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Improving Elementary School Students' Understanding Through Islamic Education Teaching Materials Based on the Local Wisdom of the Cigugur Community

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Abstract

Elementary school students' understanding of Islamic Religious Education is often hindered by the lack of relevance between teaching materials and everyday life. This research aims to develop teaching materials based on the local wisdom of the Cigugur community as an innovative approach to enhance students' understanding of Islamic Religious Education content. The research method used is research and development (R&D) with the Borg and Gall model. The study involved 80 students as the experimental group and 50 students as the control group from several elementary schools in Cigugur District. Data collection techniques included questionnaires, comprehension tests, and observations of the learning process, while data analysis was conducted using t-tests and N-gain calculations. The results of the study indicate that teaching materials based on Cigugur's local wisdom effectively improve students' understanding compared to conventional methods. The integration of local cultural values into Islamic Religious Education makes the material more contextual, relevant, and engaging, while fostering students' critical thinking and problem-solving skills. Additionally, this approach contributes to the preservation of local culture, builds students' appreciation for regional traditions, and encourages active engagement in the learning process. This study provides an innovative model for developing teaching materials based on local wisdom in various regions as a solution to improving the quality of education in Indonesia.

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Keywords: Islamic Religious Education, teaching materials, local wisdom, students' understanding

Abstrak

Pemahaman siswa sekolah dasar terhadap Pendidikan Agama Islam (PAI) sering kali terkendala oleh kurangnya relevansi materi ajar dengan kehidupan sehari-hari. Penelitian ini bertujuan mengembangkan bahan ajar berbasis kearifan lokal masyarakat Cigugur sebagai pendekatan inovatif untuk meningkatkan pemahaman siswa terhadap materi PAI. Metode penelitian yang digunakan adalah riset dan pengembangan (R&D) dengan model Borg dan Gall. Penelitian ini melibatkan 80 siswa sebagai kelompok eksperimen dan 50 siswa sebagai kelompok kontrol dari beberapa SD di Kecamatan Cigugur. Teknik pengumpulan data meliputi kuesioner, tes pemahaman, dan observasi proses pembelajaran, sementara analisis data dilakukan melalui uji-t dan perhitungan N-gain. Hasil penelitian menunjukkan bahwa bahan ajar berbasis kearifan lokal Cigugur efektif meningkatkan pemahaman siswa dibandingkan dengan metode konvensional. Integrasi nilai-nilai budaya lokal dalam pembelajaran PAI membuat materi lebih kontekstual, relevan, dan menarik, serta mampu menumbuhkan keterampilan berpikir kritis dan pemecahan masalah siswa. Selain itu, pendekatan ini berkontribusi pada pelestarian budaya lokal, membangun rasa cinta siswa terhadap budaya daerah, dan mendorong keterlibatan aktif dalam proses pembelajaran. Penelitian ini memberikan model inovatif bagi pengembangan bahan ajar berbasis kearifan lokal di berbagai daerah sebagai solusi untuk meningkatkan kualitas pendidikan di Indonesia.

Kata Kunci: Pendidikan Agama Islam, bahan ajar, kearifan lokal, pemahaman siswa

Introduction

This challenge arises from various factors, including the lack of relevance of teaching materials to students' daily lives, which makes Islamic Religious Education materials less engaging and difficult for students to comprehend.[1] [2] [3] Recent research indicates that when teaching materials are

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not connected to students' daily contexts, the results include lower engagement and difficulty applying the knowledge learned in class to real-life situations.[4] [5] One significant study highlights that using concept maps and more structured visual aids can help students connect lesson materials with their prior knowledge and daily experiences.[6] [7] On the other hand, efforts to improve the quality of education at the elementary level are crucial to building a strong foundation for character development and students' broader understanding.[8] [9] Moreover, the lack of connection between teaching materials and students' real-life experiences can hinder the development of higher-order critical thinking and problem-solving skills, which are essential for students' long-term success.[10] [11]

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Local wisdom is a cultural asset that can be integrated into the learning process to enhance students' understanding.[12] [13] Local wisdom not only embodies rich cultural values but also reflects the real-life experiences of the surrounding community. This connection can help students relate lesson materials to their everyday lives. Integrating local wisdom into Islamic Religious Education teaching materials can provide students with more meaningful, contextual, and relevant learning experiences, making it easier for them to understand and apply the concepts they learn.

The Cigugur region is one area rich in local wisdom, encompassing the values, traditions, and knowledge of its local community. By developing teaching materials based on Cigugur's local wisdom, it is expected that students' understanding of Islamic Religious Education materials will improve, while also fostering a love for and awareness of local culture. This study aims to examine how Islamic Religious Education teaching materials based on Cigugur's local wisdom can be used to enhance elementary students' understanding of lesson content and identify the impact of using these materials on the overall learning process.

The research presented in this article offers a novel approach by integrating Cigugur's local wisdom into Islamic Religious Education teaching materials, a method that has not been widely implemented in elementary school curricula. Focusing on students' understanding through the lens of local cultural contexts introduces a new dimension to the learning process, which is expected to increase the relevance of the material to students' daily lives.

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This research could serve as a model for the development of other local wisdom-based teaching materials, which can be applied to various regions or communities across Indonesia. The new aspect introduced here is how teaching materials based on local wisdom can directly impact students' understanding, offering an alternative to conventional teaching methods that tend to be more generic. This study not only provides innovation in Islamic Religious Education instruction but also emphasizes the importance of preserving and introducing local culture to younger generations

Method

This study employs a research and development design based on Borg and Gall's theory. The data used in this research focuses on the development of teaching materials based on the Samin community for sixth-grade students at Public Primary School of Cisantana, Sukamulya, and Puncak, with a total of 80 students forming the experimental group. Meanwhile, Public Elementary School of Cileuleuy and Cipari, with a total of 50 students, served as the control group. The data collected includes a needs analysis and students' learning outcomes.The data collection techniques aim to assess students' ability to understand and learn about the local history of the Cigugur community. Data were gathered through questionnaires for teachers and students, as well as instruments to measure attitudes, understanding, and skills. Learning outcomes were assessed using the N-gain test, with results interpreted through the gain classification table (g). Hypothesis testing was conducted between the two population groups using a t-test.[14] The analytical techniques employed in this study include testing the validity

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of the questions, the reliability of the test items, the level of difficulty of the questions, and the discriminatory power of the questions. A test is considered valid if the results meet the predetermined criteria, ensuring alignment with the established standards.[15]

Result And Discussion

Teaching materials encompass all forms of content or media used in the learning process to assist students in understanding the subject matter or deepening their comprehension of specific topics within a subject. These materials can take the form of infographics, audio, articles, posters, books, modules, handouts, videos, presentation slides, or other digital media designed to support learning objectives and enhance understanding of particular topics. Teaching materials should be developed with consideration of pedagogical principles, relevance, alignment with the curriculum, and ease of comprehension for students.[16] [17]

The content in teaching materials typically includes several key elements designed to support the learning process and achieve educational goals: (1) Introduction: Provides an overview of the material to be studied, learning objectives, and the relevance of the material to real-life situations or

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specific contexts. It may also include motivation or reasons why the material is important to learn. (2) Learning Objectives: Clearly state what students are expected to achieve after studying the material. These objectives are usually specific, measurable, and aligned with the competencies to be attained. (3) Learning Content: Includes explanations of concepts, theories, principles, or information relevant to the topic being studied. This content can be presented in various formats, such as text, images, graphics, videos, or animations. (4) Examples and Illustrations: Provide concrete representations to clarify the concepts. (5) Exercises or Questions: Test students' understanding of the material. These can take the form of multiple-choice questions, fill-in-the-blank exercises, essays, or more complex project-based tasks. (6) Summary: Offers a brief recap of the main points discussed in the material, helping students recall and understand the essence of the topic. (7) Highlights: A more concise version of the summary, focusing on key concepts and essential information students need to remember. (8) Evaluation: Assesses the extent to which students have understood the material and achieved the learning objectives. This can include tests, quizzes, or other formal assignments. [18] [19] [20]

Meanwhile, culture encompasses the complex system of values, knowledge, norms, beliefs, morals, laws, traditions, languages, arts, and various other forms of expression shared by a group or society. Culture includes ways of life passed down from generation to generation, such as social practices, rituals, customs, and interaction patterns in daily life. It

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serves as a foundational framework shaping a community's identity and influences how they interact with their environment and other groups, whether in tangible forms (e.g., art, architecture) or intangible forms (e.g., language, norms, values). Culture is formed through socialization processes and inherited across generations, shaping the mindset and behavior of community members.

Description of Islamic Education Teaching Methods. [21] [22]

The description of Islamic Religious Education teaching methods for fifth-grade students, based on interviews with the principal of Public Elementary School in Cisantana, Cigugur Subdistrict, Kuningan Regency, conducted from February 12–15, 2024, reveals several important insights. In the teaching of Social Studies for sixth-grade students, the methods used are limited to lectures, question-and-answer sessions, and practice exercises. The media and teaching models applied lack creativity, innovation, and engagement. Consequently, many students face difficulties and are less active in thematic learning sessions.

Teachers at Public Elementary School of Cisantana utilize available teaching media, most of which are government-provided resources. However, the use of these media in teaching models remains infrequent. The teaching materials used are deemed insufficient to fully meet the needs of elementary school students, and the number of government-provided teaching materials is very limited. Students require more creative media with content relevant to their needs. Although the overall learning process for sixth-grade students is relatively conducive, some students occasionally lose

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focus and struggle to grasp local history materials. This may be attributed to teacher-centered learning methods, which render students passive, merely receiving information without actively participating by asking questions, answering, or expressing opinions.

This teaching material is expected to support teachers and students in social studies learning, particularly on topics related to motion and force. A needs survey for developing teaching materials focused on Samin community-based learning for sixth-grade elementary students has been conducted. The study involved sixth-grade students from Public Elementary School in Cisantana, Sukamulya, and Puncak, totaling 80 students as the experimental group, and sixth-grade students from Public Primary School in Cileuleuy and Cipari, totaling 50 students as the control group. All these schools are located in the Cigugur subdistrict, which is rich in cultural diversity, religions, beliefs, and well-preserved natural tourism. The results of the teaching material need survey are presented in Table 1.

Table 1. Summary of Survey Results on the Development of Community-

Aspect	Student		Teacher	
	Percentage	Information	Percentage	Information
Desired teaching materials	84%	Very much needed	95%	Very much needed
Language	90%	Very much needed	99%	Very much needed
Percentage	95%	Very much needed	95%	Very much needed
Review	87%	Very much needed	87%	Very much needed
Average	89%	Very much needed	93%	Very much needed

Based Learning Teaching Materials in Cigugur

The effectiveness of the teaching materials was tested by comparing the differences in student learning outcomes between the control group and the experimental group. Before assessing learning mastery, prerequisite tests

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were conducted, including normality and homogeneity tests. The data used consisted of pretest scores from the control and experimental classes.

The normality test was conducted to determine whether the samples from the population followed a normal distribution after the study was completed. This test used the pretest scores from both the experimental and control classes. The hypotheses for this test can be formulated as follows:
Ho: The initial data comes from a population with a normal distribution.
H1: The initial data comes from a population without a normal distribution.

The testing criterion is that if the significance value in the Kolmogorov-Smirnov test is greater than 5% ($p > 0.05$), then Ho is accepted, indicating that the sample comes from a population with a normal distribution. The results of the normality test for the initial data of the experimental and control classes are presented in Table 2

Table 2. Results of the Normality Test for the Experimental and Control Groups

Data	*Kolmogorov-Smirnov*		Conclusion	Informasi
	Statistic	Sig.		
Trial before test	1.227	0.099	Ho accepted	Normal data
Pre-test control	0.942	0.336	Ho accepted	Normal data

Based on the results of the normality test, a significance value of 0.099 ($p > 0.05$) was obtained for the experimental group and 0.337 ($p > 0.05$) for the control group. Thus, the null hypothesis (Ho) is accepted. It can be concluded that the initial data for both the experimental and control groups follow a normal distribution.

The homogeneity test was conducted to determine whether the samples were drawn from populations with uniform variances. To test the equality of variance between the two groups, a homogeneity test was performed using the pretest data from the experimental and control groups. The hypotheses for this test can be formulated as follows:

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Ho: The variance of pretest data in the experimental class is equal to the variance in the control class.

H1: The variance of pretest data in the experimental class differs from the variance in the control class.

The testing criterion states that if the significance value in Levene's test exceeds 5% ($p > 0.05$), the null hypothesis (Ho) is accepted, indicating that the variance of scores in the experimental class is equal to the variance in the control class. The results of the homogeneity test calculations are presented in Table 3.

Table 3. Results of the Homogeneity Test for Pretest Data in the Experimental and Control Groups

Levene Statistics	df1	df2	Sig.	Conclusion	Information
2.879	1	80	0.094	Ho accepted	Homogeneous

Based on the results of the homogeneity test shown in Table 4.8, the significance value from Levene's test is 0.094 ($p > 0.05$), indicating that the null hypothesis (Ho) is accepted. This means it can be concluded that the initial data for the experimental and control classes are homogeneous or have equal variances.

The next step is the t-test, conducted using SPSS version 28, to determine whether there is a significant difference between the pre-test results of the control group and the experimental group. The hypotheses tested are as follows:

Ho: The mean score of the experimental class is equal to the mean score of the control class.

H1: The mean score of the experimental class is higher than the mean score of the control class.

The testing criterion states that if the significance value in the t-test exceeds 5% ($p > 0.05$), the null hypothesis (Ho) is accepted, meaning that the pre-test scores of students in the experimental class do not significantly differ

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from those in the control class. The results of the t-test calculations are presented in Table 4.

Table 4. Pre-Test Results of the Control and Experimental Groups

		t-test for Equality of Means		
Pretest	Equal variances assumed	0.248	80	0.805

The t-test results for the wc.re-test of the control and experimental groups show a significance value of 0.248, which is greater than α = 0.05. Therefore, the null hypothesis (Ho) is accepted. This indicates that there is no significant difference between the average pre-test scores of the control and experimental groups. As such, both samples qualify for further testing.

The improvement in students' learning outcomes was analyzed using the normalized Gain average. To provide an overview of the improvement in students' learning outcomes, the summary of pre-test and post-test results for the experimental and control classes is presented in Table 5 below.

Table 5. Pre-Test and Post-Test Results of the Experimental and Control Classes

		Groups	
Variable	Statistics	Experimental Class	Control Class
Pretest	Min	40	30
	Max	90	90
	Mean	64.51	63.80
Postest	Min	70	60
	Max	90	90
Variables	Statistic	Groups	
	Mean	83.26	76.18
Normalized	Gain	0.50 (Medium)	0.30 (Medium)

The improvement in students' learning outcomes is demonstrated through the normalized gain line. Both the experimental and control classes

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experienced learning improvements that fall into the medium category. However, the improvement in the experimental class was higher compared to the control class. The learning improvement in the control class was 0.30, while in the experimental class, it reached 0.50. Therefore, it can be concluded that teaching materials oriented towards Problem-Based Learning (PBL) with the assistance of an Android application are effective in enhancing students' learning outcomes, particularly in the aspect of cognitive development. The hypothesis testing for the difference in means was conducted using a t-test, and the results of the t-test calculations are presented in the following table.

Table 6. Comparison of Student Learning Outcomes between the Experimental Group and the Control Group

	n	Average	T	df	Sig. (2-tailed)	Conclusion	Inf
Experiment	40	83.26	3.796	80	0.000	Ho is rejected	Significant
Control	42	76.18					

This finding is consistent with several studies that suggest PBL materials supported by Android applications are an effective teaching method that leverages digital technology to enhance student understanding. PBL is a learning approach that emphasizes solving real-world problems as the central activity, encouraging students to think critically, collaborate, and apply their knowledge in practical contexts. This method has proven effective in improving learning outcomes by combining problem-based learning with

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engaging digital technology.[23] [24] Students become more active and involved in the learning process, which contributes to enhancing cognitive skills such as critical thinking and problem-solving. By utilizing Android applications, these learning materials offer more dynamic and engaging interactions for students, allowing access to additional resources and providing tools for collaboration and more effective assessment. The use of Android applications in PBL facilitates the integration of technology into learning. These apps can offer features like interactive quizzes, discussion forums, and supplementary materials that support the learning process. Android applications also provide flexibility for students to learn anytime and anywhere. [25] [26] [27]

Overall, students use PBL-based learning materials with the support of Android applications as a means to learn more actively, flexibly, and collaboratively. This integration of technology not only enhances student understanding but also develops essential skills such as critical thinking, communication, and problem-solving. Thus, this approach offers an innovative solution that is relevant to the learning needs of the digital era.

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The development of PBL-based learning materials with Android applications has great potential to improve student understanding and critical thinking skills. However, challenges such as infrastructure limitations, technological skills, funding, and resistance to change must be addressed with a systematic approach and continuous support from all stakeholders. By overcoming these obstacles, the technology-based PBL method can become an innovative solution to enhance the quality of education in the digital age.

This article is closely related to research on the effectiveness of technology-assisted PBL models. If the Math Home app and E- Student Worksheet based on Android in PBL effectively enhance understanding of mathematical concepts, [28] [29] then locally wisdom-based learning materials also serve a similar function in the context of Islamic Education. Both emphasize contextual learning that is relevant to students' lives, making the learning process more meaningful and improving understanding. While digital technology creates dynamic engagement, local wisdom provides a culturally based approach that builds a strong connection between the teaching materials and the students' realities. These two approaches are superior to conventional methods because they encourage critical thinking, problem-solving, and deep understanding through contexts that are closer to students' experiences.

[28] Sumaji Devita Afriyani, Savitri Wanabiliandari, "Efektivitas Penggunaan Model Pembelajaran Problem Based Learning (PBL) Berbantuan Math Home Application Untuk Meningkatkan Pemahaman Konsep Matematis Siswa," in *Seminar Nasional Pendidikan Matematika (Snapmat)*, 2023.

[29] M.A. Fitriyah, I.M.N., & Ghofur, "Pengembangan E-LKPD Berbasis Android Dengan Model Pembelajaran Problem Based Learning (PBL) Untuk Meningkatkan Berpikir Kritis Peserta Didik," *Edukatif* 3, no. 5 (2021): 1957–70, https://doi.org/https://doi.org/10.31004/edukatif.v3i5.718.

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Conclusion

It was revealed that the local wisdom-based Islamic Religious Education teaching materials from the Cigugur community are effective in improving students' skills during the learning process. This is demonstrated by the t-test result, where the calculated t-value is 3.797. The t-table value for df = 80 with a 5% significance level is 1.989. Since the calculated t-value (3.797) is greater than the t-table value (1.989), the null hypothesis (Ho) is rejected and the alternative hypothesis (H1) is accepted. This shows that the learning outcomes of students using the local wisdom-based Islamic Religious Education teaching materials from the Cigugur community are better compared to learning that only relies on lectures and group discussions.

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