



The Effectiveness of Implementing the Project Based Learning Model in Teaching the Writing Element of Procedural Texts Based on the Local Wisdom of Sengkang Silk Sarong Among Eleventh-Grade Students of Vocation High School

Nurmilasari¹, Muh. Safar², Andi Tenri Sua³, Ilma Rahim⁴

^{1,2,3}Department of Indonesian Language Education, Muhammadiyah University of Bone, Bone, South Sulawesi, Indonesia

⁴Department of Indonesian Language and Literature, Faculty of Indonesian Language and Literature, Makassar State University, Indonesia

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Abstract

The Effectiveness of Applying the Project Based Learning Model in Teaching the Writing Elements of Procedural Texts Based on the Local Wisdom of Sengkang Silk Sarongs among Eleventh Grade Students of SMK Negeri 1 Wajo. This study aims to determine the effectiveness of the Project Based Learning (PjBL) model in teaching the writing elements of procedural texts based on the local wisdom of Sengkang silk sarongs among eleventh-grade students of SMK Negeri 1 Wajo. This research employed a quantitative approach with a pre-experimental design (one-group pretest-posttest design). The subjects were 32 students of the Computer and Network Engineering Department (TKJ) selected through purposive sampling. Research instruments included observation sheets for teacher and student activities and a writing skills test for procedural texts. Data were analyzed using descriptive statistics and t-tests to examine the difference between pretest and posttest results. The findings revealed a significant improvement in students' ability to write procedural texts after the implementation of the PjBL model based on the local wisdom of Sengkang silk weaving. The posttest scores were higher than the pretest scores,

Corresponding Author:

Nurmilasari
nurmilasarisalam@gmail.com
Department of Indonesian
Language Education,
Muhammadiyah University
of Bone, Bone, South Sulawesi,
Indonesia

indicating that the PjBL model effectively enhanced students' writing skills. Moreover, this model fostered active participation, creativity, and cultural awareness among students. Integrating local wisdom into the learning process provided more meaningful and contextual learning experiences while contributing to the preservation of regional cultural values.

1. Introduction

Writing skills are one of the essential competencies in Indonesian language learning, particularly at the vocational high school level. In learning procedural texts, students are required to present steps systematically, logically, and in accordance with linguistic rules. However, in practice, students' writing abilities remain relatively low. They often experience difficulties in organizing text structure, constructing imperative sentences, and applying appropriate spelling and punctuation.

These problems are closely related to the predominance of teacher-centered learning practices, which limit students' opportunities to actively construct knowledge. As a result, students tend to be passive and less engaged in meaningful learning experiences.

To address this issue, an innovative and student-centered learning model is required. One such model is Project Based Learning (PjBL), which emphasizes learning through projects that involve planning, implementation, and evaluation processes. Previous studies have shown that PjBL can improve students' writing skills, critical thinking, and collaboration. However, most of these studies focus on general learning contexts without integrating cultural elements.

The integration of local wisdom into learning is an important strategy to create contextual and meaningful learning experiences. In this study, local wisdom is represented by the Sengkang silk sarong, a cultural heritage that reflects local identity and values. Incorporating such cultural elements into learning not only enhances students' motivation but also contributes to cultural preservation.

Despite numerous studies on PjBL, there is still a gap in research that specifically examines the integration of PjBL with local wisdom in teaching procedural text writing. Therefore, this study aims to investigate the effectiveness of implementing the Project Based Learning model based on local wisdom in improving students' procedural text writing skills.

2. Method

Research Design: this study employed a quantitative approach using a pre-experimental design with a one-group pretest–posttest model.

Participants: the participants were 32 eleventh-grade students from the Computer and Network Engineering (TKJ) program at SMK Negeri 1 Wajo. The sample was selected using purposive sampling, considering that the class had relatively low writing performance based on preliminary observations.

The instruments used in this study included: a procedural text writing test (pretest and posttest), observation sheets for teacher and student activities, a writing assessment rubric covering structure, content, language use, and mechanics

The rubric was validated by experts, and reliability was ensured through consistent scoring criteria.

Procedure the study was conducted over several meetings, consisting of: pretest administration, implementation of PjBL based on local wisdom (project on Sengkang silk sarong procedural texts), posttest administration

Data Analysis were analyzed using: descriptive statistics (mean, minimum, maximum), normality test, paired sample t-test to determine significance, N-Gain analysis to measure improvement level

Ethical Consideration: permission was obtained from the school, and participants were informed about the research purpose.

3. Result

The results show a significant improvement in students' procedural text writing skills.

The pretest mean score was 64.38, indicating low performance, with most students not achieving mastery. After the implementation of PjBL, the posttest mean score increased to 86.25, with all students achieving mastery .

Statistical analysis using paired sample t-test showed a significant difference between pretest and posttest scores ($p < 0.05$), confirming that the improvement was statistically significant .

Furthermore, the N-Gain analysis indicated that the improvement was in the high category, showing that the PjBL model had a strong effect on students' learning outcomes.

Category	Score Range	Frequency	Percentage
Very Good	86–100	0	0%
Good	76–85	5	15.63%
Fair	66–75	12	37.50%
Poor	≤65	15	46.87%

After implementing the PjBL model, a significant improvement was observed. The posttest mean score increased to 86.25, with the lowest score of 80 and the highest score of 95. All students (100%) achieved mastery. Improvement occurred across all assessment aspects: structure, content, language use, and mechanics.

Category	Score Range	Frequency	Percentage
Very Good	86–100	20	62.50%
Good	76–85	12	37.50%
Fair	66–75	0	0%
Poor	≤65	0	0%

The mean score increased by 21.87 points. Mastery learning improved from 9.37% to 100%, indicating that the PjBL model based on local wisdom had a positive impact on students’ learning outcomes.

Observational results also showed behavioral changes. Students became more active in discussions, more systematic in organizing steps, and more confident in presenting their project results. Project-based learning encouraged students to be directly involved in planning, implementing, and evaluating the procedural texts they created.

Overall, the results consistently demonstrate improvement in scores, achievement categories, and student engagement. Therefore, the PjBL model based on local wisdom is effective in improving students’ procedural text writing skills.

4. Discussion

The findings of this study confirm that Project Based Learning (PjBL) based on local wisdom is effective in improving students’ procedural text writing skills.

From a constructivist perspective, learning occurs when students actively construct knowledge through real experiences. In this study, students were directly involved in observing and understanding the process of making Sengkang silk sarongs. This experience enabled them to better organize ideas into structured procedural texts.

The effectiveness of PjBL can also be explained by its learning stages, including planning, implementation, and evaluation. These stages guide students systematically in developing their writing. As stated in the thesis, PjBL encourages students to actively engage in learning through real and meaningful activities .

Moreover, the integration of local wisdom plays a significant role in enhancing student motivation. Learning based on familiar cultural contexts makes the material more relevant and meaningful. The Sengkang silk sarong not only provides a concrete example of procedural steps but also introduces cultural values such as discipline, patience, and responsibility.

Compared to previous studies that focus only on PjBL, this study offers a new contribution by integrating local wisdom into the learning process. This integration not only improves academic achievement but also supports cultural preservation.

In addition, students showed increased participation, collaboration, and confidence during the learning process. These findings indicate that PjBL creates a more active and engaging learning environment.

Therefore, the effectiveness of this model is influenced by three main factors:

1. Active student involvement
2. Contextual learning through local wisdom
3. Structured learning process in PjBL

5. Conclusion

The implementation of Project Based Learning based on local wisdom is proven effective in improving students' procedural text writing skills. This is indicated by the significant increase in mean scores and statistical test results.

The model also enhances students' engagement, creativity, and collaboration. Furthermore, integrating local wisdom makes learning more meaningful and contributes to preserving cultural values.

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