The Effect of the Project Based Learning Model on the Reading Comprehension Ability of Students in Grade V of SD Negeri 101600 Purba Bangun

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Abstract: This study investigates the effect of the Problem-Based Learning (PBL) model on the reading comprehension skills of fifth-grade students at SDN 101600 Purbabangun, a public elementary school located in Sukamulia, Padang Lawas Utara Regency, North Sumatra Province. In this school, many students demonstrate fluency in reading but face difficulties in comprehending texts critically. The research employed a quantitative approach using a quasi-experimental method with a nonequivalent control group design. A total of 40 fifth-grade students were selected through purposive sampling and divided into two groups: an experimental group taught using the PBL model and a control group taught using conventional methods. Data were collected through pre-tests, post-tests, classroom observations, and student response questionnaires. An independent sample t-test was used for data analysis at a 5% significance level. The results showed a significant difference in reading comprehension between the two groups, with a p-value of 0.0424 ($p < 0.05$). These findings demonstrate that the PBL model effectively enhances students' reading comprehension, particularly in developing their critical thinking and problem-solving skills. The study emphasizes the need for innovative and student-centered learning approaches to address reading challenges in elementary schools.
Keywords: Problem Based learning, reading skills, elementary school student

A. Introduction

Reading is an activity that involves the visual process of recognizing letters and words and includes understanding, analyzing, and evaluating information in the text. According to the Big Indonesian Dictionary (KBBI), reading is seeing and understanding the contents of the writing, either out loud or in the heart (Rasuli, 2019). Meanwhile, Anderson explains that reading is an interactive process involving readers constructing meaning based on the interaction between text and prior knowledge (Anderson, 2002; Rastegar et al., 2017). This definition strengthens the view of (Bangsu et al., 2023), who state that reading comprehension is an active process linking information in the text with the knowledge the reader already has.

Speaking, listening, reading, and writing are the four basic language skills related to language use. Listening: The ability to understand what others are saying or saying. This entails focusing on the meaning of the words used, the emphasis, and the tone (Katoningsih, 2021). Listening attentively facilitates understanding of the context and the message the source is trying to convey. Analyzing, hiding, and reacting correctly to the information heard are all necessary for practical listening skills (Sudirjo & Alif, 2021).

A student's comprehension ability greatly affects his ability to absorb material during learning and helps him develop other skills through reading (Fitri et al., 2022). Low reading comprehension skills will make students lag behind in learning, so they tend to have difficulty achieving when moving up to higher grades (Syah & Pertiwi, 2024; UGM, 2014).. Reading is very important to explore information, but it must also be accompanied by good reading skills so that reading becomes effective for students. PISA 2018 data shows that Indonesian students' reading ability is still below the international average, ranking 74th out of 79 countries with an average score of 371 from the OECD standard of 487 (OECD, 2019). This reinforces the importance of improving reading comprehension skills early because this ability significantly affects students' academic achievement at all levels of education

Various factors contribute to poor reading abilities among elementary school students, which can generally be classified into internal and external variables. Internal factors relate to conditions within the students, such as low interest in reading, which may stem from a lack of exposure to engaging reading materials or limited motivation. Additionally, poor reading habits, such as reading only when required, can hinder the development of fluency and comprehension skills. Some students may also face specific learning difficulties like dyslexia, have a limited vocabulary, or experience health-related issues (e.g., visual impairment or fatigue), which can negatively affect their ability to focus and retain information (Juhaeni et al., 2022; Soniah et al., 2023).

On the other hand, external factors involve the surrounding learning environment. These include a less supportive school climate, such as a lack of individualized attention, outdated teaching methods, and insufficient reading programs. Schools often lack sufficient books or reading materials, and libraries may be absent or underused (Hilda Hadian et al., 2018). At home, minimal family support for literacy, absence of a reading culture, and limited parental involvement further hinder progress. Moreover, socioeconomic challenges such as poverty can limit access to educational resources. The growing presence of digital distractions, such as excessive use of television or mobile phones, also reduces the time children spend on meaningful reading activities (Patandean & Indrajit, 2021; Purwanti, 2022).

Observations at SD Negeri 101600 Purba Bangun show that some students lack reading comprehension skills. However, most children in grade V are already proficient in reading, and most have difficulty understanding and critically evaluating their reading. At least 12 out of 20 students have difficulty in understanding reading, thus hindering

their ability to answer questions, especially Indonesian questions that require reading analysis. In addition to affecting students' enthusiasm for reading, the learning model also affects the classroom environment so that students are reluctant to learn. Therefore, interactive learning models must be innovative to provide an engaging and focused learning environment. Teachers can implement a variety of strategies to address learning challenges, including creative models in the classroom.

One approach considered effective in improving reading comprehension skills is applying the Problem-Based Learning (PBL) model. PBL is highly relevant in addressing the challenges identified in students' reading comprehension, such as low engagement, difficulty understanding texts critically, and limited ability to analyze and synthesize information. This model encourages active learning, where students are directly involved in solving real or simulated problems requiring them to analyze content, interpret information, and draw conclusions based on textual evidence—skills fundamental in reading comprehension.

Fadholi emphasize that PBL helps students acquire critical, analytical, and reflective thinking abilities, crucial for making inferences, identifying main ideas, evaluating arguments, and connecting prior knowledge with new information—key components of adequate reading comprehension (Fadholi et al., 2024). Moreover, PBL fosters a student-centered learning environment (Amris & Desyandri, 2021; Warda Rasidah et al., 2022), allowing students to explore and construct meaning from texts autonomously rather than passively receiving information.

By engaging students in problem-solving tasks integrating reading activities, PBL enhances their reading strategies, such as identifying keywords, summarizing, questioning, and clarifying content. These strategies are beneficial for students who struggle with understanding texts in depth. Therefore, the use of PBL is relevant and strategic in addressing the multidimensional challenges associated with low reading comprehension among elementary students.

Studies on how the Project-Based Learning (PJBL) model affects the reading comprehension skills of primary school students show a significant improvement in teaching methods. PJBL has been shown to help students overcome various learning barriers by improving reading comprehension, engagement, and critical thinking. PJBL has been associated with improved reading comprehension skills, as evidenced by research showing increased student engagement and improved literacy outcomes compared to traditional methods (Nopiyanti et al., 2024; Zhang et al., 2023). PJBL helps students develop critical thinking and problem-solving skills in addition to their reading comprehension (Karmana, 2024; Mariatul Kibtiyah, 2022).

Research "The Effect of Problem Based Learning Model on Reading Comprehension Ability of Grade IV Elementary School Students" by (Halimah et al., 2022) is a previous study that is relevant to this study. The results show how the use of the PBL paradigm helps the reading comprehension skills of fourth-grade children. Based

on the findings of the t-test of an independent sample analysis, the PBL model outperforms conventional teaching techniques, with a calculated t-value of 6.403 and a significance level of 0.00.

Different research was conducted by (Falah et al., 2024), "Exploration of Problem-Based Learning Model: Effectiveness in Improving Reading Comprehension of Elementary School Students" shows that the PBL paradigm works well to improve reading comprehension among fifth-grade students. With a significance value of 0.001 on the findings of the Paired Sample Test, it is proven that the use of this model improves students' reading comprehension skills.

Although Project-Based Learning (PJBL) has been extensively researched, few specific studies have examined its influence on particular genres of reading materials, such as narrative texts or explanatory texts. In this study, the focus is placed on narrative texts, which are commonly used in elementary-level reading and often present comprehension challenges due to their structural complexity and the need to infer meaning from events and character actions. By targeting this genre, the research seeks to explore how PJBL can enhance students' ability to understand story elements, plot development, and implied messages.

Furthermore, most existing studies are short-term, focusing on immediate post-intervention outcomes. As such, longitudinal studies are still needed to assess the sustained impact of PJBL on students' reading comprehension over time. Recent research also points to the potential of integrating PJBL with blended learning environments, which combine face-to-face and digital learning strategies to enhance student engagement and literacy outcomes (Zhang et al., 2023). This study contributes to the existing literature by offering insights into how PJBL, when applied to narrative texts, can address specific comprehension challenges faced by elementary students and serve as a practical instructional model for teachers.

The use of PJBL in a variety of topics, including language arts and sciences, demonstrates adaptability and promises broader education reform (Inda Assaidah et al., 2023; Karmana, 2024). On the other hand, some teachers argue that some children can still benefit from traditional teaching techniques, thus highlighting the need for a holistic strategy that combines traditional techniques and PJBL to accommodate different learning preferences.

Based on the background described above, this study aims to analyze the influence of the Problem-Based Learning (PBL) model on the reading comprehension skills of fifth-grade students at SD Negeri 101600 Purba Bangun, explicitly focusing on narrative texts, which are often challenging for students to understand deeply. This research addresses a gap in the literature by examining how PBL impacts comprehension in this specific genre, an area that has received limited attention in previous studies.

While this study does not take a longitudinal approach, it lays the groundwork for future research exploring the long-term effects of PBL on reading comprehension development. Focusing on short-term impacts within a specific genre, this study contributes practical evidence on the effectiveness of PBL in classroom instruction. It offers direction for more extensive, long-term studies. Ultimately, this research seeks to provide teachers with an alternative instructional strategy to help overcome students' low comprehension skills and enrich classroom learning practices with more student-centered and engaging methods.

B. Method

This study uses a quantitative approach with a quasi-experimental method and a Nonequivalent Control Group Design. This design was chosen because it did not allow researchers to fully randomize the placement of participants into experimental and control groups, following the existing class divisions (Ati & Setiawan, 2020; Sasmita & Harjono, 2021). However, this design still allows for comparing the impact of the treatment (PBL model) on the dependent variable, namely reading comprehension skills. The main limitation of this quasi-experimental design is the possibility of confounding variables (disturbing variables) due to the lack of randomization. To overcome this limitation, researchers used a pretest to measure the initial conditions of the two groups and ensure that there were no significant differences between the two before the treatment was given. In addition, purposive sampling was also carried out, which considered the equality of characteristics to minimize bias.

This research was conducted at SD Negeri 101600 Purba Bangun, grade V, for two months, from March to April 2025. The population in this study was all grade V students, and the sample was 40 students divided into two classes, each with 20 students. The experimental group received treatment with the Problem-Based Learning (PBL) model, while the control group used conventional learning methods. The dependent variable in this study was students' reading comprehension skills, which were operationally defined as students' ability to understand the meaning, structure, and messages of narrative texts through indicators: finding the main idea, concluding the contents of the reading, interpreting messages, and assessing information in the text. The independent variable uses the Problem-Based Learning (PBL) learning model.

Data collection techniques include pretest and posttest to measure the improvement of reading comprehension skills, observation of student activities during the learning process, and student response questionnaires to the implementation of the PBL model. Data analysis was carried out using an independent sample t-test with a significance level of 5% (0.05) to see significant differences between the learning outcomes of the experimental and control groups. If the significance value is ≥ 0.05, Ho is accepted and Ha is rejected, indicating no difference in the average learning outcomes between the pretest and posttest groups. Conversely, if Ho is rejected and Ha is accepted,

it suggests a difference in the average learning outcomes between the two groups (Dewi & Lestari, 2020; Puspitasari & Nurhayati, 2019).

Before the t-test was conducted, the assumptions of normality and homogeneity of the data were first tested to ensure the validity of the analysis. Data processing and analysis were carried out using SPSS software version 25, which supports parametric statistical calculations and has been widely used in educational experimental research (Gunawan, 2018; Santoso, 2018).
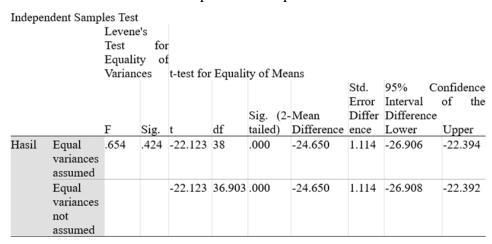
C. Results and Discussion

Table 1. Results of Descriptive Statistical Test Scores

Experimental Classes	Number of Students	Minimum	Maximun	Mean	Standard Deviation
Pretest	20	52	62	57.20	3.205
Posttest	20	75	88	81.85	3.815

Table 1 presents the descriptive statistics of the pretest and posttest scores in the experimental class. The data indicate increased students' reading comprehension scores after implementing the Problem-Based Learning (PBL) model. Rather than detailing each numerical value, it is sufficient to note that the posttest average is considerably higher than the pretest average, suggesting a positive shift in learning outcomes.

Table 2. Independent Sample Test Results

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Hasil	Equal variances assumed	.654	.424	-22.123	38	.000	-24.650	1.114	-26.906	-22.394
	Equal variances not assumed			-22.123	36.903	.000	-24.650	1.114	-26.908	-22.392

To assess whether this difference is statistically significant, an Independent Samples t-test was conducted (see Table 2). The result shows a significance value of 0.0424 (p < 0.05), indicating a meaningful difference in student performance before and after applying the PBL model. This supports the conclusion that the PBL model significantly impacted students' reading comprehension abilities.

The improvement observed implies that the PBL approach effectively supports students in developing critical and analytical reading skills. By engaging students in real-life problem-solving tasks, PBL encourages deeper interaction with texts, fostering independent learning and collaboration. These findings align with prior studies (Falah et al., 2024; Halimah et al., 2022), which affirm the efficacy of PBL in enhancing literacy, particularly in reading comprehension. Therefore, beyond statistical significance, this result highlights the pedagogical implication that innovative and student-centered models like PBL can better support literacy development in elementary students compared to conventional approaches. Based on the findings obtained, there was a difference between the reading comprehension ability of students who used the Problem-Based Learning model before and after therapy.

Thus, the results of this study empirically answer the formulation of the problem proposed, namely that there is a significant difference in students' reading comprehension skills before and after using the Problem Based Learning model. These differences not only confirm the effectiveness of PBL in improving reading comprehension skills, but also reinforce the findings from previous research that PBL can be one of the effective learning models to be applied in the development of student literacy.

However, it is essential to acknowledge the limitations of this study. The sample size was small, limited to one school with 40 fifth-grade students, and the intervention was conducted over two months. These factors may restrict the generalizability of the findings to broader educational contexts or long-term outcomes. Additionally, the study focused solely on narrative texts; different results might emerge when applied to other genres such as expository or procedural texts.

Despite these limitations, the findings provide valuable insight into the potential of PBL to foster reading comprehension in elementary education. Future studies are encouraged to include larger, more diverse populations and more extended observation periods to assess the sustainability of the learning outcomes. Moreover, exploring PBL integration with digital tools or blended learning models could offer further innovation in literacy instruction.

D. Conclusion

Based on the results of this study, it can be concluded that applying the Problem-Based Learning (PBL) model significantly improves the reading comprehension skills of fifth-grade students at SD Negeri 101600 Purba Bangun. Students in the experimental class who were taught using the PBL model showed better comprehension performance than those in the control class who experienced traditional learning methods. This finding confirms that PBL effectively develops students' abilities to understand, analyze, and reflect on reading materials, particularly narrative texts, through active learning and problem-solving activities.

These results directly answer the research question posed in the introduction, affirming a statistically significant difference in students' reading comprehension skills before and after the implementation of PBL. Furthermore, the study supports previous research that emphasizes the advantages of student-centered learning models in improving literacy outcomes. However, the findings should be interpreted cautiously due to limitations, including the small sample size, short intervention period, and focus on only one type of text genre. These factors may limit the generalizability of the results. Therefore, further research involving larger and more diverse populations, extended

duration, and various reading genres is recommended to strengthen the evidence for PBL's effectiveness in literacy instruction.

In practical terms, this study highlights the need for educators to adopt more innovative and engaging learning strategies, such as PBL, to overcome students' difficulties in reading comprehension. Schools and curriculum developers should consider integrating PBL into the reading curriculum to foster critical thinking, active participation, and deeper understanding among elementary school students.

References

Amris, F. K., & Desyandri, D. (2021). Pembelajaran Tematik Terpadu menggunakan Model Problem Based Learning di Sekolah Dasar. *Jurnal Basicedu*, *5*(4), 2171–2180. https://doi.org/10.31004/basicedu.v5i4.1170

Anderson, N. J. (2002). *The Role of Metacognition in Second Language Teaching and Learning. Eric Digest*. Eric Clearinghouse on Languages and Linguistics, 4646 40th Street N. https://eric.ed.gov/?id=ED463659

Ati, T. P., & Setiawan, Y. (2020). Efektivitas Problem Based Learning-Problem Solving Terhadap Kemampuan Berpikir Kritis dalam Pembelajaran Matematika Siswa Kelas V. *Jurnal Cendekia: Jurnal Pendidikan Matematika*, *4*(1), 294–303. https://doi.org/10.31004/cendekia.v4i1.209

Bangsu, A. M., Syamsuri, S., & Baso, B. S. (2023). Meningkatkan Kemampuan Membaca Pemahaman Isi Teks Bacaan Melalui Pendekatan Whole Language Pada Siswa Kelas IV Sd Negeri 6 Bontokamase Kecamatan Somba Opu Kabupaten Gowa. *Jurnal Motivasi Pendidikan Dan Bahasa*, *1*(2), 32–57.

Dewi, M. S. A., & Lestari, N. A. P. (2020). E-Modul Interaktif Berbasis Proyek Terhadap Hasil Belajar Siswa. *Jurnal Ilmiah Pendidikan Dan Pembelajaran*, *4*(3), Article 3. https://doi.org/10.23887/jipp.v4i3.28035

Fadholi, A., Mahmud My, & Jamrizal. (2024). Analisis Model Pembelajaran Problem Based Learning Pada Kemampuan Berpikir Kritis Siswa Pada Mata Pelajaran Fiqih di Mts Mahdaliyah Kota Jambi. *Jurnal Ihsan Jurnal Pendidikan Islam*, *2*(2), 151–174. https://doi.org/10.61104/ihsan.v2i2.154

Falah, A. M., Sofiana, N., & Wiranti, D. A. (2024). Eksplorasi Model Problem-Based Learning: Efektivitas dalam Meningkatkan Pemahaman Bacaan Siswa Sekolah Dasar. *Biormatika: Jurnal Ilmiah Fakultas Keguruan Dan Ilmu Pendidikan*, *10*(2), 94–101. https://doi.org/10.35569/biormatika.v10i2.2062

Fitri, R. M., Toharudin, M., & Rizkhi, A. (2022). Penggunaan Media Pembelajaran Kartu Kata pada Siswa Kelas 4 SDIT Nurul Hidayah. *JAMU: Jurnal Abdi Masyarakat UMUS*, *3*(01), 56–66. https://doi.org/10.46772/jamu.v3i01.856

Gunawan, C. (2018). *Mahir Menguasai SPSS (Mudah mengolah Data Dengan IBM SPSS Statistic 25)*. Deepublish.

Halimah, N., Firman, F., & Desyandri, D. (2022). Pengaruh Model Problem Based Learning Terhadap Kemampuan Membaca Pemahaman Siswa Kelas IV SD. *Jurnal*

IKA PGSD (Ikatan Alumni PGSD) UNARS, *12*(2), 177–186. https://doi.org/10.36841/pgsdunars.v12i2.2559

Hilda Hadian, L., Mochamad Hadad, S., & Marlina, I. (2018). Penggunaan Media Big Book Untuk Meningkatkan Keterampilan Membaca Kalimat Sederhana. *Didaktik: Jurnal Ilmiah PGSD STKIP Subang*, *4*(2), 212–242. https://doi.org/10.36989/didaktik.v4i2.73

Inda Assaidah, Nurkholis, & Rinto. (2023). Penerapan Model Project Based Learning Pada Materi Siklus Air Untuk Meningkatkan Hasil Belajar Siswa Kelas V SD. *Didaktik: Jurnal Ilmiah PGSD STKIP Subang*, *9*(2), 4787–4794. https://doi.org/10.36989/didaktik.v9i2.1120

Juhaeni, J., Agista Ifain, Asadine Silmi Kurniakova, Azmi Tahmidah, Dwi Nur Arifah, Siti Faridha Friatnawati, Safaruddin, S., & R. Nurhayati. (2022). Strategi Guru dalam Mengatasi Kesulitan Membaca pada Siswa Madrasah Ibtidaiyah. *Journal of Instructional and Development Researches*, *2*(3), 126–134. https://doi.org/10.53621/jider.v2i3.74

Karmana, I. W. (2024). Penerapan Model Project Based Learning (PJBL) terhadap Kemampuan Literasi Sains dan Hasil Belajar Peserta Didik pada Pembelajaran IPA di Sekolah. *Panthera: Jurnal Ilmiah Pendidikan Sains Dan Terapan*, *4*(2), 79–92. https://doi.org/10.36312/panthera.v4i2.273

Katoningsih, S. (2021). *Keterampilan Bercerita*. Muhammadiyah University Press.

Mariatul Kibtiyah, A. (2022). Penggunaan Model Project Based Learning (PJBL) Dalam Meningkatkan Kemampuan Bernalar Kritis Pada Materi Mengklasifikasikan Informasi Wacana Media Cetak Siswa Kelas 5 Sekolah Dasar. *INOPENDAS: Jurnal Ilmiah Kependidikan*, *5*(2), 82–87. https://doi.org/10.24176/jino.v5i2.7710

Nopiyanti, N., Altaftazani, D. H., & Kuswendi, U. (2024). Improving Reading Comprehension of Explanatory Texts in Indonesian Language Subject, Fifth Grade Students Through Radec Learning Model. *Current Issues on Elementary Education Journal*, *3*(1), 18–23. https://doi.org/10.17509/ciee.v3i1.71081

OECD. (2019). *Pisa Publications*. OECD. https://www.oecd.org/en/about/programmes/pisa/pisa-publications.html

Patandean, Y. R., & Indrajit, R. E. (2021). *Flipped Classroom: Membuat Peserta Didik Berpikir Kritis, Kreatif, Mandiri, dan Mampu Berkolaborasi dalam Pembelajaran yang Responsif*. Penerbit Andi.

Purwanti, E. (2022). *Pembelajaran Kontekstual Media Objek Langsung Dalam Menulis Puisi*. Penerbit P4I.

Puspitasari, Y., & Nurhayati, S. (2019). Pengaruh Model Pembelajaran Discovery Learning Terhadap Hasil Belajar Siswa. *Jurnal Pendidikan Dan Kewirausahaan*, *7*(1), 93–108. https://doi.org/10.47668/pkwu.v7i1.20

Rastegar, M., Mehrabi Kermani, E., & Khabir, M. (2017). The Relationship between Metacognitive Reading Strategies Use and Reading Comprehension Achievement

of EFL Learners. *Open Journal of Modern Linguistics*, *07*(02), 65–74. https://doi.org/10.4236/ojml.2017.72006

Rasuli, R. (2019). Meningkatkan Hasil Belajar Bahasa Indonesia Materi Kata Baku Dan Tidak Baku dengan Media Flash Card pada Siswa Kelas VI SDN Semaye Tahun Pelajaran 2018 /2019. *JISIP (Jurnal Ilmu Sosial dan Pendidikan)*, *3*(2). https://doi.org/10.58258/jisip.v3i2.764

Santoso, S. (2018). *Mahir Statistik Multivariat dengan SPSS*. Elex Media Komputindo.

Sasmita, R. S., & Harjono, N. (2021). Efektivitas Model Problem Based Learning dan Problem Posing dalam Meningkatkan Kemampuan Berpikir Kritis Siswa Sekolah Dasar. *Jurnal Basicedu*, *5*(5), 3472–3481. https://doi.org/10.31004/basicedu.v5i5.1313

Soniah, Safrizal, & Herlina, E. (2023). Strategi Guru Untuk Meningkatkan Kemampuan Membaca Siswa Kelas IV Sekolah Dasar Negeri 15 Pagaruyung. *Jurnal Riset Madrasah Ibtidaiyah*, *3*(1), 54–65. https://doi.org/10.32665/jurmia.v3i1.1342

Sudirjo, E., & Alif, M. N. (2021). *Komunikasi Dan Interaksi Sosial Anak*. CV Salam Insan Mulya.

Syah, M. E., & Pertiwi, D. S. (2024). *Psikologi Belajar*. Feniks Muda Sejahtera.

UGM. (2014). Pemahaman Membaca Siswa SD Indonesia Masih Lemah. *Universitas Gadjah Mada*. https://ugm.ac.id/id/berita/8593-pemahaman-membaca-siswa-sd-indonesia-masih-lemah/

Warda Rasidah, Tri Wahyuningsih, Erna Suhartini, Yudo Dwiyono, & Andi Asrafiani Arafah. (2022). Pengaruh Penggunaan Model Pembelajaran Project Based Learning terhadap Penguasaan Materi IPA Pada Siswa. *Jurnal Pendidikan MIPA*, *12*(4), 1072–1078. https://doi.org/10.37630/jpm.v12i4.730

Zhang, W., Lu, M., & Yang, P. (2023). An Empirical Study About the Impact of Project-Based Learning on Reading Literacy of Primary Students in a Blended Learning Environment. *Psychology in the Schools*, *60*(12), 4930–4945. https://doi.org/10.1002/pits.22949