

Development of literacy teaching materials in elementary schools based on local wisdom in Kuningan

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Received: March 9, 2025

Revised: May 7, 2025

Accepted: May 20, 2025

KEYWORDS

Elementary School
Literacy
Local Wisdom
Teaching Material

ABSTRACT

This study aims to develop literacy teaching materials based on local wisdom for upper-grade elementary school students as a means of supporting the School Literacy Movement. The research addresses the gap in the availability of teaching materials that integrate local wisdom values, particularly in the Kuningan region, which are essential for promoting holistic literacy development. Literacy materials rooted in Kuningan's local wisdom are crucial, as they enhance students' understanding by presenting content closely related to their daily lives, such as local culture, traditions, and values. This development research was conducted at SDN 1 Ciloa, SDN Sukaraja, and MI PUI Cilimus in Kuningan. The development process adopted the Joli and Bolitho models, which include stages of needs identification, needs exploration, contextual realization, pedagogical realization, physical production, testing, and product evaluation. Data collection involved both qualitative methods—such as interviews and observations—and quantitative methods from questionnaires and tests. The results reveal four key findings. First, the existing literacy materials do not meet students' needs in terms of design and content. Second, the developed materials are comprehensive, addressing linguistic, cognitive, and socio-cultural dimensions while incorporating complete teaching components. Third, feasibility tests—both theoretical (conducted by experts) and empirical (involving teachers and students)—indicate that the materials are appropriate for use. Fourth, effectiveness testing shows that the materials are effective when implemented in classroom learning. Thus, the developed literacy teaching materials based on local wisdom are not only feasible but also effective in enhancing literacy learning among elementary students in Kuningan.

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Introduction

Literacy skills, especially literacy, are very important skills for everyone, especially a student. This is because reading and writing are basic sciences needed to acquire the right knowledge. If you are proficient in reading and writing, it will be easy to learn other sciences (Kementrian Pendidikan dan Kebudayaan, 2021). Of course, a student will have a hard time learning science, mathematics, economics, as well as culture and citizenship if he is not proficient in reading and writing.

In addition, the low level of literacy, especially literacy, will certainly have a big impact on low understanding. As expressed by Aisyah et al. (2017) low literacy results in low understanding, on the contrary, high literacy leads to a person's high comprehension ability (Aisyah et al., 2017). By understanding something well, a person will easily learn or do something in his life. Thus, this literacy will greatly affect the ease of a person's life.

Indonesia as a country that seeks to improve the standard of living of its people participates in the development of this literacy program. However, the results cannot be said to be encouraging. In 2011, UNESCO launched the results of its survey showing that the reading rate index of the Indonesian people is only 0.001 percent, or there is only one person in 1000 people who want to read books seriously. The low interest in reading is also seen from the lack of new books published in Indonesia. This country only publishes about 24 thousand book titles per year with an average print of 3,000 copies per title (Nurchaili, 2016).

The Human Development Report 2008/2009 published by UNDP (*United Nations Development Programme*), shows that the reading interest of the Indonesian people is ranked 96th out of countries around the world, equivalent to Bahrain, Malta and Suriname. For the Southeast Asia region, Indonesia's position is also below, only better than Cambodia and Laos (Nurchaili, 2016). Meanwhile, in 2015 Indonesia's literacy level was only ranked 64 out of 65 countries surveyed and its students' reading ranking was only ranked 57 out of 65 countries surveyed (Permatasari, 2015). To overcome this, Indonesia promotes a literacy program known as the National Literacy Movement (GLN).

For Kuningan Regency, the problem of implementing school literacy, especially in elementary schools, is no different from the problem that has been expressed previously, namely that students' literacy skills are still low. The low literacy ability of students is caused by: 1) lack of appropriate teaching materials (existing teaching materials are only in the form of reading books whose context is sometimes not in accordance with the development and needs of elementary school students); 2) there are still teachers who do not understand literacy; and 3) there are still many students who use Sundanese as their mother tongue so that it hinders the process of learning to read, especially reading comprehension (Hanifah et al., 2022).

As reference material, the researcher cited several previous studies on literacy, namely (McDaniel et al., 2017; Graham et al., 2018; Mayuni et al., 2020; Muhammadi, 2017; Cantrell et al., 2017; Cassady et al., 2018; Damayanti et al., 2020). Research related to teaching materials for reading and reading (Atmazaki, 2019; Pan & Chen, 2020; Wright et al., 2016; Kung, 2019; Kusuma, 2016).

Based on previous research presentations related to literacy learning, reading, and writing, there are several things that can be concluded by the author. First, research on literacy learning is one of the trends in language research and learning. Second, the concept of literacy contained in previous research is still synonymous with reading or writing skills. This means that the literacy concept used still refers to literacy in the linguistic dimension. Third, from several studies that talk about literacy teaching materials, they still focus only on the provision of reading materials. Fourth, other developments in reading and writing research, both methods and teaching materials, are only limited to the feasibility test, while the target ability is only in the form of reading and writing skills (linguistic dimension).

Based on this explanation, the author found a *research gap* that there is still an empty gap in the research domain to develop literacy teaching materials. The literacy teaching materials in question refer to the concept of comprehensive literacy seen from the linguistic dimension, cognitive dimension, and socio-cultural dimension. Therefore, the selection of themes about local wisdom is an alternative in literacy teaching materials in this study. In addition, the iteration teaching materials developed not only provide reading materials but are comprehensively compiled from determining basic goals or competencies to evaluation and reflection. These two things then become new in this study, namely: 1) developing comprehensive literacy teaching materials from linguistic, cognitive, and socio-cultural dimensions and 2) developing teaching materials that are systematically arranged in accordance with the components of teaching materials starting from competency standards, materials, evaluation, and reflection.

In addition, the research gap found in literacy in Indonesia, especially in Kuningan Regency, is the lack of teaching materials that comprehensively integrate linguistic, cognitive, and socio-cultural dimensions. Most previous research has focused on linguistic literacy, such as reading and writing skills, without paying attention to the cognitive dimensions related to deep and sociocultural understanding that touch on students' local contexts. This is a big challenge in basic education in Kuningan which still faces a gap in the quality of literacy education.

Literacy is the ability to understand information obtained from various sources or media, both print, oral, and digital. This is in line with the opinion of Montoya (2018), who states that literacy involves the ability to identify, understand, interpret, create, communicate, and calculate using printed and written materials related to various contexts. Therefore, literacy not only includes reading and writing skills, but also involves cognitive skills in critical thinking and the ability to interact with sociocultural contexts

(Boeriswati, 2017). This is in line with what Anwar et al. said that the current conditions require humans to have an awareness of the importance of information literacy in creating, selecting, and sharing information (Anwar et al., 2021).

In literacy learning, there are three dimensions that are very important, namely linguistic, cognitive, and socio-cultural dimensions. The linguistic dimension is related to the ability to read and write, as well as understanding the relationship between graphic symbols and verbal meanings (Kern, 2000). The cognitive dimension is concerned with a thought process that involves linking the text with real-world knowledge, prediction, inferences, and the synthesis of meaning (Thorndike in Kern, 2000). The sociocultural dimension, as described by Freire (in Kern, 2000), suggests that literacy is a socially constructed phenomenon, which occurs in the context of the student's life and culture.

These three dimensions are very interrelated in a comprehensive literacy approach that must be understood by students. Literacy is not only about the technical ability to read and write, but also about the ability to relate the information obtained from the text with personal knowledge and social experience. Therefore, a comprehensive literacy approach requires a deep understanding of these three dimensions, which can assist students in developing critical thinking skills and understanding their cultural context.

Meanwhile, culture is a way of life that develops and is shared by a group of people and passed down from generation to generation, which will then affect people's personalities (Lustyantie, 2015). Furthermore, Koentjaraningrat (in Lustyantie, 2015) classifies culture as having 7 elements, (1) human life tools, (2) livelihoods, (3) social systems, (4) language (and literary) systems, both written and oral, (5) various arts, (6) knowledge systems, and (7) religious systems.

The culture inherent in the community is then known as local wisdom. It is said to be local wisdom, because it is usually very close to local life or a certain area. Usually, between one local wisdom and another, it will be very different. There is a close relationship between the life of the people who produce culture and the order of the surrounding community which will usually also be related to nature and so on. Furthermore, this local wisdom can be interpreted as a harmonious relationship between humans, nature, and the environment built in an area that is also influenced by its culture (Dahlani et al., 2015; Kurniasari & Rahardi, 2019).

Culture is synonymous with local wisdom. According to Pesurnay, local wisdom is a form of knowledge, belief, understanding or perception along with customary habits or ethics that guide human behavior in ecological and systemic life (Pesurnay, 2018). What Pesurnay conveyed more or less means that local wisdom is a form of knowledge, belief, understanding or perception along with customary habits or ethics that guide human behavior in ecological and systemic life. Values rooted in a culture are not concrete material objects but tend to be a kind of guideline for human behavior. In that sense, to study it we must pay attention to how humans act in a local context.

In response to the previously mentioned research gaps, and by paying attention to the importance of integrating linguistic, cognitive, and sociocultural dimensions in a comprehensive literacy model, this study proposes the development of literacy teaching materials based on Kuningan local wisdom. Integrating local wisdom as teaching materials is important to increase the relevance and effectiveness of literacy learning at the elementary school level. This material based on local wisdom will introduce students to cultural values, traditions, and ways of life that are close to their lives (Kelly, 2021). Elements of local wisdom included in this literacy curriculum include Kuningan folklore, Kuningan traditional food, Kuningan tourist attractions, Kuningan traditional games, and Kuningan traditional ceremonies. It contains historical elements and noble values of Kuningan culture. For example, the value of cooperation contained in elements of traditional games and food, historical value in elements of folklore and tourist attractions, and cultural value in elements of traditional ceremonies.

By using local wisdom, it is hoped that students can more easily understand the text and improve their literacy skills because the material taught is closer to their experiences and culture. The use of local wisdom also overcomes the challenges of education in Kuningan, namely the limitations of teaching materials that are in accordance with the characteristics of students and their environment. In addition, this teaching material is expected not only to develop reading and writing skills, but also critical thinking skills (cognitive) and a deeper understanding of cultural context (socio-cultural), which is the main goal of this study.

This study or research contributes to improving students' literacy skills and instilling character values through local wisdom. This is also the implementation of government policy, namely Permendikbud No. 23 of 2015 that GLS (School Literacy Movement) functions to foster ethics. One way to foster this is to present reading materials that contain ethical values sourced from local wisdom. Furthermore, in terms of policy, this teaching material is expected to support the implementation of the AKM (Minimum Competency Assessment) program or minimum competency assessment for grade 5 elementary school students. One of the indicators of the success of AKM in schools is the improvement of students' literacy skills. Based on the

results of the research, literacy and evaluation activities carried out are based on reading literacy indicators, namely finding information, inferring, and associating reading with experience (OECD, 2019). Thus, it is hoped that the level of reading literacy of students will increase so that Indonesia's ranking in the PISA measure of literacy can also increase.

Method

The approach used in this study is the Research and Development Approach or Reasearch and Development (R and D). The research and development approach were then modified with the development of the Jolly and Bolitho teaching material model. In this study, the educational product developed is a literacy reading teaching material for elementary school students based on local wisdom.

In this study, the Jolly and Bolitho models were chosen because of their unique ability to integrate cultural elements into educational materials, especially in the development of teaching materials based on local wisdom. This model allows the adaptation of the material to the local socio-cultural context, which is the main need in learning in Kuningan Regency. The three dimensions contained in this model, namely linguistic, cognitive, and socio-cultural, provide space for the integration of cultural values, traditions, and local norms that are relevant to students' lives.

Jolly and Bolitho's own development mode consists of the following steps, namely: 1) Needs Identification, 2) Needs Exploration, 3) Contextual Realization, 4) Pedagogical Realization, 5) Physical Production, 6) Product Testing, and 7) Evaluation (Cresswell, 2015). The seven steps will then be applied to 4 stages of development research, namely: introduction, development planning, validation, and implementation.

This model is very appropriate because the steps in Jolly and Bolitho allow for the exploration and realization of contextual needs that are indispensable for developing literacy teaching materials based on local wisdom. This approach focuses not only on reading and writing competence (linguistics), but also on the development of a deeper understanding (cognitive) as well as awareness of the existing cultural context (socio-cultural). In the context of basic education in Kuningan, the main challenge is the limitation of teaching materials that are in accordance with the local socio-cultural characteristics and the difficulty of teachers in connecting teaching materials with students' daily lives. The Jolly and Bolitho model provides a solution to this problem by facilitating the preparation of teaching materials that are appropriate to the cultural needs and cognitive development of students. The research steps are visualized in the Fig. 1.

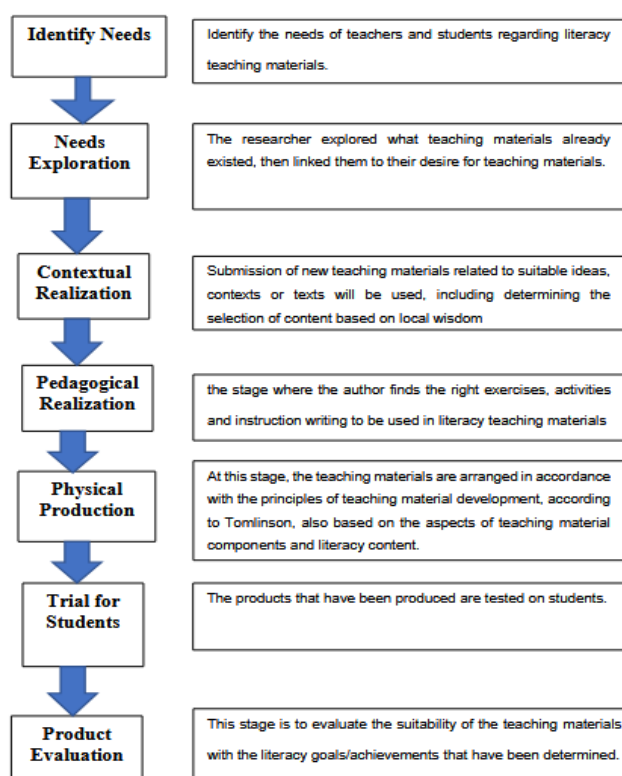


Fig. 1. Research steps or procedures with the Jolly and Bolitho models

The subjects of this study are students in elementary schools in Kuningan Regency. There are three primary schools that are used as subjects to conduct *one-to-one* tests, small group tests, and large group tests and effectiveness tests. The three schools are SDN Cilowa 1, MI Cilimus, and SDN 1 Sukaraja.

To clarify the sampling methodology, this study involved three elementary schools in Kuningan Regency, namely SDN Cilowa 1, MI Cilimus, and SDN 1 Sukaraja. The number of students involved in this study was 41 students who participated. The selection of these schools was carried out by considering the socio-cultural diversity and language background of students in the area, which is still dominant with their mother tongue, Sundanese, as well as their suitability with the purpose of developing literacy teaching materials based on local wisdom.

The selection of the right and representative sample size is important in this study. In the *one-to-one* test phase, one student from each school (a total of 3 students) was involved. *One-to-one testing* aims to gain in-depth insights into individual interactions with teaching materials and allow researchers to make more detailed observations of students' understanding. In the small group test phase, two students from each school (a total of 6 students) were involved. Small group testing gives researchers the opportunity to see the dynamics between students in understanding the teaching material. In the large group test phase, there were 17 students involved. This phase serves to test students' assessment of teaching materials. In the effectiveness test phase, 15 students from SDN Cilowa 1 were involved. The effectiveness test was carried out to measure the extent to which teaching materials can improve the literacy of students in a larger amount.

The selection of this sample size was considered representative for research purposes, as it allowed for the collection of data that reflected the effectiveness of teaching materials at different levels of testing and diverse student characteristics. *One-to-one* and small-group tests provide a deeper picture of student understanding, while effectiveness tests with a larger sample size can provide broader data on the impact of these teaching materials based on local wisdom.

To collect research data, research using techniques and instruments is as follows.

1. Interview techniques and interview guideline instruments. These techniques and instruments are used when identifying needs and exploring the needs of teaching materials.
2. Observation techniques and observation sheet instruments. Observation techniques are data collection techniques by researchers who conduct direct observations in the field.
3. Questionnaire techniques and questionnaire instruments. These techniques and instruments are used for the study of experts as well as teachers and students.
4. Test techniques and test instruments. These techniques and instruments are used to test students' literacy skills before and after using teaching materials.

Meanwhile, data analysis techniques consist of qualitative and quantitative analysis techniques. Qualitative techniques are used to analyze data from interviews and observations. The techniques used include data collection, data reduction, data analysis, and data display. Qualitative data analysis is used to collect questionnaire and test results. For the questionnaire, the percentage is visible. The test processing technique is carried out by testing validity, reality, normality, and effectiveness.

Results and Discussion

Need Analysis Results

The need for literacy teaching materials is based on the analysis of needs based on the elements of *needs*, *shortcomings*, and *desires*. *Needs* are defined as needs related to the ideal conditions of the teaching material. *Deficiency*, defined as the lack of teaching materials available in the field. *Desire* is defined as a desire for teaching materials to be given. The gap between needs and wants and existing shortcomings is then concluded as a need.

Needs analysis was carried out by interviews with teachers and questionnaires to students. The needs analysis item is based on the aspects of the teaching material component, and the literacy content component. The aspect of teaching materials consists of several indicators, namely, the need to know competency standards, the need for learning instruction, the need for material that is close to the student's world, and the need for practice or assessment. Literacy content aspects include indicators: the need to master voice pronunciation, the need to understand reading, the need to know the meaning of words, and the need for writing skills.

Based on questionnaires and interviews, the results of the needs analysis can be seen in Table 1.

Table 1. Results of Needs Analysis

<i>Aspects/Indicators</i>	<i>Condition should be</i>	<i>Existing conditions</i>	<i>Necessity</i>
Aspects of Teaching Materials			
Competency standards	Must be there	None	Needed
Study guide	Must be there	None	Needed
Materials that are close to students	Must be there	Inadequate	Needed
Exercise	Must be there	None	Needed
Aspects of Literacy Content			
Pronunciation	Must be there	None	Needed
Reading comprehension	Must be there	Inadequate	Needed
Understanding vocabulary	Must be there	None	Needed
Write	Must be there	None	Needed

Results of Analysis of Teaching Materials

The condition of the available teaching materials is obtained through observation. Of all the schools visited, there are schools that already have adequate literacy teaching materials, some have teaching materials for literacy programs on an emergency basis, and some do not. There are only a few schools that have adequate teaching materials for literacy programs. Usually, they are pilot schools that receive grants from provincial offices. They have literacy teaching materials in the form of guides for teachers and readings for students. The teacher handbook contains instructions that require the teacher to guide students during the literacy program. Student books are only in the form of reading (usually in the form of stories, both fantasy and motivation) which are divided into two, namely books intended for elementary school children at the lower level and books intended for elementary school children at the higher level. Therefore, in terms of language and materials, it is indeed in accordance with the level of child development. However, the material in it is not related to classroom learning. The content is usually in the form of stories that do not contain any elements of local Kuningan wisdom, even in terms of appearance accompanied by illustrations that help students visualize what they read. In addition, it is only in the form of text that does not contain any instructions so that students' critical thinking skills are not highlighted too much through books. This means that students rely heavily on the instruction given by the teacher during the lessons.

As for schools that have emergency teaching materials, literacy teaching materials are usually in the form of books in the form of story books or self-development and motivation books. The language used in it is usually a popular language. The language in storybooks is usually appropriate, but many other general books are not suitable for elementary school children. Some of the material presented is in accordance with the development and needs of the child and some are not. There are materials that are suitable for learning in class, such as writing and speaking skills, and there are also materials that are just stories and ordinary general information. In terms of layout, these books only use emergency illustrations, and they don't even tend to be interesting enough for students. The content of this book is general and not something close to the world of students. There is no arbitrary instruction, and no *output* is required from the book, so according to the researchers, it does not stimulate students' levels of thinking.

This situation illustrates a significant gap between the availability and quality of literacy teaching materials and the actual needs of students in elementary schools. The lack of integration between literacy content and classroom learning objectives, as well as the absence of localized cultural elements, limits the relevance and effectiveness of the materials. Furthermore, the absence of structured guidance or tasks within the student books hampers the development of students' higher order thinking skills, such as analysis, evaluation, and reflection. Students are placed in a passive position, relying solely on the teacher's direction rather than engaging with the materials independently. In schools with only emergency materials, the use of inappropriate language, unengaging visuals, and content that is often disconnected from the students' context further exacerbates the problem. These materials neither reflect the students' cultural background nor stimulate curiosity and critical thinking. Therefore, it becomes essential to design and develop literacy materials that are not only age-appropriate and pedagogically sound but also culturally relevant and cognitively stimulating. Materials that incorporate local wisdom and provide meaningful learning tasks can bridge the gap between students' real-life experiences and literacy development, ultimately contributing to more effective and contextualized literacy learning in schools.

Meanwhile, schools that do not have student literacy teaching materials usually only use package books as reading materials when implementing the GLS program. In summary, the results of observations about the literacy teaching materials can be seen in Table 2.

Table 2. Observation Results of Literacy Teaching Materials Available in Schools

<i>No</i>	<i>Observed Aspects</i>	<i>Observation Results</i>
1	Availability of literacy teaching materials	Of the ten schools observed, two schools have literacy teaching materials from the government. The school is a pilot school. One school provides its own teaching materials. The rest, only have a package book that is commonly used daily
2	Types of literacy teaching materials available	The literacy books provided by the government for elementary schools are divided into two, namely low level and high level. Usually in the form of a storybook. Meanwhile, schools that hold their own teaching materials, the books provided are story books and knowledge books, such as reading, writing, and speaking guides, as well as self-development books such as cultivation and crafts.
3	Available literacy teaching material content	
	a. Suitability of the material to classroom learning and students' abilities	Books provided by the government are usually in the form of story books. If it is adjusted to the learning material in the classroom, of course it is not fully appropriate, because in elementary school the high grade is not only about narrative texts, but there are also procedures and so on. However, in terms of suitability with students' abilities, these books are quite appropriate because they are intended for high and low classes. Meanwhile, books provided by schools themselves are usually only general knowledge books that are not related to classroom learning. In terms of suitability with children's abilities, many are not suitable, feasible in terms of language and in terms of the material provided. Less suited to their needs.
	b. The content of the values in the available teaching materials	Character values are usually found in storybooks.
4	The display of available literacy teaching materials includes the layout and use of illustrations	For storybooks, it is equipped with illustrations that help children visualize the content. The illustrations are quite interesting with color images and according to the content of the story. The layout is also quite right. Meanwhile, the reading books provided by schools are mostly only in the form of minimal reading books with illustrations. If anything, it is just a black and white image that is less attractive to students.
5	The available literacy teaching materials include grammar, word choice, and sentence use	In terms of language, books from the government are in accordance with the level of child development. This is because literacy books from the government have indeed been adjusted for elementary school children. Meanwhile, there are still many books provided by schools that are not suitable. The languages spoken are many higher languages. For example, in one of the books found with the title "Puisi Indonesia Sebelum Kemerdekaan". In terms of content and language, it seems that the book is indeed intended for students.
6	The content of Kuningan local wisdom in the available literacy teaching materials	Of all the schools observed, there was not a single teaching material that contained local wisdom of Kuningan.
7	Clarity of instruction in available teaching materials	On average, the books given are only limited to reading. There are no specific instructions in it. Book instructions from the government are also only found in the teacher's book.
8	Components of teaching materials	Because it is only a reading and there is no instruction that must be done by students, the existing teaching materials are only in the form of readings or just information so that in terms of the completeness of the components, the available literacy teaching materials do not have complete components as teaching materials

Results of Teaching Material Development

The development of literacy teaching materials is based on the concept of balanced literacy which includes reading, writing and vocabulary learning activities. This is in accordance with the literacy approach used in the current School Literacy Movement (GLS). Reading activities are focused on reading comprehension in accordance with the reading literacy indoctrinator set by PISA.

The development of the theme is based on the need for students to learn based on the local wisdom where this research is conducted, namely the local wisdom of Kuningan Regency. The focus of local wisdom designed in this teaching material is several forms of typical culture that develop, exist, and sustain in Kuningan Regency. Based on this, literacy teaching materials were developed for 5th grade elementary school students in semester 1 which contained 5 themes, namely, 1) Traditional Brass Toys; 2) Brass Specialty; 3) Brass folklore; 4) Tourist attractions in Kuningan; and 5) New Year's Ceremony.

Visually, the teaching materials developed can be seen in Fig. 2.

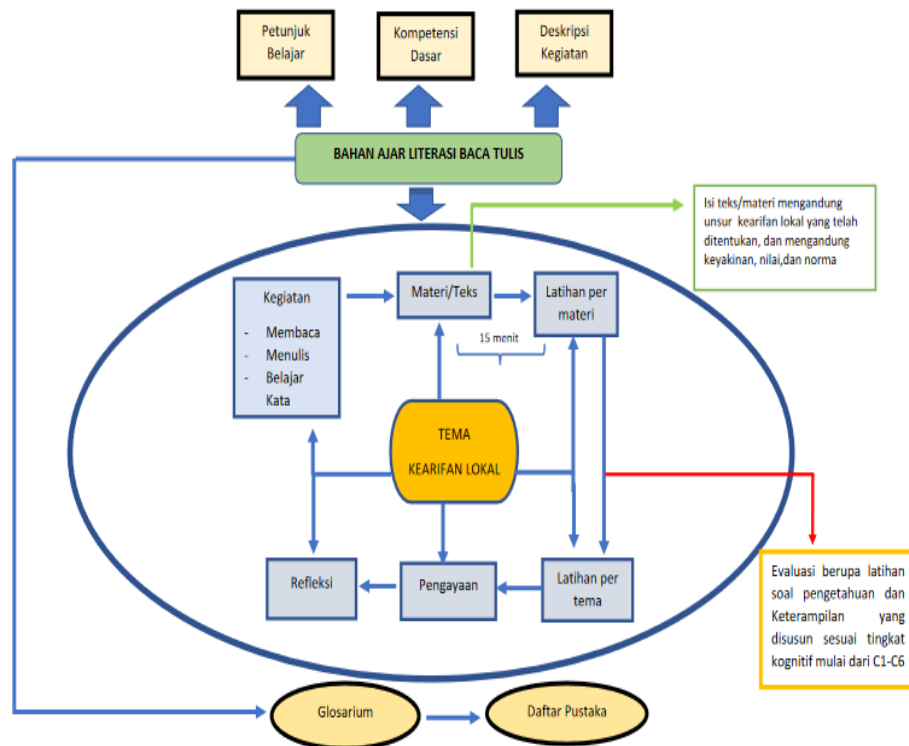


Fig. 2. Literacy Teaching Material Model Based on Local Wisdom in Kuningan

The teaching materials prepared reflect the local wisdom of Kuningan, which can be seen from the theme to the evaluation. An example of the display of teaching materials in the theme section that reflects the local wisdom of Kuningan can be seen in Fig. 3.



Fig. 3. Display of the Theme of Teaching Materials based on Local Wisdom

In addition to the theme, literacy teaching materials that reflect local wisdom are also seen in the reading texts used. Here are some of the views of reading texts contained in teaching materials and reflecting the local wisdom of Kuningan can be seen in Fig. 4.



Fig. 4. Display of Teaching Materials Text based on Kuningan local wisdom

The next part is the evaluation. This section also reflects the local wisdom found in Kuningan. This is reflected in every evaluation item provided can be seen in Fig. 5.

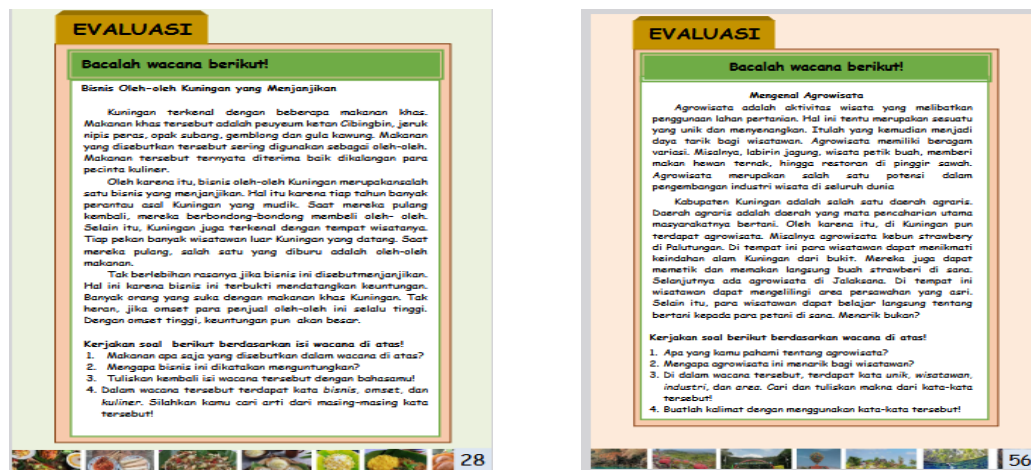


Fig. 5. Display of evaluation of teaching materials based on local wisdom in Kuningan

Feasibility Test Results

The feasibility of teaching materials is obtained by theoretical feasibility test and empirical feasibility test. The theoretical feasibility test is carried out with expert justification about the teaching materials developed. The experts in question are experts in teaching materials, literacy experts, local wisdom experts and linguists. The results are as follows: the results of the language feasibility test were declared feasible with an average score of 2.66; The results of the local wisdom feasibility test were declared feasible with an average score of 3.81; The results of the feasibility test of teaching materials were declared feasible with a score of 2.65; and the results of the literacy feasibility test were declared feasible with an average score of 3.50.

The empirical test is carried out by asking for student assessment through a one-to-one test, a small group test, and a large group test. For the one-to-one test, it is known that the average score of students is in the *feasible category*, with a score of **3.745**. For the small group test, it is known that the average score of students is in the *feasible category*, with a score of **3.685**. As for the large group test, it was found that students' assessments of teaching materials were in the appropriate category with a score of 3.6.

Effectiveness Test Results

The effectiveness test tested validity, realism, normality, and t-test. Test the validity of the product moment using IBM Statistics 25 software. From this calculation, it can be concluded that there are 10 questions that are valid and meet the indicators studied can be seen in Table 3.

Table 3. Question validation results

<i>Question</i>	<i>Nilai Sig. (2-tailed)</i>	<i>Nilai Pearson Correlation</i>	<i>Conclusion</i>
1	0,004	0,551	Valid
2	0,009	0,513	Valid
3	0,003	0,571	Valid
4	0,005	0,542	Valid
5	0,002	0,600	Valid
6	0,001	0,637	Valid
7	0,010	0,506	Valid
8	0,002	0,595	Valid
9	0,003	0,564	Valid
10	0,002	0,595	Valid

Furthermore, the results of the reliability test of literacy questions based on local wisdom showed that the question instrument had a decent level of reliability with an Alpha Cronbach value (0.766) can be seen in Table 4.

Table 4. Realibility Statistics

<i>Cronbach's Alpha</i>	<i>N of Items</i>
0,776	10

For the normality test, it is known that the significance value of Asymp.Sig (2-tailed) is $0.9772 > 0.05$. So it can be concluded that the data is distributed normally can be seen in Table 5.

Table 5. One-Sample Kolmogorov-Smirnov Test

		<i>Unstandardized Residual</i>
N		15
Normal Parameters ^{a,b}	Mean	,000000
	Std. Deviation	1,70909277
Most Extreme Differencess	Absolute	,171
	Positive	,110
	Negative	-,171
Kolmogorov-Smirnov Z		,663
Asymp.Sig. (2-tailed)		,772

a. Test distribution is normal

b. Calculated from data

The effectiveness test of the literacy teaching materials based on local wisdom involved several statistical analyses, including validity, reliability, normality, and t-test procedures. The validity test using the product moment formula in IBM Statistics 25 showed that all ten items were valid, with Pearson correlation values ranging from 0.506 to 0.637 and significance values (2-tailed) below 0.05, indicating strong correlations with the studied indicators. Reliability testing using Cronbach's Alpha yielded a value of 0.776, which signifies a high level of internal consistency and confirms the instrument's reliability. In terms of data distribution, the normality test through the Kolmogorov-Smirnov method indicated that the residuals were normally distributed, as the significance value (Asymp. Sig. = 0.772) was greater than 0.05. This means the data met the assumptions for further parametric analysis, such as the t-test, and confirms the statistical soundness of the evaluation instruments used in assessing the effectiveness of the developed literacy materials.

The effectiveness test was carried out by looking at the pretest and posttest scores after using the developed teaching materials. The results of the pretest and postes can be seen in Table 6.

Table 6. Pretest and post-test results

<i>Data</i>	<i>Pretest</i>	<i>Posttest</i>
1	3	10
2	5	9
3	9	10
4	7	8
5	6	7
6	7	7
7	7	9
8	5	8
9	6	7
10	5	4
11	7	10
12	2	9
13	7	10
14	9	10
15	3	6

The effectiveness test was carried out in grade 5 using a non-free sample t-test SPSS 25 application. From the test, it is known that there are differences before and after being given literacy teaching materials based on local wisdom for grade 5 students can be seen in Table 7.

Table 7. Paired Samples Test

<i>Paired Differences</i>								
			<i>95% Confidence Interval Of the Difference</i>					
	<i>Mean</i>	<i>Std. Deviation</i>	<i>Std. Error Mean</i>	<i>Lower</i>	<i>Upper</i>	<i>t</i>	<i>df</i>	<i>Sig. (2- tailed)</i>
Pair1 Pre test – post test	-2,44	2,293	,592	-3,670	-1,130	-4.054	14	,001

In the Paired Sample Statistics table, a sig value is obtained (2-tailed) is $0.001 < 0.05$, therefore H_0 is rejected and H_a is accepted. So it can be concluded that there is an average difference between the learning outcomes of the *pretest* and *posttest*.

In addition to assessing cognitive results by looking at pretests and posts, assessments are also carried out to hone students' creativity in writing poetry. The following are the students' grades in writing poems before and after using teaching materials can be seen in Table 8.

Table 8. Score of Writing Poetry Before and After Using Teaching Materials

<i>Sample</i>	<i>Pretest</i>	<i>Posttest</i>
Adi	50	85
Anis Herti A	55	83
Dilara Shillan R	50	88
Intan Tina A	68	80
Iztiyar A Altaf	60	70
Kamila Azka N	70	70
Khairani C A	75	88
Muthi F	55	83
Nizam	55	75
Raihan	55	70
Reyhan Syabiyyan	60	70
Rizky	50	80
Salwa Azhar	55	70
Zahwa Raiya M	68	70
Zyan	70	75
Total	896	1157
Rata-rata	59,7	77,13

From the table, we can see that the score of writing students' poems before using teaching materials is 59.7. After using the teaching materials, the score of writing students' poems became 77.13. This means that there is an increase in student scores before and after using teaching materials. This shows that students' poetry writing skills have improved. Qualitatively, it can be explained that students' abilities have improved which are tested with various cognitive levels ranging from remembering, applying, learning, assessing, to creating.

Discussion

Integrating of Local Wisdom in the Development of Literacy Teaching Materials

This research develops literacy teaching materials based on local wisdom in Kuningan Regency with the aim of enriching students' linguistic, cognitive, and socio-cultural skills. Elements of local wisdom that are used as material in this teaching material include traditional games, traditional foods, tourist attractions, folklore, and traditional ceremonies (Lubis, 2020). Each of these cultural elements has relevant value for enriching students' learning experiences, allowing them to learn in a more in-depth context, while introducing aspects of their own culture. The use of this local wisdom aims to create a more meaningful learning experience, which allows students to not only improve their literacy skills, but also deepen their understanding of their own culture.

Linguistic Dimension: Strengthening Students' Language Skill through Local Culture

The development of students' linguistic skills, which include reading and writing skills, is heavily influenced by material relevant to their experiences and lives. Tomlinson (2014) stated that material that is close to the student's world will be easier to understand, and this is reflected in the use of folklore, traditional games, traditional foods, and traditional ceremonies that are known to students. By associating teaching materials with things that are familiar to students, such as folklore that contains elements of local culture or traditional Kuningan games, these teaching materials become easier for students to understand.

Folklore and traditional games that are part of the Kuningan culture teach language and vocabulary in a context that is already familiar to students. For example, students who are familiar with traditional games such as *dadamparan* or *dadaluan* will find it easier to understand and relate the vocabulary used in the story or learning about the game to their everyday language. This reminds us of Kusuma's (2016) research, which states that the use of local culture in teaching materials enriches students' understanding of the language because they already have a strong initial knowledge of the context of the culture.

The Cognitive Dimension: The Development of Critical Thinking through Local Culture

In the cognitive dimension, the development of critical thinking skills is greatly influenced by material that can invite students to analyze and evaluate the information received. As stated by Agustina et al. (2022), the use of local culture in teaching materials helps students connect new knowledge with the knowledge they already have. In this case, students are not only learning folklore or cultural values from teaching materials but are also invited to think critically about the moral values or lessons contained in the stories. This is in line with Genlott's research that reading is engaging in, reshaping and critically examining where the world is described and is a culturally defined social activity (Genlott & Grönlund, 2016). The theory of constructivism also reinforces that each individual actually brings with him prior knowledge during learning. This statement is then reinforced by the opinion (Brooks & Brooks, 1999) which states that culture-based learning that goes hand in hand with the theory of constructivism will create a very comfortable learning process.

For example, folklore that contains lessons about cooperation or courage is often linked to students' social lives. By relating such stories to their daily activities, such as the celebration of traditional ceremonies or social activities in traditional games, students can analyze and assess those values in a more practical and applicable context. Damayanti et al. (2020) reveal that in literacy, it is important to include material that develops students' ability to analyze and think critically about the information they learn. In this way, local culture-based materials help students to not only understand the text but also construct their knowledge in a more critical and reflective way.

The literacy theory from Kern (2000) makes it clear that literacy involves three main dimensions: linguistic, cognitive, and sociocultural. In the linguistic dimension, literacy includes the ability to convert graphic symbols into verbal forms (reading) or vice versa (writing), which requires an understanding of morphological, lexical, and syntactic relationships in sentences. In this context, the use of elements of local

Kuningan culture in the teaching material enriches students' linguistic understanding because they are already familiar with the language and vocabulary used in folklore and traditional games.

On the cognitive dimension, Kern (2000) quoted Thorndike, who stated that literacy is a thought process that involves connecting written symbols with the knowledge that the reader already has. This process requires the ability to make predictions, inferences, and synthesize meaning. Thus, local culture-based materials that invite students to relate texts to their life experiences help them in developing critical and analytical thinking skills, which are crucial in improving their understanding of the texts they read.

Socio-Cultural Dimension: Connecting Social Understanding with Local Wisdom

The socio-cultural dimension in literacy involves students' understanding of the social and cultural context around them. Through elements of Kuningan culture used in teaching materials, such as traditional foods, tourist attractions, and traditional ceremonies, students are given the opportunity to deepen their understanding of the social values that exist in their communities. For example, students who learn about *Seren Taun* traditional ceremonies not only learn about cultural symbolism, but also understand the importance of social values such as togetherness and respect for tradition.

Sujinah (2019) and Riwu et al. (2019) argues that local culture-based teaching materials can enrich students' socio-cultural understanding because they can more easily relate learning to their daily social context. Similarly, Azizah et al. (2021) stated that integrating local culture in teaching materials also strengthens students' understanding of their social identity. By studying tourist attractions in Kuningan, such as *Darma Reservoir* or *Palutungan*, students learn to appreciate their nature and culture while also increasing their social awareness about the importance of environmental conservation.

The Effectiveness of Lokal Wisdom-Base Teaching Materials in Improving Student Literacy

The results of a trial conducted on teaching materials based on local wisdom show that this material is effective in improving student literacy. Based on the results of *one-to-one*, small group, and large group tests, as well as effectiveness tests conducted at SDN Cilowa 1, this teaching material succeeded in improving students' reading and writing skills. This is in line with Retnaningdyah (2019), who emphasizes the importance of a balanced literacy approach that includes reading, writing, and vocabulary skills. In this study, teaching materials based on local wisdom managed to integrate these three components very well, so that it not only improves literacy skills but also provides students with a deeper socio-cultural understanding.

In addition, Muhammadi (2017), Groen et al. (2018), Gumono (2013), and Gutierrez de Blume et al. (2021) also showed that teaching materials based on local culture play a major role in improving students' understanding of the reading they learn. By connecting teaching materials to local cultures, students more easily understand the text and relate it to the knowledge they already have. This proves that this teaching material based on local wisdom is not only effective in improving linguistic skills, but also in deepening students' cognitive and socio-cultural understanding.

The literacy teaching materials based on local wisdom developed in this study have proven to be effective in improving students' linguistic, cognitive, and socio-cultural skills. By integrating elements of Kuningan culture such as traditional games, traditional foods, tourist attractions, folklore, and traditional ceremonies, these teaching materials allow students to relate new knowledge to their daily life experiences. Materials that are relevant to students' lives make it easier for them to understand the text and improve their literacy skills overall. Therefore, this teaching material based on local wisdom can be an effective solution in improving the literacy of students in Kuningan Regency and strengthening their cultural identity.

Conclusion

Literacy teaching materials based on local wisdom prepared by the author according to needs, this is expected to meet the needs of the School Literacy Movement literacy teaching materials at the elementary school level and complement the shortage of available teaching materials. The teaching materials that have been prepared have also gone through a feasibility test, both empirical and theoretical. Therefore, when this teaching material is tested for effectiveness, it is declared effective in improving students' literacy skills. The government, both at the district, provincial and central levels, is expected to provide support for the further development and dissemination of this teaching material. This is because if it is proven that this teaching material can improve students' literacy skills, of course Indonesia's literacy level will increase both nationally and internationally. Thus, Indonesia's literacy ranking in PISA is no longer in the bottom 10.

Declarations

- Author contribution** : Ifah Hanifah is responsible for the entire research and article writing process. Sun Suntini and Ida Hamidah assisted in the process of data collection, qualitative data analysis and article writing. Meanwhile, Tong Thi Thuy Trang assisted with quantitative data analysis and article writing.
- Funding statement** : This research was fundid by LPPM Universitas Kuningan.
- Conflict of interest** : All authors declare that they have no competing interests.
- Ethics Approval** : Information on Ethics Approval and informed consent statements are required for all articles published in BAHASTRA since 2025.
- Additional information** : No additional information is available for this paper.

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