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Innovation of student worksheet (lkpd) based on *geblek renteng* local wisdom for grade v elementary school students

Nova Riswanti [1]*, Annery Fienta [1], Ali Mustadi [2], Sammy Enggar Patalatu [3]

[1] Universitas Pattimura, Ambon, Indonesia, 97233
[2] Universitas Negeri Yogyakarta, Yogyakarta, Indonesia, 55281
[3] Wheelock College of Education and Human Development, Boston, Amerika Serikat, 02215

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Abstract

Integrating local wisdom into student worksheets (LKPD) helps learners connect with their surrounding culture, fostering a deeper sense of appreciation and pride in their regional heritage. This study aimed to develop student worksheets that integrate the local wisdom of *Geblek Renteng* into the economic concepts taught in the Indonesian language curriculum, using concrete examples from students' immediate surroundings. The participants in this research were 15 fifth-grade elementary school students. This study employed the ADDIE Research and Development (R&D) model, which encompasses five systematic phases: (1) Analysis, (2) Design, (3) Development, (4) Implementation, and (5) Evaluation. Data were collected through observations, interviews, needs analysis questionnaires, and validation surveys administered to media and subject matter experts, alongside feedback forms for teachers and students. The gathered data were subsequently evaluated using quantitative descriptive analysis techniques. Validation results from subject matter and media experts indicated that the product is "Highly Feasible," achieving average scores of 83% and 87%, respectively. Furthermore, responses from teachers and students classified the product as "Highly Practical," with average scores of 94% and 97%, respectively. Ultimately, it can be concluded that the newly developed worksheets based on the *Geblek Renteng* local wisdom are both feasible and practical for implementation in the learning process.

* Corresponding Author.
E-mail address: nova.riswanti@lecturer.unpatti.ac.id (Nova Riswanti)
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1. Introduction

The expansion of globalization and digitalization has profoundly transformed the social, economic, and cultural aspects of modern society. One consequence of this shift is the gradual erosion of traditional community values. This issue is particularly critical for Indonesia, a nation

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characterized by a rich tapestry of cultural heritage passed down through generations (Mastiah et al., 2026). The educational ecosystem and its inherent learning cultures have not been immune to these structural transformations. Education requires continuous innovation to guarantee high-quality educational outcomes (Shofiyati et al., 2023). This impact is most evident in how both teachers and students acquire, present, and develop learning materials (Siska et al., 2026). Traditional teacher-centered paradigms have proven to be increasingly ineffective (Safrizal et al., 2026). Primary school students, for example, typically exhibit shorter attention spans and are highly susceptible to boredom. An effective learning environment must therefore demand active student participation in creating, analyzing, solving, and evaluating information (Riswanti et al., 2024). A student's capacity to solve theoretical and practical problems anchored in everyday reality serves as a crucial indicator of their academic comprehension (Lokasanti et al., 2026). However, within formal education, the concept of local wisdom remains somewhat peripheral. This eventually contributes to the marginalization and eventual abandonment of indigenous values, directly diminishing students' understanding of their own cultural roots (Ramdiah et al., 2020). In response to this, schools must optimize student roles, encouraging them to actively participate in preserving regional culture (Taib et al., 2024). A highly relevant strategy is the implementation of local wisdom-based learning approaches.

Local wisdom functions as the cultural identity or personality of a nation, empowering communities to process and respond to foreign influences using their unique intrinsic capabilities (Pesurnay, 2018; Saidah et al., 2020). Such wisdom, deeply acknowledged and utilized within society, does not emerge spontaneously. Rather, it represents an accumulation of policies and knowledge continually refined through extensive periods of social selection (Novia & Aznam, 2026). Local wisdom encompasses a comprehensive array of knowledge, beliefs, customs, and ethical values that serve as behavioral compasses for specific communities (Muna et al., 2025). Insights, conceptual frameworks, and survival skills derived from adapting to a socio-cultural environment can be directly applied to resolve localized challenges (Intem et al., 2021).

Local wisdom-based learning is an educational approach deliberately designed to embed cultural values, indigenous traditions, and local contexts directly into the learning process. This is supported by experts who state that local wisdom-based learning effectively bridges the gap between educational objectives and actual student outcomes as well as optimizing students' character development, intellectual growth, and cultural identity (Laila et al., 2021; Maemunah et al., 2026). This pedagogical strategy also equips learners to contextualize academic materials within real-world scenarios (Uge et al., 2019). This is because the principles of this approach compel students to engage with real-life situations and complex issues, and to solve them through self-awareness, critical thinking, problem-solving, communication, collaboration, and autonomous learning (Hasanah et al., 2016; Hestiana & Rosana, 2020).

Preliminary observations, interviews, and needs analyses conducted at SDN Kebonrejo revealed several critical challenges in the field. Primarily, students had significant difficulty identifying the potential and characteristics of their own region. A glaring example is their lack of familiarity with the history of *batik Geblek Renteng*, a prominent cultural icon of Kulon Progo Regency, despite wearing this specific batik motif as their school uniform every Thursday. Conversely, teachers face significant hurdles in integrating local content into their teaching modules. This difficulty largely stems from a scarcity of accessible, high-quality reference materials. This situation aligns with expert observations that teachers frequently struggle to source local cultural materials because standard textbooks predominantly emphasize broader national culture (Sari & Kumalasani, 2025). Integrating localized knowledge into the curriculum constructs a strong national identity, enriches the educational experience, and reinforces cultural values directly

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relevant to students' everyday lives (Ecca et al., 2025). The historical narrative of *Geblek Renteng* can be embedded into Indonesian Language lessons. This can effectively instill core values while fostering problem-solving skills, autonomy, responsibility, discipline, and an entrepreneurial spirit. Ultimately, grounding learning in proximal, real-life events enables students to grasp abstract concepts more easily (Suarmika et al., 2025).

One highly effective instrument for implementing local wisdom-based learning is the Student Worksheet (commonly referred to in Indonesia as LKPD). LKPD plays a pivotal role in maximizing the efficiency of the learning process (Rohman et al., 2023). When infused with local wisdom, LKPD enables students to gain a more profound understanding of local cultural nuances through relatable, everyday examples. This contextualization makes it significantly easier for students to apply various concepts within the framework of their local traditions, thereby enriching their overall learning experience. While the government provides standard teacher and student manuals to support education, these resources often require further adaptation to meet specific classroom dynamics. As supplementary instructional materials, LKPD summarizes and deepens theoretical concepts. They are typically equipped with various evaluation formats, such as multiple-choice, short-answer, and essay questions, designed to foster meaningful learning and promote student independence (Mahardika Arsa Putra & Tri Agustiana, 2021; Munafi'ah et al., 2021). By integrating targeted materials, practice exercises, and structured activities (Dewi & Meilina, 2022), LKPD ensures that educational content feels proximate and accessible to the learners. The primary advantages of utilizing LKPD include enhanced knowledge retention, the cultivation of self-directed learning, and improved student interaction with the subject matter (Kosasih, 2021; Munafi'ah et al., 2021). Therefore, this study aims to develop a targeted, locally wisdom-based LKPD, centered on the theme of Geblek Renteng, specifically designed for fifth-grade elementary school students.

2. Literature review

2.1 Geblek renteng local wisdom-based student worksheets (lkpd)

LKPD functions as instructional materials designed to assist students in problem-solving through structured activities and integrated assessment methods (Hastuti & Fauzan, 2022). Teachers typically develop these LKPD to align with specific educational needs, fostering more meaningful learning experiences while enhancing students' cognitive skills (Widodo et al., 2023). The design often incorporates a guided discovery strategy, providing clear instructions to direct the learning process. Consequently, LKPD serves as a primary educational resource facilitated by the teacher that centers student activity within the classroom environment (Widodo et al., 2023).

Local wisdom embodies the distinct cultural characteristics of a specific region, cultivated by native inhabitants across generations. It encompasses the principles, practices, interaction methods, values, and norms upheld by a community (Ardhia Pratiwi & Wikantiyoso, 2022). Local wisdom also represents a nation's cultural identity and personality, providing the foundation for absorbing or responding to foreign influences based on inherent regional capabilities and customs (Saidah et al., 2020). The collective knowledge, concepts, and adaptive skills derived from surviving within a specific socio-cultural environment are continuously applied to resolve everyday issues within the local community (Intem et al., 2021).

Developing LKPD based on local wisdom is an educational approach that embeds cultural values, traditions, and regional contexts directly into the learning process (Munjiatun et al., 2023). This approach involves presenting economic activity materials by weaving local values into the core instructional content. Such materials are specifically incorporated into the fifth-grade Indonesian Language curriculum for elementary students, primarily delivered through reading texts. According

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to the targeted learning outcomes, students are expected to do more than merely comprehend the text; they must also demonstrate the ability to participate in economic activities. By tailoring these economic concepts to concrete examples from the students' own surroundings, abstract ideas become tangible. This contextualization allows students to connect economic theories with their daily experiences, making the information much easier to grasp and retain. Furthermore, understanding social dynamics from the local to the global scale is intended to shape students into active, empathetic citizens with a strong national perspective rooted in their country's cultural diversity (Yuliantoro et al., 2025).

2.2 The local wisdom of geblek renteng

Geblek Renteng represents a distinct batik craftsmanship originating from Kulon Progo in the Special Region of Yogyakarta. *Geblek Renteng* is inspired by the word *geblek*, a traditional, figure-eight-shaped culinary specialty of the area, and the concept of linking or chaining these shapes together (*renteng*). Today, this motif functions as a primary cultural icon and hallmark of the district. Its popularity has been deliberately fostered by instituting batik as a mandatory uniform for a wide range of people, from schoolchildren to institutional employees across various sectors. This patterned uniform is worn regionally every Thursday. Beyond establishing a cultural identity, the widespread adoption of *Geblek Renteng* serves a strategic economic purpose. It directly empowers local artisans in Kulon Progo, thereby broadening employment opportunities and stimulating the regional economy.

Embedding the *Geblek Renteng* local wisdom into educational curricula offers a dual benefit. Primarily, it simplifies academic concepts, making the instructional material much more accessible to students. Simultaneously, it nurtures the students' ability to identify, respect, and actively sustain their indigenous heritage. This pedagogical approach supports the findings of Ecca et al. (2025), which indicate that leveraging local culture significantly adds depth to academic materials. Because students already have a foundational familiarity with their immediate cultural environment, anchoring lessons in regional customs ensures the educational content remains highly relevant and engaging.

3. Method

This research employed a Research and Development (R&D) methodology, adapting the ADDIE model as outlined by Branch (2009). The framework systematically guides the study through five distinct stages: Analysis, Design, Development, Implementation, and Evaluation. The sequential procedures executed during this research process are illustrated in the following figure.

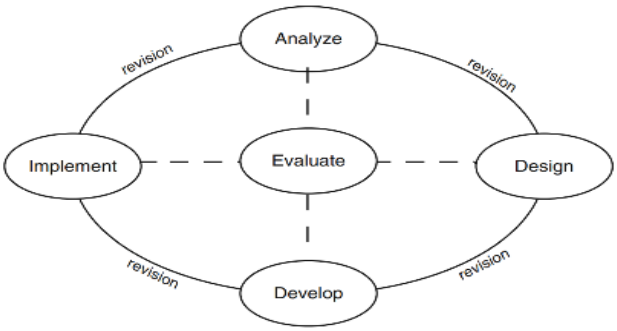


Figure 1. ADDIE Model

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The initial phase, analysis, identifies product requirements and gathers baseline information. This objective is achieved through direct observation, interviews, and needs assessments. Furthermore, it involves evaluating available resources to ensure their adequacy for the research development. Following this, the Design phase commences. The primary output of this stage is a structural blueprint for the intended product, specifically an LKPD integrated with Geblek Renteng's local wisdom. Subsequently, the Development stage translates these foundational analyses and designs into concrete lesson plans and instructional materials. Once the prototype is drafted, the LKPD undergoes rigorous expert validation. The Implementation phase then introduces the revised product into a real classroom trial. This step focuses on preparing the learning environment and engaging both teachers and students as they construct new knowledge and skills, ultimately yielding practical implementation strategies. Finally, the Evaluation phase measures the product's overall efficiency; notably, it is a continuous process that occurs both iteratively during development and after final implementation.

This research was conducted in Temon Subdistrict, Kulon Progo Regency. The study involved a diverse group of participants: a subject-matter expert, a media expert, a fifth-grade classroom teacher, and 15 fifth-grade students. The material validator was selected based on stringent criteria: holding a tenure-track position (PNS lecturer) at a state university in Yogyakarta, possessing or currently pursuing a doctoral degree, holding professional certification, and having an academic background in teaching the Indonesian language and local culture. Similarly, the media expert was required to be a PNS lecturer from a state university in Yogyakarta with doctoral-level education and professional certification, alongside a specific background in teaching educational media and instructional strategy planning. Data were collected using various instruments, including validation questionnaires for both experts, practical response questionnaires for teachers and students, interview guides, observation checklists, and a needs assessment questionnaire.

The research population comprised one fifth-grade class consisting of 15 students. A purposive sampling technique was applied, driven by the specific research objectives and the classroom teacher's recommendation regarding the students' notably low daily assessment scores in the Indonesian language subject. Data collection heavily relied on observations to capture contextually relevant information about the learning topics. Additionally, interviews were conducted with the teacher and students to gain deeper insights into classroom dynamics and media requirements, which were further supported by the distribution of needs assessment questionnaires. Analytically, data derived from observations, interviews, and needs assessments were examined using descriptive statistics.

Meanwhile, the outcomes from the expert validation questionnaires determined the feasibility of the newly developed media. The practical utility of the product was evaluated through the teacher and student response questionnaires. All quantitative assessments used a Likert scale from 1 to 5, and final scores were calculated using the formula below.

$$Percentage = \frac{score\ obtained}{ideal\ maximum\ score}\ x\ 100\ \%$$

Furthermore, the evaluation of student responses encompasses four primary dimensions: cognitive (knowledge), affective (attitudes and feelings), conative (actions), and media presentation. The response instrument consists of 10 distinct items. These items were assessed using a dichotomous scale, with a score of 1 for 'YES' responses and 0 for 'NO' responses. The collected data were subsequently used to compute the total score using the following equation.

$$Percentage = \frac{f}{N}\ x\ 100\ \%$$

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The scores were subsequently converted into qualitative data and categorised according to the criteria detailed below.

Table 1. Feasibility category

Score	Criteria
80% < Score ≤ 100%	Highly Feasible
60% < Score ≤ 80%	Feasible
40% < Score ≤ 60%	Less Feasible
20% < Score ≤ 40%	Not Feasible

Table 2. Practicality category

Score	Criteria
80% < Score ≤ 100%	Highly Practical
60% < Score ≤ 80%	Practical
40% < Score ≤ 60%	Less Practical
20% < Score ≤ 40%	Not Practical

The procedures of this study were executed in strict compliance with educational ethical principles. Prior to data collection, formal authorization was secured from the administration of SDN Kebonrejo. Informed consent was obtained from all participating individuals after they were fully briefed on the research objectives. Furthermore, to guarantee absolute confidentiality, anonymous codes were applied to the response sheets. Any personal information about the students was strictly safeguarded and used solely for scientific analysis.

4. Results

This research and development process resulted in the Student Worksheet (LKPD), based on the local wisdom of Geblek Renteng, as a printed teaching material that is feasible and practical for use in the learning process of fifth-grade elementary school students. The development procedure used in this research refers to the ADDIE branch model, consisting of five stages, which are:

4.1 Analyze

The analysis stage aims to identify problems that occur in the learning process. The research and development process began with observations and interviews, as well as needs assessment questionnaires administered to fifth-grade teachers and students. These activities were conducted to ensure that the product developed could effectively address the problems encountered in the field. Based on direct classroom observations, students struggled to pay attention to the teacher's explanations, while the teacher's use of student worksheets dominated the lesson. This is supported by the result of interviews with students, who stated that,

"In every lesson, our teacher often gives us worksheets that contain questions. The questions are boring and consist only of words. There are no pictures. I enjoy learning more when pictures are involved and not just answering the same questions over and over again. Especially when the materials are about the culture of Kulon Progo, I do not understand it because I am not originally from Java" (Student, IKYN, August 2).

Furthermore, during the interviews with fifth-grade teachers, they stated that,

"Sometimes, in order to reinforce the learning materials, I create my own Student Worksheets (LKPD) according to my abilities. Particularly when teaching topics related to local culture and

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wisdom, as it is difficult to integrate them and also difficult to present and convey the material." (Teacher, LDA, August 2).

The needs analysis conducted for fifth-grade students is presented in the following table.

Table 3. Needs analysis table

No	Statement	Criteria			
		SA	A	D	SD
1.	I do not know the history of Geblek Renteng	13	2	0	0
2.	I am interested in learning about the history of Geblek Renteng	12	3	0	0
3.	Teachers use teaching materials and/or books during the learning process	12	2	1	0
4.	Teachers use Student Worksheets (LKPD) when teaching in the classroom	10	3	2	0
5.	I enjoy learning with Student Worksheets (LKPD)	12	1	1	1
6.	I need new teaching materials (LKPD) to support learning in the classroom	13	1	1	0

Based on Table 3, the statement regarding a lack of knowledge about the history of *Geblek Renteng* received a score of 86.7% for "Strongly Agree," and 13.3% of students chose "Agree." The second statement regarding interest in learning about the history of *Geblek Renteng* received a score of 80% for "Strongly Agree" and 20% for "Agree". Meanwhile, regarding the statement about teachers using teaching materials/books during the lesson, 80% of students chose "Strongly Agree", 13.3% chose "Agree", and 6.67% chose "Disagree". On the statement regarding teachers' use of LKPD when teaching in class, 66.7% of students chose "Strongly Agree", 20% chose "Agree", and 13.3% chose "Strongly Disagree". Regarding the enjoyment of learning using LKPD, 80% of students chose "Strongly Agree", 6.67% chose "Agree", 6.67% chose "Disagree", and 6.67% chose "Strongly Disagree". Regarding the need for new teaching materials (LKPD) to support learning in the class, 86.7% of students chose "Strongly Agree", 6.67% chose "Agree", and 6.67% chose "Disagree". Based on the needs analysis results, it can be concluded that students are unfamiliar with the history of *Geblek Renteng* and are interested in learning about it. Teachers use LKPD as teaching materials during the learning process. Therefore, students need new teaching materials, such as LKPD, for classroom lessons.

4.2 Design

The second stage involved designing LKPD based on local wisdom for Indonesian Language lessons on the topic of Learning Entrepreneurship. The design process began with planning, identifying learning outcomes and objectives based on the curriculum in use. Followed by determining the materials and searching for supporting reference materials. The application selected for designing the LKPD was Canva, along with identifying supporting components such as pictures, text, and learning materials. The LKPD developed includes learning outcomes and learning objectives for the fifth-grade Indonesian Language, presented in Table 4.

Table 4. Learning outcomes

No	Learning Outcomes	Learning Objectives
1.	Students can identify the main idea and supporting ideas in a text.	➢ Through reading and listening activities, students can accurately identify the main idea and supporting ideas in a text.

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		➢ Through recognition and reading activities, students can design Geblek Renteng batik according to their imagination.
2.	Students can listen to and analyze a performed interview text.	➢ Through question-and-answer activities, students can accurately analyze interview texts.
3.	Students can write an expository text with more detailed information.	➢ Through discussion, students can write an expository text with more detailed, clear information.

The learning outcomes were selected based on the Grade V Teacher's Book of the Merdeka Curriculum. The Merdeka Curriculum includes the Pancasila Student Profile, which students will develop. In this research, the Pancasila Student Profile to be implemented is: faithful and devout to God Almighty; of noble character; embracing global diversity; and demonstrating critical thinking, creativity, and collaboration.

4.3 Develop

The third stage is designing the product that will be developed. The procedure for developing LKPD includes preparing the Canva application and the supporting components, such as images, text, and learning materials. For the next step, product validation was conducted through media expert validation and subject matter expert validation. This stage aims to determine the feasibility of LKPD based on local wisdom from *Geblek Renteng* and to obtain suggestions and feedback on the developed product. Suggestions and feedback on LKPD cover include the *Geblek Renteng* icon and the Kulon Progo Regency icon. This is intended to pique students' interest in learning about materials integrated with the local wisdom of *Geblek Renteng*. The following is the LKPD cover before and after revision.



Figure 2. The cover of LKPD before and after revision

The cover page of the developed LKPD includes the LKPD title, an image, and supporting components related to the local wisdom of Geblek Renteng. The learning activities include instructions such as Let's Read, Let's Find the Words, Let's Observe, Let's Identify, Let's Think, Let's Do an Interview, and Let's Write. The procedures for the activities students will carry out are arranged according to the materials they will learn. The page is presented as follows.

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Figure 3. Developed LKPD

A validation was then conducted on the developed LKPD products by expert validators in media and subject matter (Rahmawati et al., 2023). Expert validation aims to determine the feasibility of the initial product, as assessed by expert lecturers, with respect to the materials and media. After validation by experts and revision based on their suggestions, feedback, and guidance, the products were declared suitable for testing without further revision. The process can continue with testing by teachers and students to determine the practicality of the developed LKPD. The following describes the LKPD product validation results.

Table 5. Summary of validation assessment results

No	Subject Expert	Validity Result (%)	Percentage Qualification
1.	Educational Media Expert	87 %	Highly Feasible
2.	Subject Matter Expert	83 %	Highly Feasible

4.4 Implement

This stage is the implementation of the LKPD product, during which a test of the LKPD based on Geblek Renteng's local wisdom was conducted with fifth-grade teachers and students, totaling 15 participants. The test included conducting the learning process in the classroom using LKPD based on the local wisdom of *Geblek Renteng*. After completion, students were given a response questionnaire. The following describes the test results of the developed LKPD.

Table 6. Practicality test results for the lkpd product

No	Test Subject	Assessment Results	Percentage Qualification
1.	Teacher Responses	94%	Highly Practical
2.	Student Test	96%	Highly Practical

Based on the table above, students' responses regarding the developed LKPD based on the local wisdom of *Geblek Renteng* fell into the Very Practical category.

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4.5 Evaluate

The evaluation stage is the final stage of the ADDIE development model. During this stage, an evaluation of the research process's findings was conducted. These findings include that product testing on students was limited to determining the practicality level of the developed product. The product has not yet been tested to determine its effectiveness.

5. Discussion

Providing teaching materials in the form of LKPD is a strategic approach to navigating 21st-century educational challenges, particularly since modern students are more interested in novel information that connects directly to their daily lives (Ridho et al., 2021). In this context, the newly developed local wisdom-based LKPD incorporates the cultural values of *Geblek Renteng*, a distinctive icon of the Kulon Progo Regency. The product trial achieved a "Highly Practical" qualification score, indicating that the featured local content is highly relevant to students' everyday experiences and translates well into instructional materials. Because students are already familiar with the visual and contextual elements of *Geblek Renteng*, the need for text-heavy learning is significantly reduced. Students are enabled to engage in more exploratory activities by identifying figure-eight patterns within the motif of *Geblek Renteng*, rather than through conventional lecture methods. This statement aligns with expert perspectives that cultural and local wisdom can be effectively integrated into educational content (Ramdiah et al., 2020). *Geblek Renteng* was specifically chosen to address a prevailing lack of historical awareness among the students. Many were previously unable to recount the history of *Geblek Renteng*. Such a lack of knowledge risks the gradual fading of this unique Kulon Progo trademark, whereas the use of local wisdom as a cultural pillar is crucial for sustaining regional identity (Parmadi et al., 2022; Tohri et al., 2022). Furthermore, teacher feedback during the trials also fell within the "Highly Practical" category. Teachers can successfully integrate local wisdom to bridge the gap between abstract concepts and the students' tangible environment.

Preserving the values embedded within local culture ultimately fosters cultural resilience within a community's daily activities (Ardhia Pratiwi & Wikantiyoso, 2022). In Kulon Progo, residents actively uphold the Geblek Renteng identity by producing its signature batik and traditional food, both of which hold significant economic value. These real-world practices can be implemented in LKPD through hands-on learning exercises. Students are tasked with cutting, pasting, and identifying the philosophical meanings behind the *Geblek Renteng* clothing motifs. They are encouraged to express their creativity independently by designing their own batik garments utilizing these traditional patterns.

As time progresses, both the batik and the culinary aspects of *Geblek Renteng* become increasingly diverse. To stimulate further innovation and variation inspired by Geblek Renteng, it is imperative to introduce its historical roots to the broader public, particularly students, at an early age. This is supported by experts who state that culturally rich local wisdom serves as an excellent educational tool and learning resource (Ali, 2023).

Through the *Geblek Renteng*-based LKPD, students' appreciation for local products can be heightened. This was evident during the learning process, when students demonstrated the ability to retell the history of Geblek Renteng, as well as the motifs and their underlying meanings. The development of *Geblek Renteng*-based LKPD is highly systematic and structured, and it is completed with clearly defined learning outcomes. Among these objectives is the expectation that students will be able to identify the history and symbolism of Geblek Renteng, design their own Geblek Renteng batik, and conduct interviews—an activity expected to spark their entrepreneurial

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spirit. This aligns with the experts' statement that integrating culture and local wisdom simplifies the process of mastering learning competencies (Lubis et al., 2022). For teachers, the positive impact lies in gaining a deeper understanding of the relationship between students' cultural backgrounds and their educational journeys (Tanase, 2022). Research conducted by Intem et al. (2021) found that positioning local wisdom at the core of the curriculum imparts essential knowledge of community lifestyles and traditions, particularly for local youth.

An aesthetically appealing LKPD proves significantly more beneficial than the conventional one (Nuraina et al., 2022). Beyond that, studying these local wisdoms serves as a testament to the younger generation's capacity and responsibility to safeguard local heritage for their elders (Ueangchokchai, 2022). Utilizing local culture and wisdom to teach academic knowledge and skills profoundly improves students' personal, social, cultural, and civic development (Gay, 2015).

6. Conclusion and implications

The research findings revealed that the LKPD, based on the local wisdom of *Geblek Renteng,* is both feasible and practical for classroom use. Based on assessments by subject-matter and media experts, the developed product falls into the "Highly Feasible" and "Highly Practical" categories. Substantively, this LKPD presents the historical narrative of *Geblek Renteng*, accompanied by engaging visuals and explanations of its philosophical meanings. The use of this LKPD is expected to support learning materials and serve as a strategic effort to strengthen students' cultural identity. However, this study has limitations, as it primarily focuses on feasibility and practicality without assessing its impact on student learning outcomes. Therefore, further research is recommended to assess the effectiveness of this LKPD in improving student comprehension and performance. As a tangible learning guide, this LKPD is highly suitable for fifth-grade elementary school students. For optimal implementation results, teachers serving as facilitators should have a basic understanding of local history to deliver the moral messages in the LKPD effectively. Additionally, if the material is adapted for schools outside the Kulon Progo region, a practical strategy would be to use a comparative method, which involves comparing the unique *Geblek Renteng* pattern with local batik motifs from the students' own region to broaden their national awareness.

Credit authorship contribution statement

Nova Riswanti: Conceptualization, Investigation, Methodology, Data curation, Writing original draft. **Annery Flenta:** Translator, Copyeditor, Proofreader. **Ali Mustadi:** Reviewer, Validation. **Sammy Enggar Patalatu:** help with finding relevant references and creating discussions.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this article.

Data Availability Statement

The data supporting the findings of this study are not publicly available as they contain information that could identify research participants. However, the data are available from the corresponding author upon reasonable request and with permission from the relevant authorities.

Ethical Declaration

The study obtained permission from the elementary school Kebonrejo. All participants provided informed consent prior to their involvement in the study, including consent for note-taking and for the use of their responses and observational data for research purposes. Participation was voluntary, and participants could

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withdraw at any time without any consequences. To protect confidentiality, no personally identifiable information was collected; all data were anonymized at the time of collection, stored securely, and access was restricted to the research team.

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Declaration of AI statement
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