnomathematics-based LKPD can increase student enthusiasm for learning and active engagement because it offers learning experiences related to everyday life (Cahya & Siregar, 2023).

Theoretically, the results of this study reinforce D'Ambrosio's (2001) view that ethnomathematics can be a bridge between school mathematics and community cultural practices. The integration of Jihat Ninek Depati Intan Kemalo Sari's cultural elements in learning about plane shapes proves that students find it easier to connect new knowledge with cultural experiences they are already familiar with. This emphasizes that ethnomathematics not only functions as a medium for contextualizing concepts but also as a means to preserve local cultural values amidst modern learning. According to (Blegur, 2023; Iriandre et al., 2025) who stated that cultural activities such as counting, measuring, designing, and explaining are forms of universal mathematical activities that can be used as learning resources. Thus, ethnomathematics-based LKPD not only strengthens students' academic abilities but also contributes to the preservation and introduction of local cultural values.

This kind of culture-based learning also contributes to strengthening the Pancasila student profile, particularly in the dimensions of faith, global diversity, and mutual cooperation. Learning within the Independent Curriculum should develop students' full potential, encompassing knowledge, skills, and character (Ferdi et al., 2025; Kemendikbudristek, 2022). As students learn the values embodied in the Jihat Ninek Depati Intan Kemalo Sari culture, they learn to appreciate ancestral traditions, foster a love for local culture, and understand the connection between cultural values and knowledge. Thus, ethnomathematics-based LKPD serve not only as a cognitive learning medium but also as a means of character development, in line with the spirit of the Independent Curriculum (Adinda et al., 2025).

However, its implementation faces several challenges that require attention. First, not all students are deeply familiar with the Jihat Ninek Depati Intan Kemalo Sari culture, so teachers need to provide an introduction before linking it to mathematical concepts. Second, some teachers are not yet accustomed to integrating culture into learning, requiring training and mentoring to optimize the use of student worksheets. Third, limited learning time prevents comprehensive exploration of ethnomathematics. This obstacle was also found in similar studies, where the implementation of

ethnomathematics in schools often requires adaptation of the curriculum and learning strategies to suit the local context and the available time (Bustaren et al., 2025).

In general, the advantages of the developed student wokrsheet include: (1) an attractive design with a combination of colors, images, and illustrations of local culture; (2) it facilitates teacher implementation; (3) it connects the concept of geometric shapes with the cultural values of Jihat Ninek Depati Intan Kemalo Sari; and (4) it meets the criteria of validity and practicality after undergoing validation and testing. However, this study has limitations because the testing was only conducted in one class with 26 students. In addition, this research did not include effectiveness testing. Therefore, further research is needed involving a wider range of subjects and testing in diverse school contexts, as well as examining the effectiveness of the developed of an LKPD in improving students' learning outcomes and mathematical understanding to obtain more comprehensive results and stronger generalizations.

CONCLUSION

Based on the research results, it can be concluded that the development of local culture-based ethnomathematics of Jihat Ninek Depati Intan Kemalo Sari on the material of plane figures has been successfully implemented in accordance with the research objectives stated in the introduction. The designed LKPD meet the standards of validity and practicality, as seen from the validation results by experts with an Aiken index reaching 0.84 (in the high validity category) and the results of the practicality test reaching 81% (in the practical category), so they are suitable for application as a mathematics learning tool. The integration of local cultural elements in the LKPD can connect abstract plane figure concepts with students' cultural experiences, making the learning process more contextual, meaningful, and increasing students' active involvement and contributing to strengthening the Pancasila Student Profile in accordance with the principles of the Independent Curriculum. These findings pave the way for further development of ethnomathematics-based LKPD on other mathematics materials and various levels of education, and encourage further research to test their effectiveness in improving learning outcomes, critical thinking skills, and students' appreciative attitudes towards local culture with a wider range of subjects.

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ARTICLE INFO

Article history
Received
Revised
Accepted

Keywords
Ethnomathematics; Geometric Shapes; LKPD; Local Culture

ABSTRACT

Mathematics learning in schools is often presented abstractly and does not connect concepts to students real experiences. This results in low understanding and motivation to learn. One way to address this problem is by integrating local culture into mathematics learning using the ethnomathematics method. This study aims to develop a Student Worksheet (LKPD) based on the local culture of Jihat Ninek Depati Intan Kemalo Sari on the topic of plane figures, and to determine its level of validity and practicality. The method used in this study is Research and Development (R&D) using the Plomp development model, which includes the steps of initial investigation, development, and evaluation. A limited trial was conducted on 26 students from grade IXB at SMPN 14 Kerinci in the 2025/2026 academic year. The instruments used in this study included a validation sheet prepared by experts and a practicality questionnaire for teachers and students. Data were analyzed using the Aiken index to measure validity and percentages to assess practicality. The results of this study indicate that the developed Student Worksheets (LKPD) demonstrated a high level of validity, with an average score of 0.84, and a practicality rating of 81%. However, this study is limited to the stages of validity and practicality evaluation and does not include effectiveness testing. This limitation is due to time constraints and the scope of the research, which focuses on product development. Therefore, further research is recommended to examine the effectiveness of the developed LKPD in improving students' learning outcomes and mathematical understanding in a broader implementation. The implications of this study indicate that ethnomathematics-based LKPDs can be an alternative teaching material that is relevant and meaningful, and supports the strengthening of the Pancasila Student Profile in mathematics learning.

How to Cite:.....

INTRODUCTION

Mathematics is a subject taught from elementary school to university and plays a significant role in various aspects of life. Besides being a tool for solving quantitative problems, mathematics is also embedded in cultural practices. However, many students view mathematics as a difficult and uninteresting subject, which ultimately results in low motivation to learn (Monalisa et al., 2023). Difficulty understanding mathematical concepts often results in shallow understanding that is easily forgotten (Cholid et al., 2022; Rohim & Prayogi, 2023).

objectives, resulting in a lack of coherence in supporting students' conceptual understanding (Armanza & Asyhar, 2020).

Moreover, the context of Jihat Ninek Depati Intan Kemalo Sari is not only important from a local perspective but also holds significant scientific value. This cultural site represents a complex system of spatial structures, geometric patterns, symmetry, and proportional reasoning, which are fundamental concepts in mathematics, particularly in plane geometry (Asdar et al., 2025). The philosophical values embedded within it, such as balance, harmony, and order, reflect universal mathematical principles that can be studied academically. Therefore, this context provides an authentic representation of how mathematical concepts are embedded in real-life cultural practices and offers a meaningful way to bridge abstract mathematical ideas with students' experiential understanding (Utama et al., 2024).

Therefore, this study aims to develop a Local Culture-Based LKPD Jihat Ninek Depati Intan Kemalo Sari on Plane Figure Material. By linking the concept of plane figures with geometric elements in the philosophy of the tradition, it is hoped that students will not only be able to understand mathematical concepts more deeply, but also experience a more meaningful learning process through the use of the local cultural contexts as a learning resource.

METHOD

This research employed the Research and Development (R&D) method with the Plomp development model, which consists of three main stages: preliminary investigation, development, and evaluation (Plomp, 2013). This model was chosen because it is suitable for producing valid and practical learning tools through systematic steps.

The research was conducted in the odd semester of the 2025/2026 academic year, with a limited trial of the learning tools at SMP Negeri 14 Kerinci, located in Kayu Aro Barat District, Kerinci Regency, Jambi. The initial investigation phase was conducted in Siulak Mukai Hamlet, Kerinci Regency, Jambi, specifically to gather information related to the Jihat Ninek Kemalo Sari culture through interviews with local traditional leaders and educators. The research subjects in the limited trial included 26 ninth-grade students

This kind of culture-based learning also contributes to strengthening the Pancasila student profile, particularly in the dimensions of faith, global diversity, and mutual cooperation. Learning within the Independent Curriculum should develop students' full potential, encompassing knowledge, skills, and character (Ferdi et al., 2025; Kemendikbudristek, 2022). As students learn the values embodied in the Jihat Ninek Depati Intan Kemalo Sari culture, they learn to appreciate ancestral traditions, foster a love for local culture, and understand the connection between cultural values and knowledge. Thus, ethnomathematics-based student worksheets (LKPD) serve not only as a cognitive learning medium but also as a means of character development, in line with the spirit of the Independent Curriculum (Adinda et al., 2025).

However, its implementation faces several challenges that require attention. First, not all students are deeply familiar with the Jihat Ninek Depati Intan Kemalo Sari culture, so teachers need to provide an introduction before linking it to mathematical concepts. Second, some teachers are not yet accustomed to integrating culture into learning, requiring training and mentoring to optimize the use of student worksheets (LKPD). Third, limited learning time prevents comprehensive exploration of ethnomathematics. This obstacle was also found in similar studies, where the implementation of ethnomathematics in schools often requires adaptation of the curriculum and learning strategies to suit the local context and the available time (Rustaren et al., 2025).

In general, the advantages of the developed LKPD include: (1) an attractive design with a combination of colors, images, and illustrations of local culture; (2) it facilitates teacher implementation; (3) it connects the concept of geometric shapes with the cultural values of Jihat Ninek Depati Intan Kemalo Sari; and (4) it meets the criteria of validity and practicality after undergoing validation and testing. However, this study has limitations because the testing was only conducted in one class with 26 students. In addition, this research did not include effectiveness testing. Therefore, further research is needed involving a wider range of subjects and testing in diverse school contexts, as well as examining the effectiveness of the developed LKPD in improving students' learning outcomes and mathematical understanding to obtain more comprehensive results and stronger generalizations.

User
Perlu ditambah penjelasan mengapa tidak sampai uji efektifitas.
21 March 2026, 06:43

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Karena penelitian ini terbatas pada tahap evaluasi validitas dan kepraktisan dan tidak mencakup pengujian efektivitas. Keterbatasan ini disebabkan oleh kendala waktu dan cakupan penelitian yang berfokus pada pengembangan produk. Oleh karena itu, penelitian lebih lanjut disarankan untuk menguji efektivitas LKPD yang dikembangkan dalam meningkatkan hasil belajar siswa dan pemahaman matematika dalam implementasi yang lebih luas.
Penelitian ini belum sampai pada tahap uji efektivitas karena difokuskan pada pengembangan produk pembelajaran melalui pendekatan design research yang menekankan pada validitas dan kepraktisan desain. Tahapan penelitian yang dilakukan meliputi preliminary design, pilot experiment, dan teaching experiment yang bertujuan untuk menghasilkan LKPD yang layak dan siap digunakan dalam pembelajaran. Uji efektivitas memerlukan implementasi dalam skala yang lebih luas serta penggunaan desain penelitian eksperimen yang lebih mendalam untuk mengukur dampak produk terhadap hasil belajar siswa. Oleh karena itu, pengujian efektivitas tidak termasuk dalam ruang lingkup penelitian ini dan direkomendasikan untuk dilakukan pada penelitian selanjutnya guna mengetahui sejauh mana LKPD yang dikembangkan dapat meningkatkan hasil belajar dan pemahaman matematis siswa.
21 March 2026, 20:12

Reply

User
Coba ditambahkan penjelasan apa yang belum dilakukan penelitian sebelumnya
mengapa konteks Jihat Ninek ini penting

novita sari
Penelitian ini belum sampai pada tahap uji efektivitas karena difokuskan pada pengembangan produk pembelajaran melalui pendekatan design research yang menekankan

Reply

User
Perlu dipertegas mengapa tidak sampai efektifitas

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Karena penelitian ini hanya sampai tahap pengembangan produk

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Beberapa perbandingan yang digunakan memunculkan efektivitas, padahla di penelitian anda tidak ada.
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Terima kasih atas masukannya. Kami menyadari terdapat ketidaksesuaian karena penelitian ini hanya menguji validitas dan praktikalitas, belum mencakup efektivitas. Oleh karena itu, pernyataan terkait efektivitas telah kami revisi dengan menghapusnya, dan kami arahkan sebagai rekomendasi untuk penelitian selanjutnya agar hasil penelitian lebih konsisten.

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Nama Jurnal Ilmiah

Jurnal Pendidikan Matematika Universitas Lampung

E-ISSN
2715856X
Fakultas Keguruan dan Ilmu Pendidikan Universitas Lampung

Ditetapkan Sebagai Jurnal Ilmiah:

TERAKREDITASI PERINGKAT 4

Akreditasi Berlaku selama 5 (lima) Tahun, yaitu:
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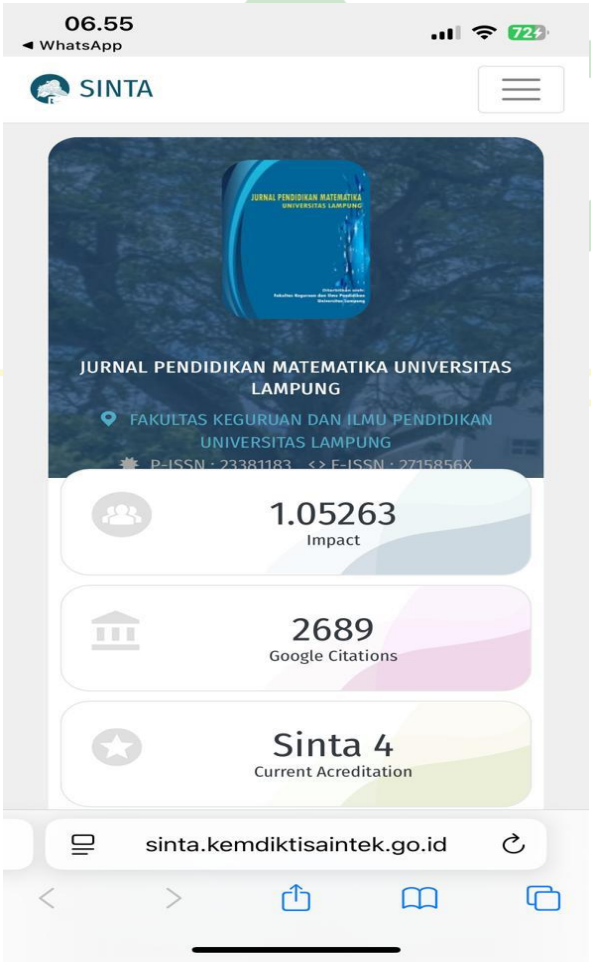

KISI-KISI INSTRUMEN VALIDASI LKPD
BERBASIS ETNOMATEMATIKA PADA BUDAYA LOKAL JIHAT NINEK DEPATI INTAN KEMALO SARI PADA BAHAN BENTUK DATAR

No	Aspek Yang Dinilai	Indikator Penilaian	Nomor
1.	Aspek Didaktik	Kesesuaian materi dengan capaian pembelajaran (CP) dan tujuan pembelajaran (TP)	1
		Urutan materi menggunakan alur belajar yang logis	2
		LKPD menggunakan konteks etnomatematika jihat ninek depati intan kemalo sari	3,4,5,
2.	Aspek Materi/Isi	Komponen-komponen LKPD	6
		Kesesuaian materi dengan kemampuan siswa	7
		Teknik Penyajian Materi	8,9,10,11,12
3.	Aspek Bahasa	Ketepatan penggunaan bahasa dan kalimat	13,14,15,16
4.	Aspek Penyajian	Kemenarikan Penampilan	17, 18
		Ketepatan penggunaan tulisan dan gambar	19, 20

LEMBAR VALIDASI
LKPD BERBASIS ETNOMATEMATIKA PADA BUDAYA LOKAL JIHAT NINEK DEPATI INTAN KEMALO SARI PADA BAHAN BENTUK DATAR

Lembar validasi LKPD ini bertujuan untuk mengetahui kekuatan dan kelemahan LKPD yang dirancang, supaya LKPD yang dirancang lebih sempurna dan valid serta dapat digunakan sebagai perangkat pada pembelajaran matematika kelas IX SMP.

Nama Validator : _____

Petunjuk Pengisian:

1. Mohon berikan penilaian Bapak /Ibu dengan cara memberi tanda centang (√) pada kolom sesuai dengan pendapat Bapak/Ibu.
   Keterangan:

1	Sangat Tidak Setuju
2	Tidak Setuju
3	Setuju
4	Sangat Setuju

2. Mohon berikan penilaian Bapak/Ibu pada kesimpulan dengan tanda silang (X) pada kolom huruf sesuai dengan pendapat Bapak/Ibu.
3. Jika Bapak/Ibu merasa perlu memberi catatan khusus demi perbaikan lembar validasi LKPD, mohon ditulis langsung pada bagian yang dimaksud atau pada bagian saran.

No	Butir Penilaian	Skor penilaian			
		1	2	3	4
A.	**Aspek Didaktik**				
1.	LKPD dirancang sesuai dengan Capaian Pembelajaran (CP) dan Tujuan Pembelajaran (TP)				
2.	Urutan materi pada LKPD disusun sesuai dengan alur belajar yang logis				
	♦*Aspek etnomatematika pada Budaya Lokal Jihat Ninek Depati Intan Kemalo Sari*				
3.	LKPD memfasilitasi siswa dalam menyusun, memproses, mengorganisir dan menganalisis data yang diperoleh untuk menemukan kembali konsep matematika				
4.	LKPD memfasilitasi siswa untuk menarik kesimpulan				
5.	LKPD memfasilitasi siswa untuk mengaplikasikan ide-ide yang telah dimilikinya dalam mengerjakan soal				

No	Butir Penilaian	Skor penilaian

		1	2	3	4
B.	**Materi/Isi**				
6.	LKPD berisi komponen antara lain: judul, capaian pembelajaran (CP) dan tujuan pembelajaran (TP)				
7.	Materi yang disajikan sesuai dengan tingkat kemampuan siswa.				
8.	Gambar yang disajikan berkaitan dengan etnomatematika Budaya Lokal Jihat Ninek Depati Intan Kemalo Sari Pada Bahan Bentuk Datar yang dapat membantu siswa memahami materi.				
9.	Istilah-istilah yang digunakan sesuai dengan bahasa matematika				
10.	LKPD dilengkapi dengan masalah atau persoalan yang sesuai dengan materi				
11.	Setiap tahapan memiliki pertanyaan pengiring yang dapat membantu siswa dalam melaksanakan tahapan tersebut				
12.	Informasi pendukung dalam LKPD sesuai dengan materi yang disajikan				
C.	**Aspek Bahasa**				
13.	Istilah, kata maupun kalimat yang digunakan komunikatif dan sesuai dengan tingkat kedewasaan siswa SMP				
14.	Kalimat yang digunakan tidak bermakna ganda				
15.	Kalimat yang digunakan baku dan sesuai dengan bahasa Indonesia yang baik dan benar				
16.	Bahasa yang digunakan sederhana dan mudah dipahami				
D.	**Aspek Penyajian**				
17.	Desain cover LKPD sederhana dan menarik				
18.	LKPD didesain dengan warna yang tidak berlebihan				
19.	LKPD menggunakan *font* yang jelas dan terbaca				
20.	Perbandingan ukuran tulisan dan ukuran gambar serasi				

Penilaian Secara Umum

NO.	URAIAN	A	B	C	D	E
1.	Penilaian secara umum terhadap LKPD berbasis Etnomatematika Budaya Lokal Jihat Ninek Depati Intan Kemalo Sari					

Keterangan:

A = dapat digunakan tanpa revisi

B = dapat digunakan dengan revisi sedikit

C = dapat digunakan dengan revisi sedang

D = dapat digunakan dengan revisi banyak

E = tidak dapat digunakan

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LEMBAR VALIDASI
INSTRUMEN VALIDASI LKPD BERBASIS ETNOMATEMATIKA PADA BUDAYA LOKAL JIHAT NINEK DEPATI INTAN KEMALO SARI PADA BAHAN BENTUK DATAR

Lembar validasi ini disampaikan kepada Bapak/Ibu untuk mendapatkan masukan tentang instrumen validasi LKPD berbasis etnomatematika Budaya Lokal Jihat Ninek Depati Intan Kemalo Sari. Data pada lembar validasi ini dibutuhkan untuk mengetahui kelayakkan instrumen validasi LKPD dan sebagai dasar perbaikan sebelum digunakan.

Nama Validator : _____

Petunjuk Pengisian:

1. Mohon berikan penilaian Bapak/Ibu dengan cara memberi tanda centang (√) pada kolom sesuai dengan pendapat Bapak/Ibu.
   Keterangan:

1	Sangat Tidak Setuju
2	Tidak Setuju
3	Setuju
4	Sangat Setuju

2. Mohon berikan penilaian Bapak/Ibu pada kesimpulan dengan tanda silang (X) pada kolom huruf sesuai dengan pendapat Bapak/Ibu.
3. Jika Bapak/Ibu merasa perlu memberi catatan khusus demi perbaikan instrumen validasi LKPD berbasis etnomatematika Budaya Lokal Jihat Ninek Depati Intan Kemalo Sari, mohon ditulis langsung pada bagian yang dimaksud atau pada bagian saran.

No	Aspek yang Dinilai	Skor penilaian			
		1	2	3	4
1.	Petunjuk pengisian data instrumen validasi LKPD berbasis etnomatematika Budaya Lokal Jihat Ninek Depati Intan Kemalo Sari dinyatakan dalam bahasa yang jelas dan mudah dipahami.				
2.	Pernyataan-pernyataan yang dibuat pada instrumen validasi LKPD berbasis etnomatematika Budaya Lokal Jihat Ninek Depati Intan Kemalo Sari sesuai dengan kisi-kisi				
3.	Pernyataan-pernyataan yang disusun pada instrumen validasi LKPD berbasis etnomatematika Budaya Lokal Jihat Ninek Depati Intan Kemalo Sari terurut dengan benar				
4.	Pernyataan-pernyataan yang dibuat pada instrumen validasi LKPD berbasis etnomatematika Budaya Lokal Jihat Ninek Depati Intan Kemalo Sari sudah tepat untuk menvalidasi LKPD				
5.	Pernyataan-pernyataan dalam instrumen validasi LKPD berbasis etnomatematika Budaya Lokal Jihat Ninek				

No	Aspek yang Dinilai	Skor penilaian			
		1	2	3	4
	Depati Intan Kemalo Sari tidak mengandung makna yang ganda				

No	Aspek yang Dinilai	Skor penilaian			
		1	2	3	4
6.	Instrumen validasi LKPD berbasis etnomatematika Budaya Lokal Jihat Ninek Depati Intan Kemalo menggunakan format penilaian yang sederhana dan mudah dipahami				
7.	Bahasa yang digunakan pada setiap butir pertanyaan pada instrumen validasi LKPD berbasis etnomatematika Budaya Lokal Jihat Ninek Depati Intan Kemalo Sari sesuai dengan kaidah EYD bahasa Indonesia yang baik dan benar				

Penilaian Secara Umum

NO.	URAIAN	A	B	C	D	E
1.	Penilaian secara umum terhadap instrumen lembar validasi LKPD berbasis etnomatematika Budaya Lokal Jihat Ninek Depati Intan Kemalo Sari					

Keterangan:

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B = dapat digunakan dengan revisi sedikit
C = digunakan dengan revisi sedang
D = dapat digunakan dengan revisi banyak
E = tidak dapat digunakan

Saran

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LEMBAR VALIDASI INSTRUMEN
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Lembar validasi ini disampaikan kepada Bapak/Ibu untuk mendapatkan masukan tentang instrumen pedoman wawancara dengan guru mengenai proses pembelajaran selama ini yang peneliti buat. Lembar validasi ini dibutuhkan untuk mengetahui kelayakan instrumen pedoman wawancara dengan guru mengenai proses pembelajaran selama ini dan sebagai dasar perbaikan sebelum digunakan dalam penelitian.

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1. Mohon berikan penilaian Bapak /Ibu dengan cara memberi tanda centang (√) pada kolom penilaian sesuai dengan pendapat Bapak/Ibu.
   Keterangan:
   Skor 1 = Sangat Tidak Setuju
   Skor 2 = Tidak Setuju
   Skor 3 = Setuju
   Skor 4 = Sangat Setuju
2. Jika Bapak/Ibu merasa perlu memberi catatan khusus demi perbaikan lembar penilaian validitas instrumen pedoman wawancara dengan guru mengenai proses pembelajaran selama ini, mohon ditulis langsung pada bagian yang dimaksud atau pada saran perbaikan.

B. Aspek Penilaian

No.	Aspek yang Dinilai	Penilaian			
		1	2	3	4

No.	Aspek yang Dinilai	Penilaian			
		1	2	3	4
1.	Instrumen/pertanyaan telah tepat untuk mengungkapkan proses pembelajaran matematika di kelas selama ini.				
2.	Instrumen/pertanyaan telah tepat untuk mengungkapkan aktivitas guru di kelas dalam proses pembelajaran matematika selama ini.				
3.	Instrumen/pertanyaan telah tepat untuk mengungkapkan perolehan nilai peserta didik dalam proses pembelajaran matematika selama ini.				
4.	Instrumen/pertanyaan telah tepat untuk mengungkapkan pendapat guru tentang buku yang digunakan dalam proses pembelajaran matematika selama ini.				
5.	Instrumen/pertanyaan telah tepat untuk mengungkapkan tentang buku yang dibutuhkan oleh guru.				
6.	Bahasa yang digunakan komunikatif dan menggunakan kaidah bahasa Indonesia yang baik dan benar atau sesuai dengan EYD.				

Saran Perbaikan:

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A. Petunjuk Pengisian

1. Mohon berikan penilaian Bapak/Ibu dengan cara memberi tanda *checklist* (√) pada kolom penilaian sesuai dengan pendapat Bapak/Ibu.

   Keterangan:

   Skor 1 = Sangat Tidak Setuju

   Skor 2 = Tidak Setuju

   Skor 3 = Setuju

   Skor 4 = Sangat Setuju

2. Jika Bapak/Ibu merasa perlu untuk memberi catatan khusus demi perbaikan daftar *check list*, mohon tuliskan pada bagian yang dimaksud atau pada bagian saran perbaikan.

B. Aspek Penilaian

No.	Aspek yang Dinilai	Penilaian			
		1	2	3	4
1.	Pertanyaan sudah cukup dan tepat untuk mengungkap permasalahan dalam pembelajaran matematika.				
2.	Pertanyaan sudah cukup dan tepat untuk mengungkap deskripsi pembelajaran matematika yang telah dilaksanakan di kelas.				

No.	Aspek yang Dinilai	Penilaian			
		1	2	3	4
3.	Pertanyaan sudah cukup dan tepat untuk mengungkap usaha guru dalam memperbaiki pembelajaran.				
4.	Pertanyaan sudah cukup dan tepat untuk mengungkap hasil belajar peserta didik.				
5.	Pertanyaan sudah tepat untuk mengungkap penggunaan bahan ajar.				
6.	Pertanyaan sudah cukup dan tepat untuk mengungkap penggunaan konteks budaya dalam pembelajaran.				
7.	Pertanyaan sudah cukup dan tepat untuk mengungkap hal-hal yang berkaitan dengan penggunaan bahan ajar yang ada.				
8.	Pertanyaan sudah cukup dan tepat untuk mengungkap tanggapan peserta didik terhadap pembelajaran.				
9.	Pertanyaan sudah cukup dan tepat untuk mengungkap tanggapan peserta didik terhadap bahan ajar yang digunakan.				
10.	Bahasa yang digunakan komunikatif dan menggunakan kaidah bahasa Indonesia yang baik dan benar atau sesuai dengan EYD.				

Saran Perbaikan:

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Sungai Penuh,.....2025

Validator

(.....)

KISI-KISI INSTRUMEN *SELF-EVALUATION*
LKPD BERBASIS ETNOMATEMATIKA PADA BUDAYA LOKAL JIHAT NINEK DEPATI INTAN KEMALO SARI PADA BAHAN BENTUK DATAR

No	Aspek	Indikator Penilaian	Nomor
1.	Pengetikan	Kejelasan Tulisan	1
		Ketepatan Pengetikan	2
2.	Bahasa	Ketepatan penggunaan kata dan istilah	3
		Ketepatan penggunaan tanda baca	4
3.	Penyajian	Ketepatan dalam penempatan gambar	5
		Ketersediaan tempat untuk penyelesaian masalah	6

LEMBAR VALIDASI INSTRUMEN TERHADAP LEMBAR *SELF EVALUATION* PRODUK: LKPD BERBASIS ETNOMATEMATIKA BUDAYA LOKAL JIHAT NINEK DEPATI INTAN KEMALO SARI PADA BAHAN BENTUK DATAR

Lembar validasi ini disampaikan kepada Bapak/Ibu untuk mendapatkan masukan tentang pedoman *self evaluation* produk: LKPD. Data pada lembar validasi ini dibutuhkan untuk mengetahui kelayakan pedoman *self evaluation* dan sebagai dasar perbaikan sebelum digunakan pada penelitian.

Nama Validator: _____

A. Petunjuk Pengisian

1. Bapak/Ibu dimohon untuk memberikan penilaian/validasi terhadap lembar pedoman *self evaluation*.
2. Beri tanda *checklist* (√) pada kolom penilaian sesuai dengan pendapat Bapak/Ibu.
   Keterangan:
   Skor 1 = Sangat Tidak Setuju
   Skor 2 = Tidak Setuju
   Skor 3 = Setuju
   Skor 4 = Sangat Setuju
3. Bapak/Ibu dimohon untuk memberikan saran, masukkan, atau komentar demi perbaikan pedoman *self evaluation*, dengan menuliskannya langsung pada bagian saran perbaikan.

B. Aspek Penilaian

No.	Aspek yang Dinilai	Penilaian			
		1	2	3	4

No.	Aspek yang Dinilai	Penilaian			
		1	2	3	4
1.	Pedoman *self evaluation* sudah tepat untuk mengungkap tampilan dan ukuran tulisan pada produk: LKPD				
2.	Pedoman *self evaluation* sudah tepat untuk mengungkap keterbacaan pada produk:LKPD.				
3.	Ketepatan item-item pada pedoman *self evaluation* untuk menilai kemudahan penggunaan produk: LKPD				
4.	Kecukupan item-item pada pedoman *self evaluation* untuk menilai kemudahan penggunaan produk: LKPD				
5.	Bahasa yang digunakan komunikatif dan menggunakan kaidah bahasa Indonesia yang baik dan benar atau sesuai dengan EYD.				

Saran Perbaikan:

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Sungai Penuh, ... 2025

Validator

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LEMBAR *SELF EVALUATION* LKPD
BERBASIS ETNOMATEMATIKA PADA BUDAYA LOKAL JIHAT NINEK DEPATI INTAN KEMALO SARI PADA BAHAN BENTUK DATAR

A. Petunjuk Pengisian

Memeriksa kembali LKPD sesuai aspek yang dinilai dengan memberikan centang (√) pada kolom yang tersedia

S : Setuju

TS : Tidak Setuju

B. Aspek Penilaian

No	Aspek yang Dinilai	Skor penilaian	
		S	TS
1	LKPD dirancang dengan tulisan yang jelas		
2	LKPD dirancang dengan ketepatan pengetikan		
3	LKPD dirancang dengan penggunaan kata dan istilah		
4	LKPD dirancang dengan penggunaan tanda baca yang benar		
5	LKPD dirancang dengan penempatan gambar yang tepat		
6	LKPD dirancang dengan ketersediaan tempat untuk penyelesaian masalah		

Saran Perbaikan:

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Sungai Penuh, ... 2025

Peneliti

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KISI-KISI ANGKET PRAKTIKALITAS
LKPD ETNOMATEMATIKA PADA SBUDAYA LOKAL JIHAT NINEK DEPATI INTAN KEMALO SARI PADA BAHAN BENTUK DATAR
(Respon Siswa)

No	Aspek	Indikator	Nomor Pertanyaan
1.	Penyajian	1. Kejelasan petunjuk	1,2
		2. Penggunaan font (jenis dan ukuran huruf)	3
		3. Desain tampilan	4,5,6
2.	Kemudahan Penggunaan	1. Kemudahan memahami materi	7,8
		2. Kejelasan soal-soal	9,10
3.	Keterbacaan	1. Keterbacaan tulisan	11
		2. Penggunaan bahasa yang jelas	12
4.	Waktu	Kesesuaian waktu	13,14

ANGKET PRAKTIKALITAS LKPD
BERBASIS ETNOMATEMATIKA PADA SBUDAYA LOKAL JIHAT NINEK DEPATI INTAN KEMALO SARI PADA BAHAN BENTUK DATAR
(Respon Siswa)

Nama : ……

Kelas : ……

Sekolah : ……

Petunjuk Pengisian:

1. Bacalah setiap pertanyaan dengan baik.
2. Mohon berikan pendapat Anda tentang tanggapan penggunaan LKPD yang telah digunakan dengan memberikan tanda centang (√) pada kolom penilaian sesuai dengan pendapat Anda.

Keterangan

1	Sangat Tidak Setuju
2	Tidak Setuju
3	Setuju
4	Sangat Setuju

3. Jawaban Anda tidak mempengaruhi nilai belajar Anda.
4. Jika Anda merasa perlu memberi komentar/saran, mohon ditulis langsung pada bagian saran/komentar yang telah disediakan.

No	**Pernyataan**	**Skala Penilaian**			
		1	**2**	**3**	**4**
1.	Saya dapat memahami petunjuk penggunaan LKPD dengan jelas				
2.	Saya dapat memahami petunjuk-petunjuk belajar yang terdapat pada LKPD dengan jelas				
3.	Saya menyukai ukuran dan jenis huruf yang digunakan dalam LKPD				
4.	Saya menyukai ukuran kertas LKPD karena memudahkan saya untuk menggunakan dan membawanya				
5.	Saya menyukai warna-warna yang terdapat dalam LKPD sehingga membuat saya tertarik untuk				

No	Pernyataan	Skala Penilaian			
		1	2	3	4
	menggunakan LKPD				
6.	Saya menyukai gambar-gambar pada LKPD sehingga dapat membantu saya memahami permasalahan yang diberikan				
7.	Saya dapat menyelesaikan permasalahan melalui pertanyaan-pertanyaan dan instruksi yang diberikan di dalam LKPD				

No	Pernyataan	Skala Penilaian			
		1	2	3	4
8.	Saya dapat memahami materi pelajaran setelah menggunakan LKPD				
9.	Saya dapat memahami maksud soal-soal yang disajikan pada LKPD				
10.	Saya dapat menyelesaikan soal-soal yang disajikan pada LKPD dengan baik dan benar				
11.	Saya dapat dengan mudah membaca setiap huruf, kata, dan kalimat dalam LKPD				
12.	Saya dapat memahami kalimat yang digunakan pada LKPD				
13.	Saya dapat melaksanakan aktivitas pada LKPD sesuai dengan waktu yang diberikan				
14.	Saya dapat dapat menyelesaikan soal-soal "*Mari Berlatih*" pada LKPD sesuai dengan waktu yang diberikan				

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Sungai Penuh, ...2025

Siswa

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PEDOMAN WAWANCARA FASE INVESTIGASI AWAL

A. Pedoman Wawancara dengan Guru

1. Apakah Bapak/Ibu menggunakan modul sebagai panduan pembelajaran?
2. Apakah pelaksanaan pembelajaran sudah sesuai dengan modul yang dikembangkan?
3. Model pembelajaran atau metode pembelajaran apa yang biasa Bapak/Ibu terapkan dalam mengajar matematika? Apa pertimbangan Bapak/Ibu memilih model atau metode pembelajaran tersebut?
4. Apa kendala-kendala yang Bapak/Ibu temui dalam mengajar matematika?
5. Apa sumber belajar yang biasa digunakan oleh Bapak/ Ibu pada pelaksanaan kegiatan pembelajaran?
6. Apakah dalam proses pembelajaran Bapak/ Ibu juga menggunakan LKPD?
7. Mengapa Bapak/Ibu tidak menggunakan LKPD dalam proses pembelajaran? Apa pertimbangan Bapak/Ibu?
8. Bagaimana hasil belajar siswa sejauh ini menurut Bapak/ Ibu? Apakah sudah sesuai dengan target yang Bapak/ Ibu tetapkan?

B. Pedoman Wawancara dengan Siswa

1. Bagaimana pendapat kamu tentang pembelajaran matematika yang berlangsung di kelas?
2. Bagaimana guru matematika kamu mengajar di kelas?
3. Apakah kamu mengerti dengan konsep materi matematika yang diterangkan guru di kelas?
4. Apakah kamu pernah atau sering melakukan aktivitas yang tidak berhubungan dengan pelajaran matematika?
5. Apa saja sumber belajar yang kamu gunakan dalam pembelajaran matematika?
6. Bahar ajar seperti apa yang kamu inginkan untuk belajar matematika ?
7. Apa kesulitan-kesulitan yang kamu alami dalam memahami materi pelajaran?
8. Apakah kamu lebih senang belajar matematika secara individu atau dalam kelompok?

DAFTAR RIWAYAT HIDUP

1. **Identitas Diri**

Nama	: Novita Sari
Tempat, tanggal lahir	: Sungai Asam, 12 November 2003
Jenis Kelamin	: Perempuan
Agama	: Islam
Alamat	: Sungai Asam
No. Handphone	: 087887695813
Email	: novitasa702@gmail.com
Nama Ayah	: Riyanto
Nama Ibu	: Susi Susanti

2. **Riwayat Pendidikan**

SDN 174/III Sungai Asam	: 2010 - 2016
SMPN 14 Kerinci	: 2016 - 2019
SMAN 7 Kerinci	: 2019 - 2022
Tadris Matematika , FTIK IAIN Kerinci	: 2022 - Sekarang