

The Implementation of a Local Wisdom-Based English Learning Model to Improve Students' English Proficiency at SDN 11 Mengkendek Tana Toraja

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Abstract

This study investigated the effectiveness of a local wisdom-based English learning model in enhancing the English proficiency of fifth-grade students at SDN 11 Mengkendek, Tana Toraja, Indonesia. The model integrates Torajan cultural values into English instruction to provide students with meaningful and contextually relevant learning experiences. Employing a quantitative experimental design with a one-group pretest-posttest approach, the study involved 23 participants selected through cluster sampling. Data were collected using an English proficiency test measuring vocabulary and sentence structure, while data analysis was conducted using SPSS software. Statistical analyses included descriptive statistics, the Shapiro-Wilk normality test, the Wilcoxon Signed-Rank Test, and the calculation of effect size (r). Results revealed a significant improvement in students' posttest scores ($Z = -4.02$, $p = 0.000$), with a very large effect size ($r = 0.84$), indicating that the model had a substantial pedagogical impact. The findings affirm that embedding local culture such as the Torajan values of *kasianggaran*, *kasiuluran*, and *kasialamasean* into English learning fosters stronger engagement, comprehension, and cultural identity. This study supports the principles of Contextual Teaching and Learning (CTL) and highlights the importance of culturally responsive pedagogy in improving English education within Indonesia's multicultural settings.

Keywords: *local wisdom, Toraja culture, contextual learning, English proficiency, culturally responsive pedagogy*

Introduction

English language learning in primary schools in Indonesia still faces various challenges, especially the low motivation of students to learn and the lack of relevance of the material to the context of their lives. Many students view English as a difficult and abstract subject because the learning material is often detached from the learners' local social and cultural background (Alfian, 2019; Hulaimi, 2019). This condition has an impact on the low involvement of students and less than optimal achievement of English language competence, especially in the aspects of vocabulary and sentence structure.

Various studies show that the integration of local cultures in English learning can increase student motivation, understanding, and engagement. Fitri et al. (2016) developed English language teaching materials based on local culture and found that this approach was able to increase student participation and make learning more meaningful. Research by Azizah and Surya (2017) at the primary school level also shows that culture-based English learning has a positive impact on students' learning interests

and attitudes. In addition, Prayati et al. (2020) reported that culture-based English materials not only improve students' academic achievement, but also encourage more active classroom interaction. These findings underscore the importance of cultural context in English language learning, particularly at the primary education level.

Nevertheless, most of the previous research still focuses on the development of teaching materials or the description of the implementation of culture-based learning. Meanwhile, quantitative empirical studies that specifically test the effectiveness of local wisdom-based learning models to improve the English language skills of elementary school students, especially in the Tana Toraja region, are still limited. In addition, studies that explicitly integrate Toraja cultural values into English learning models and measure them through experimental design are still rare. This is the research gap in this study.

Theoretically, this research is based on Contextual Teaching and Learning (CTL) approach. This approach emphasizes the linkage between learning materials and students' real experiences (Alfian, 2019; Meliani et al., 2023). CTL views learning as an active process that occurs when students are able to relate new knowledge to the context of everyday life. In addition, this study is also based on The Theory of Culturally Responsive Pedagogy, which emphasizes the importance of recognizing and utilizing students' cultural backgrounds as learning resources to improve learning effectiveness (Gay, 2018). In this context, local culture not only serves as learning content, but also as a means to build students' identity, motivation, and emotional engagement.

SDN 11 Mengkendek in the Tana Toraja region is a relevant context for the application of local wisdom-based learning. This is very relevant because students live and interact directly with Toraja cultural values in their daily lives. The integration of local cultural elements in English learning is expected to help students associate vocabulary, sentence structure, and language meaning with their concrete experiences. Therefore, this study aims to empirically test the effectiveness of the English language learning model based on Toraja local wisdom in improving the English language skills of elementary school students, especially in the aspects of vocabulary and sentence structure.

Thus, this study is expected to make a theoretical contribution to the development of English learning. Especially culture-based learning as well as practical contributions to teachers. In addition, this study is also expected to contribute to education policy makers in designing contextual and culturally sensitive English learning in Indonesia's multicultural environment.

Method

Study Design

This research utilized a quantitative experimental design, specifically a one-group pretest-posttest framework, to assess the effectiveness of a local wisdom-based English learning model on students' English proficiency. This design involved measuring a single group of participants both before and after the intervention to identify changes attributable to the treatment (Dimitrov & Rumrill, 2003; Creswell, 2009; Creswell & Creswell, 2018). The design is well-suited for classroom-based educational experiments in situations where random assignment is impractical, yet measurable outcomes can be assessed before and after the intervention.

Participants

The subjects comprised 23 fifth-grade students from SDN 11 Mengkendek, Tana Toraja, Indonesia. The sample was chosen by a cluster selection method, enabling the researcher to identify entire groups (e.g., classrooms) that possess comparable learning contexts (Cohen et al., 2017). This method is suitable for school-based research where logistical and ethical factors render individual random sampling challenging. All participants were aged 10 to 11 years and had previously undergone fundamental English training. Consent from both parents and the institution was secured prior to data collection.

Data Collection Techniques and Instruments

A test of English competence that was devised by the researcher was the primary instrument that was utilized for the purpose of data collection. The test was comprised of two subtests: (1) Vocabulary is the process of evaluating pupils' comprehension of English terms that are relevant to everyday life and the culture of the area. (2) Measurement of grammatical proficiency through the use of short-answer items is referred to as sentence structure.

The study was conducted in three primary phases over a duration of six weeks: (1) Pretest Phase: Students undertook the English proficiency assessment to determine baseline performance. (2) Treatment Phase: The educator executed English courses grounded in local wisdom, incorporating Torajan cultural features, including traditional architecture, cuisine, and indigenous knowledge such as *kasianggaran*. The lessons adhered to a contextual learning framework. (3) Posttest Phase: The same assessment was conducted following the intervention to evaluate enhancements in students' English proficiency. All classroom activities prioritized student engagement, cooperation, and cultural consciousness, consistent with the tenets of culturally responsive pedagogy (Gay, 2018).

Data Analysis Techniques

Data were analyzed with PSPP software, a complimentary statistical analysis program comparable to SPSS (GNU PSPP, 2024). The subsequent analytical procedures were executed: (1) Descriptive Statistics: Computation of mean and standard deviation to characterize central tendency and score variability. (2) Normality Testing: Performed utilizing the Shapiro–Wilk test to ascertain if the data adhered to a normal distribution, a prerequisite for picking the suitable statistical test (Ghasemi & Zahediasl, 2012). (3) Wilcoxon Signed-Rank Test: Due to the infringement of the normality assumption ($p < 0.05$), the Wilcoxon Signed-Rank Test was utilized as a non-parametric substitution for the paired t-test (Pallant, 2020).

The treatment effect's strength was determined using Cohen's r calculation, indicating practical significance beyond mere statistical difference (Field, 2018). All statistical analyses were performed at a significance level of 0.05. The findings were further analyzed in accordance with pedagogical theory and existing research on culture-oriented English language acquisition in Indonesia (Fitri et al., 2016; Tandikombong et al., 2024).

Results

This section presents the results of data analysis. The results were obtained from students' English proficiency tests before and after the application of the Toraja local wisdom-based learning model. The analysis was conducted to identify changes in students' ability to vocabulary and sentence structure as an impact of the treatment given. The results presented include descriptive statistics to illustrate the general trend of student scores. Data normality test was conducted as a basis for the selection of analytical techniques. Wilcoxon Signed-Rank test was conducted to determine the difference between pretest and posttest scores, and the calculation of the effect size is done to show the power of the influence of the Applied Learning model.

Descriptive Statistics

Table 1. Descriptive Statistics

	N	Mean	Std Dev	Minimum	Maximum
Pre-test	23	48.04	27.08	10.00	95.00
Post-test	23	73.91	26.71	20.00	100.00
Valid N (listwise)	23				
Missing N (listwise)	0				

Descriptive analysis revealed an elevation in the mean scores from the pretest to the posttest following the implementation of the local wisdom-based learning approach. This suggests that students typically achieved higher scores following instruction using a culturally relevant approach.

Normality Test

Table 2. Case Processing Summary

	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Pre-test	23	100.0%	0	.0%	23	100%
Post-test	23	100.0%	0	.0%	23	100%

Table 3. Tests of Normality

	Shapiro-Wilk		
	Statistic	df	Sig.
Pre-test	.86	23	.00

The Shapiro-Wilk test produced a significance value of 0.00, which is less than 0.05, suggesting that the data were not regularly distributed. Consequently, the Wilcoxon Signed-Rank Test was employed for additional analysis.

Wilcoxon Signed-Rank Test

Table 4. Ranks

		Mean Rank		Sum of Ranks
		N	Mean Rank	
Pre-test – Post-test	Negative Ranks	22	12.27	270.00
	Positive Ranks	1	6.00	6.00
	Ties	0		
	Total	23		

Table 5. Test Statistics

	Pre-test	Post-test
	Statistic	Sig. (2-tailed)
Z	-4	.000
Asymp. Sig. (2-tailed)		

The Wilcoxon test indicated that 23 students exhibited score improvements (negative ranks), one student experienced a score decrease, and no students maintained their scores. The findings revealed $Z = -4.02$ and Asymp. Sig. (2-tailed) = 0.000, which is less than 0.05, thereby confirming a statistically significant difference between pretest and posttest scores. The local wisdom-based model significantly enhanced students' English proficiency.

Effect Size

$$r = \frac{|Z|}{\sqrt{N}} = \frac{4.02}{\sqrt{23}} = \frac{4.02}{4.795} = 0.839$$

The effect size (r) is 0.84, which is categorized as a very large effect according to Cohen's criteria: 0.1 indicates small, 0.3 medium, and 0.5 large. The findings indicate that the implementation of a local wisdom-based English learning model significantly improved students' learning outcomes.

Discussion

The results of this study indicate that the application of the English language learning model based on Toraja local wisdom has a significant impact on improving the English language skills of students in Grade V of SDN 11 Mengkendek. A significant increase in posttest scores and a very large effect size value ($r = 0.84$) indicate that this learning model is not only statistically effective, but also pedagogically meaningful. These findings provide important information for readers that local cultural integration is not merely a contextual approach, but rather an instructional strategy that has a real impact on student learning outcomes.

Conceptually, the success of this model can be explained through the Contextual Teaching and Learning (CTL) approach. Learning that links English material to students' cultural experiences allows for a process of meaning-making, in which students not only memorize vocabulary and sentence structure, but understand their meaning in real-life contexts. When vocabulary and example sentences are associated with familiar Toraja cultural practices students find it easier to establish relationships between language form and meaning. This supports the view of Alfian (2019) and Meliani et al. (2023) that contextual learning improves knowledge retention and transfer.

From the perspective of Culturally Responsive Pedagogy, these findings suggest that recognition of students' cultural identities contributes to increased emotional engagement and learning motivation. The local culture not only serves as a setting for the story, but as a source of legitimacy for the student's learning experience. When Toraja culture is presented in English language learning, students feel that the foreign language is relevant to their lives, not something separate from social reality. This is in line with Gay's theory (2018) which asserts that culturally responsive learning is able to create an inclusive learning environment and empower students.

The results of this study also reinforce the findings of previous research. Fitri et al. (2016) and Azizah and Surya (2017) reported that culture-based English learning increases student motivation and participation. However, this study provides additional information for readers by presenting strong quantitative evidence on the magnitude of the influence of local wisdom-based learning models through the calculation of effect size. Thus, this study not only supports the previous findings, but also broadens the understanding of the pedagogical power of local cultural integration in English language learning in primary schools.

In addition, these findings indicate that Toraja cultural values can serve as cognitive and affective media in language learning. Cognitively, local culture helps

students associate language concepts with existing knowledge schemes. Affectively, the local culture fosters a sense of belonging, pride, and comfort in the learning process. This information is important to readers because it shows that learning English does not have to come at the expense of local identity, but rather can strengthen it.

The pedagogical implication of this study is that English teachers, particularly in areas with strong local cultural richness, need to design learning that systematically integrates local cultural values, practices and symbols. This approach is not only relevant for the context of Tana Toraja, but can also be adapted in other areas of Indonesia with different cultural characters. Thus, the reader gets an idea that the learning model based on local wisdom has broad potential to be applied in the context of multicultural education.

Conclusion

Based on the results of research and discussion, it can be concluded that the English learning model based on Toraja local wisdom is significantly able to improve the English language skills of students in Grade V of SDN 11 Mengkendek. The main problem of this study, namely the low English proficiency of students due to less contextual learning and not connected with their cultural experiences, can be overcome through the application of learning models that integrate local cultural values into the English learning process. Wilcoxon Signed-Rank test results showed a significant difference between pretest and posttest scores ($Z = -4.02$; $p = 0.000$), which confirms that local wisdom-based learning has a real impact on improving students' vocabulary mastery and sentence structure. The very large value of the effect size ($r = 0.84$) reinforces the finding that the model is not only statistically effective, but also pedagogically relevant in the context of English language learning in primary school.

Thus, this study answers the problem of English learning in elementary school which has tended to be abstract and independent of the socio-cultural context of students. The integration of Toraja cultural values makes learning more meaningful, increases student engagement, and strengthens their cultural identity in the process of learning a foreign language. Therefore, this learning model should be recommended as an alternative approach to learning English that is contextual and responsive to local culture, especially in areas with a strong cultural background.

Suggestions

This study's findings suggest several suggestions for educational practice and further research. English educators are encouraged to include local tourism pictures and other culturally relevant materials in their lessons to enhance the significance and motivation of vocabulary acquisition for students. Incorporating pictures relevant to students' daily lives and cultural contexts helps facilitate the connection between abstract English terminology and tangible experiences. Secondly, curriculum creators ought to incorporate locally rooted cultural learning resources into national English teaching materials to enhance both linguistic and cultural proficiency. Subsequently, future research could enhance this study by incorporating more samples, diverse grade levels, or comparator groups to bolster generalizability. Qualitative methods, including classroom observations and interviews, may yield profound insights into the impact of cultural familiarity on student engagement and long-term vocabulary retention.

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