



Implementing Project-Based Learning For Improving Literacy In Madrasah Ibtidaiyah

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Received:

13 July 2022

Revised:

14 September 2022

Accepted:

16 October 2022

Published:

16 December 2022

Abstract:

This study aims to describe the steps of implementing project-based learning methods in developing students' reading skills and to measure the effectiveness of this method in improving reading comprehension among eleventh grade students. This study is based on the need for innovative methods that can improve students' literacy skills, especially in teaching Arabic at the secondary school level. The research approach uses a quantitative method with an experimental design, involving a control group and an experimental group. Data were collected through observation, interviews, questionnaires, documents, and tests, then analyzed using SPSS 25 statistical tools and a Likert scale for the questionnaire results. The results of the study showed that project-based learning was significantly effective in improving students' reading comprehension. This is indicated by the significant difference between the pre-test and post-test results in the experimental group compared to the control group. These findings are expected to be a reference for educators in implementing project-based learning strategies in various educational contexts.

Keywords: *Learning method, project-based learning, effectiveness.*

Abstrak:

Penelitian ini bertujuan untuk mendeskripsikan langkah-langkah penerapan metode pembelajaran berbasis proyek dalam mengembangkan keterampilan membaca siswa dan untuk mengukur efektivitas metode ini dalam meningkatkan pemahaman membaca di kalangan siswa kelas 11. Penelitian ini didasarkan pada kebutuhan akan metode inovatif yang dapat meningkatkan kemampuan literasi siswa, terutama dalam mengajar bahasa Arab di tingkat sekolah menengah. Pendekatan penelitian menggunakan metode kuantitatif dengan desain eksperimental, yang melibatkan kelompok kontrol dan kelompok eksperimental. Data dikumpulkan melalui observasi, wawancara, kuesioner, dokumen, dan tes, kemudian dianalisis menggunakan alat statistik SPSS 25 dan skala Likert untuk hasil kuesioner. Hasil penelitian menunjukkan bahwa pembelajaran berbasis proyek secara signifikan efektif dalam meningkatkan pemahaman membaca siswa. Hal ini ditunjukkan oleh perbedaan yang signifikan antara hasil pra-tes dan pasca-tes pada kelompok eksperimen dibandingkan dengan kelompok kontrol. Temuan ini diharapkan dapat menjadi acuan bagi para pendidik dalam menerapkan strategi pembelajaran berbasis proyek dalam berbagai konteks pendidikan.

Kata Kunci: *Metode pembelajaran, pembelajaran berbasis proyek, efektivitas*

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How to Cite:

Aulannisa, F. (2022). Implementing Project-Based Learning for Improving Literacy in Madrasah Ibtidaiyah. IJ-ATL (International Journal of Arabic Teaching and Learning), 6(2).

DOI: <https://doi.org/10.33650/ijat.v6i2.2405>

INTRODUCTION / المقدمة

In recent years, the role of Arabic as a subject in Indonesia has significantly expanded, evolving from a locally-based subject to a compulsory one taught from elementary schools (Madrasah Ibtidaiyah) through to higher education (Hasanah, 2020). This shift is driven by the richness of Arabic as a language of knowledge across various scientific and religious domains, as well as its deep historical influence on the Indonesian language (Kaptein, 2017). However, despite this increasing importance, Arabic instruction at the elementary level still faces persistent challenges. One of the most pressing issues is students' low reading comprehension skills (Khan, Shahbaz, Kumar, & Khan, 2020). Many students struggle to extract meaning from Arabic texts, often feeling disengaged or overwhelmed by lengthy and unfamiliar reading materials (Abubaker, 2017). This highlights a theoretical and practical gap between curriculum expectations and classroom realities—particularly in the development of reading literacy among young learners in Arabic language learning.

A growing body of research has explored various methods to enhance literacy and language skills in educational settings. For example, research suggests that teaching strategies that improve students' reading comprehension in Arabic highlight the limitations of traditional teacher-centered approaches, especially within the framework of Indonesia's 2013 Curriculum (Machali, 2014) and (Edeh-Okwuosah, 2022). Other research suggests that innovative pedagogical models—especially Project-Based Learning (PBL)—can significantly improve students' literacy, critical thinking, and engagement (Almulla, 2020) and (Chu, Tse, Loh, & Chow, 2011) and (Song, Razali, Sulaiman, Jeyaraj, & Ds, 2024). PBL is designed around real-world projects that encourage collaboration, creativity, and active student participation, all of which are essential elements in improving reading comprehension (Syahfutra & Niah, 2019) and (Ariani, 2023). However, there is little empirical research that specifically examines the effectiveness of PBL in teaching Arabic literacy at the elementary level, especially in the madrasah context.

In light of these findings and gaps, this study aims to investigate the implementation of Project-Based Learning as a pedagogical approach to improve reading comprehension skills among students at Madrasah Ibtidaiyah. The novelty of this research lies in its contextual focus: applying a constructivist and student-centered model—typically used in general or science education—to Arabic language instruction in a religious school setting. By integrating project work into Arabic reading lessons, this study seeks to uncover new pathways for fostering literacy, autonomy, and deeper engagement with texts in a culturally and linguistically rich environment.

It is hypothesized that the implementation of Project-Based Learning will significantly improve students' reading comprehension skills in Arabic compared to traditional instructional methods. The researcher argues that PjBL creates meaningful learning experiences that align with students' interests and social contexts, thereby enhancing their ability to decode, interpret, and critically analyze Arabic texts. This study, therefore, offers both theoretical contributions to Arabic language pedagogy and practical insights for educators in madrasah settings seeking to innovate their teaching approaches.

RESEARCH METHOD / المنهجية

This study employed a mixed-method approach, integrating both quantitative and qualitative methods, with an emphasis on the experimental method. The experimental approach was chosen because it is suitable for investigating the causal relationship or

effectiveness of a treatment by comparing outcomes between an experimental group and a control group (HR, Pd, Ahmad, ST, & Keb, 2024). As emphasized by Ahmad Badr, the experimental method is more powerful than conventional methods in discovering and expanding our understanding of phenomena or problems.

The type of experiment used in this study is a true experimental design, specifically the Pretest-Posttest Control Group Design (Lavanya Kumari, 2013). In this design, the participants were divided into two groups: an experimental group that received the treatment using the Project-Based Learning (PjBL) model, and a control group that did not receive the treatment. Both groups took a pretest and a posttest to measure improvements in literacy skills, particularly reading comprehension.

To collect comprehensive data, the researcher employed several instruments. Observation was carried out directly and in a structured manner to capture the learning environment, teacher performance, and student engagement during the implementation of the Project-Based Learning (PjBL) model. In addition, interviews were conducted with the Arabic language teacher and selected students from the experimental class. These interviews aimed to explore their experiences, perceptions, and the factors that influenced the application of the PjBL model. Documentation served as another important instrument, which included Arabic language textbooks, samples of students' project work, photographs taken during learning activities, and various supporting documents. Furthermore, a questionnaire was distributed to measure students' interest in learning Arabic in general, as well as their specific perceptions of the PjBL approach in developing reading skills. The data obtained from the questionnaire were analyzed using a Likert scale.

Lastly, to measure students' reading comprehension abilities before and after the implementation of the PjBL model, pretests and posttests were administered to both the experimental and control groups. These tests allowed the researcher to assess the effectiveness of the model in improving students' reading outcomes.

The collected data were analyzed using both qualitative and quantitative approaches. Qualitative data, which were obtained from observations, interviews, and documentation, were analyzed thematically to address research questions related to the implementation process, as well as to identify supporting and inhibiting factors in the application of the PjBL model. Quantitative data from the questionnaire responses were processed using descriptive statistical analysis. The percentage of each response was calculated using the formula:

$$\text{Percentage} = (\sum \text{Score} / \sum \text{Total Score}) \times 100\%$$

The results were interpreted using the following Likert scale classification: 84% to 100% was considered excellent; 68% to 84% was good; 52% to 68% was fair; 36% to 52% was poor; and 20% to 36% was very poor.

To analyze the test data, the researcher used SPSS version 25. The first step in the analysis was to perform a normality test using the Shapiro-Wilk method, as the sample size was below 50 (24 students). If the data met the assumption of normality, the researcher proceeded with parametric tests. These included the Independent Sample T-Test to compare results between the experimental and control groups, and the Paired Sample T-Test to compare pretest and posttest results within the same group. All statistical analyses were conducted at a significance level of 5% ($\alpha = 0.05$).

FINDINGS AND DISCUSSION / نتائج البحث و المناقشة

The Implementation of Project-Based Learning (PjBL) for Reading Skills at “Al-Ma'arif 7

Sunan Drajat” Islamic Senior High School in Lamongan

In implementing project-based learning for reading skills at this school, the researcher applied six steps: (1) presenting general material, (2) posing questions or problems, (3) evaluating the resources and materials used, (4) designing/planning the project, (5) executing the design or producing the project, and (6) conducting an evaluation. However, before applying these six steps, the researcher conducted a pretest for both the experimental and control groups. The aim of the pretest was to assess students' reading skills and their ability to comprehend reading materials.

These six steps were applied across five learning sessions. Implementing this method required more time, especially due to the reduced lesson hours at the school following the COVID-19 pandemic. Consequently, Arabic language lessons were limited to only one hour or 60 minutes per week. As explained in the previous chapter, some of the six steps applied in this research were developed further, particularly the steps of presenting general material and evaluating the resources and materials used. This is based on expert opinions which generally outline the following PjBL steps: (1) posing essential questions, (2) designing the project, (3) planning the schedule, (4) monitoring student progress, (5) testing results, and (6) evaluation.

After answering the pretest questions, the researcher asked students about their difficulties. Most students reported that the questions were difficult due to similar word meanings and the presence of unfamiliar vocabulary not found in the reading text. From their responses, the researcher learned that students relied heavily on contextual vocabulary clues in the texts and tended to ignore unfamiliar words, selecting answers based solely on text references. While this can be considered a test-taking strategy, it also suggests a lack of vocabulary comprehension. These issues were reflected in the pretest results and became a foundation for applying the PjBL approach based on student competency.

The learning activities that implemented the Project-Based Learning (PjBL) model were conducted from the second to the sixth session. In the second session, the researcher began by introducing the topic, outlining the learning objectives, and motivating the students while explaining the expected competencies. The chosen theme was "Facilities for Worshipping God." Sample texts were distributed, and students were asked to read aloud based on their capabilities. Initially, many students were hesitant and read in low voices. One student, Sanduk, expressed embarrassment and fear of making mistakes. However, with encouragement, students gradually gained confidence and read more enthusiastically.

This stage focused on presenting learning objectives, competencies, and lesson content. Students took turns reading the text entitled "Facilities for Worshipping God," and the teacher then introduced the activities to come and made preparations for the next meeting. This session allowed the teacher to assess students' reading comprehension and determine their readiness to follow the PjBL model. At this point, it was also essential to identify potential learning obstacles and prepare strategies to address them. The researcher noted that student motivation at the start of the lesson significantly impacted their involvement throughout the learning process.

In the following session, students were guided to identify problems or questions related to the material, connecting them with real-life contexts. Although many students initially proposed their own questions, the class and the researcher refined them into three central questions: What is the role of a mosque? What facilities are available in a mosque?

And what typical activities occur in a mosque? These questions became the foundation for the project and helped students explore the subject more deeply. After the problem identification phase, the researcher divided the students into three heterogeneous groups of eight members each, considering their learning capacity and workload. At this stage, a notable shift in student behavior was observed—students who had been passive became more willing to share ideas and engage in discussion, indicating their growing comfort with the PjBL method.

Once the groups were formed, students began designing their projects. They collaboratively determined the project format, timeline, tools, costs, and objectives. The researcher assumed a facilitator role, observing and evaluating the group dynamics, particularly the creativity and initiative shown by students. This phase encouraged students to express their ideas freely and take ownership of their learning. To ensure time efficiency, the researcher set a four-session (two meetings) deadline for the completion of the projects, maintaining a balance between depth of engagement and feasibility.

While planning the projects, students also identified the necessary materials and resources. The researcher reviewed these plans and offered suggestions for alternatives when certain items were expensive or difficult to obtain. Through dialogue and mutual agreement, students adjusted their material choices, demonstrating an understanding of practicality and resource management. The researcher emphasized that successful project implementation requires careful planning, especially concerning the efficient use of materials and time.

In the fourth session, students began executing their planned projects. The researcher opened the class and monitored individual and group performance. Each group worked on a different project: one produced a mind map, another created a picture book, and the third designed a set of flashcards. According to one student, Nova, the projects were simple but carried significant educational value. Another student, Fia, noted that most materials were conveniently available from the school's store, except for a few items for a student living off-campus. Since the projects were only half-finished by the end of this session, they were safely stored for continuation. By the next meeting, all groups had completed their projects and submitted them to the researcher. A student named Ismat reflected that the project helped him improve his Arabic and understand complex vocabulary better. The researcher observed students' sense of responsibility, ownership, enthusiasm, and teamwork throughout the process.

The final stage of the PjBL model took place during the sixth session and involved a comprehensive evaluation. This included assessing students' learning processes, project outcomes, individual performance, editing, and motor skills. A posttest was also administered to both the experimental and control groups using the same material and time allocation as in the pretest (one learning hour).

Throughout this implementation, some adaptations to the typical PjBL model were made, based on expert insights. Traditionally, PjBL includes posing essential questions, project planning, scheduling, progress monitoring, assessment, and evaluation. In this study, the process began with presenting general material and reading activities. Scheduling was integrated into the planning phase, and a separate step for evaluating materials and resources was added, emphasizing the importance of cost-effectiveness and practical feasibility.

The data showed that the PjBL model significantly improved students' reading skills, particularly their comprehension. It provided various benefits, including increased

motivation, collaboration, problem-solving abilities, and connections to real-life learning. However, it also posed certain challenges, such as requiring more time, higher costs, and teachers with advanced facilitation skills.

The Effectiveness of Implementing Project-Based Learning for Reading Skills at “Al-Ma’arif 7 Sunan Drajat” Islamic Senior High School in Lamongan

The researcher administered a posttest to assess students’ cognitive abilities following the implementation of the project-based learning (PjBL) approach in reading instruction. To determine whether this method was effective, the researcher conducted an effectiveness test using the SPSS program. For accurate results, the Independent Samples T-Test and Paired Samples T-Test were employed. In addition, data from the questionnaire were analyzed using the Likert scale.

However, prior to conducting the effectiveness test, it was necessary to ensure that the data were normally distributed. Therefore, the first step was to perform a normality test. The purpose of this test was to assess whether the data distribution of the variables followed a normal pattern. Generally, the Shapiro-Wilk test is used for small samples (fewer than 50 data points), while the Kolmogorov-Smirnov test is preferred for larger samples (more than 50 data points). Referring to this standard, the researcher used the Shapiro-Wilk test for this study, as the sample size consisted of 24 students, which is fewer than 50.

Tests of Normality						
	Statistic	Kolmogorov-Smirnov ^a		Statistic	Shapiro-Wilk	
		Df	Sig.		Df	Sig.
Kelas Kontrol	.133	24	.200 [*]	.971	24	.692
Kelas Eksperimen	.164	24	.093	.922	24	.063

The criteria for assessing data normality using the Shapiro-Wilk test indicate that if the significance value (p-value) is greater than 0.05, the data distribution is considered normal. Conversely, if the significance value is less than 0.05, the data distribution is considered non-normal. Based on this criterion, the significance values for the posttest items in this study were expected to exceed 0.05 to fulfill the assumption of normal distribution.

The researcher obtained a significance value of 0.692 for the control group and 0.063 for the experimental group. Both values are greater than 0.05, which indicates that the data are normally distributed. Therefore, it was concluded that the items in both the pretest and posttest were normally distributed, making it possible to conduct a parametric statistical test using the T-test.

Subsequently, the researcher analyzed the posttest scores of the experimental and control groups using the Independent Samples T-Test in SPSS. This test was chosen because the study involved two independent samples, and the researcher aimed to determine whether there was a statistically significant difference between the two groups. The results of the statistical analysis are presented below.

Group Statistics

	Kelas	N	Mean	Std. Deviation	Std. Error Mean
	Kelas A (Kelas Kontrol)	24	66.58	14.809	3.023

Hasil Belajar Bahasa Arab	Kelas B (Kelas Eksperimen)	24	86.50	8.086	1.651
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Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Hasil Belajar Bahasa Arab	Equal variances assumed	5.152	.028	-5.783	46	.000	-19.917	3.444	-26.849	-12.984
	Equal variances not assumed			-5.783	35.597	.000	-19.917	3.444	-26.904	-12.929

Based on the table of results, the obtained Sig. (2-tailed) value was 0.000. According to the decision-making criteria, if the Sig. (2-tailed) value is greater than 0.05, it indicates no significant difference in learning outcomes before and after implementing the project-based learning (PjBL) method. However, if the value is less than 0.05, it indicates a significant difference in outcomes due to the implementation of the PjBL method.

Since 0.000 is less than 0.05, it can be concluded that H_1 is accepted. This means that there is a statistically significant difference in the reading skill outcomes between the control and experimental groups, as observed from the posttest results. This finding indicates that the application of the project-based learning method had a meaningful impact on improving students' reading skills in the experimental group compared to the control group.

To reinforce the data, the researcher also compared the pretest and posttest results of students within the experimental group. In other words, the researcher aimed to assess the difference in students' learning outcomes before and after the implementation of project-based learning. For this purpose, the SPSS Paired Samples T-Test was employed.

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	66.67	24	10.741	2.192

	Posttest	86.50	24	8.086	1.651
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Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Pretest & Posttest	24	.269	.203

Paired Samples Test

		Paired Differences					T	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pretest – Posttest	-19.833	11.575	2.363	-24.721	-14.946	-8.395	23	.000

In the first table, it was evident that there was a difference in the mean scores between the pretest and posttest. The mean score for the pretest was 66.67, while the posttest mean increased to 86.50, indicating a notable improvement. The second table presented the significance value for the correlation between the pretest and posttest, which was 0.203—greater than 0.05. Based on the standard for interpreting correlation, a significance value greater than 0.05 indicates no significant correlation between the two tests. This suggests that there was no strong statistical relationship between the pretest and posttest scores.

Furthermore, the third table showed that the significance value (Sig. (2-tailed)) was 0.000, which is less than 0.05. This result confirms that there was a significant difference in learning outcomes before and after implementing the project-based learning (PjBL) method for reading skills. Based on the statistical analyses using both the Independent Samples T-Test and the Paired Samples T-Test, it can be concluded that the application of the PjBL method in teaching reading to Grade 11 students at “Al-Ma’arif 7 Sunan Drajat” Islamic Senior High School in Lamongan was effective.

To measure students’ perceptions of the application of the PjBL method for reading skills, the researcher distributed a questionnaire during the final session after administering the posttest. The number of respondents was 24 students. The questionnaire consisted of seven questions. The students’ responses were used as a reference to determine their views, which were further supported by follow-up interviews with several students. The findings are presented as follows:

Questionnaire Value

Scale					Moderate
very agree	agree	doubt	Disagree	Very disagree	
112	48	48	0	0	168
560	192	192			776

The maximum possible score was calculated by multiplying the number of items,

the highest Likert scale value, and the number of respondents:

$$7 \times 5 \times 24 = 840.$$

The minimum possible score was similarly calculated as:

$$7 \times 1 \times 24 = 168.$$

The actual total score obtained from all questionnaire responses was 776. To determine the percentage score, the following formula was used:

$$(\text{Total Score} / \text{Maximum Score}) \times 100 = (776 / 840) \times 100 = 92.4\%$$

Based on this calculation, the average response reached 92.4%, which falls under the “Excellent” category according to the Likert scale interpretation. This indicates that the implementation of the project-based learning (PjBL) method for teaching reading skills to Grade 11 students was highly effective and appropriate for Arabic language instruction.

The researcher concluded that the PjBL approach helped students enhance their reading comprehension, fostered creativity, and encouraged collaboration within groups. Additionally, the learning materials were perceived as enjoyable due to their direct relevance to the students' environment, which further increased their enthusiasm for learning Arabic.

CONCLUSION / الخلاصة

The findings of this study indicate that the application of the Project-Based Learning (PjBL) method effectively enhances students' Arabic reading skills at “Al-Ma’arif 7 Sunan Drajat” Islamic Senior High School in Lamongan. This method facilitates active and contextual learning through structured stages, including material presentation, problem identification, project planning, resource evaluation, implementation, and assessment. Quantitative analysis of pre- and post-test scores revealed a significant improvement in students' reading abilities, while qualitative data from observations and interviews confirmed increased engagement, motivation, creativity, and collaboration among learners. Despite requiring substantial time, cost, and teacher competence, the PjBL approach proves to be an effective and appropriate strategy for fostering reading comprehension and student-centered learning in Arabic language education.

REFERENCES / المراجع

- Abubaker, F. M. H. (2017). *The road to possibilities: a conceptual model for a program to develop the creative imagination in reading and responding to literary fiction (short stories) in Libyan English as a Foreign Language (EFL) university classrooms*. University of Glasgow.
- Almulla, M. A. (2020). The effectiveness of the project-based learning (PBL) approach as a way to engage students in learning. *Sage Open*, 10(3), 2158244020938702.
- Ariani, N. (2023). The Effect of Project-Based Learning on Reading Comprehension Achievement of Junior High School Students. *Beyond Words*, 11(1), 36–45.
- Chu, S. K. W., Tse, S. K., Loh, E. K. Y., & Chow, K. (2011). Collaborative inquiry project-based learning: Effects on reading ability and interests. *Library & Information Science Research*, 33(3), 236–243.
- Edeh-Okwuosah, G. N. (2022). *Teachers' Perceptions Regarding Implementing Student-Centered Instructional Practices in Reading Comprehension*. Walden University.

- Hasanah, A. (2020). *Madrasa school leadership in remote districts in Indonesia*.
- HR, H. S., Pd, M., Ahmad, B. A., ST, S., & Keb, M. (2024). *Peran Vital Metodologi Penelitian dalam Literasi Sains Kesehatan dan Pendidikan Sosial*. PENERBIT KBM INDONESIA.
- Kaptein, N. J. G. (2017). Arabic as a language of Islam Nusantara: The need for an Arabic Literature of Indonesia. *Heritage of Nusantara: International Journal of Religious Literature and Heritage*, 6(2), 237–251.
- Khan, R. M. I., Shahbaz, M., Kumar, T., & Khan, I. (2020). Investigating reading challenges faced by EFL learners at elementary level. *Register Journal*, 13(2), 277–292.
- LavanyaKumari, P. (2013). Significance of Solomon four group pretest-posttest method in True Experimental Research-A Study. *IOSR Journal of Agriculture and Veterinary Science*, 5(2), 51–58.
- Machali, I. (2014). Kebijakan perubahan kurikulum 2013 dalam menyongsong Indonesia emas tahun 2045. *Jurnal Pendidikan Islam*, 3(1), 71–94.
- Song, X., Razali, A. B., Sulaiman, T., Jeyaraj, J. J., & Ds, P. (2024). Impact of project-based learning on critical thinking skills and language skills in EFL context: A review of literature. *World*, 14(5).
- Syahfutra, W., & Niah, S. (2019). Improving students' reading comprehension by using problem-based learning strategy. *Journal of Education Informatic Technology and Science*, 1(1), 125–136.