



The Impact of Daily Life Based Project Based Learning on Elementary Students Multiliteracy

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Abstract: This study aims to evaluate the effectiveness of daily-life-based Project-Based Learning (PjBL) in improving elementary school students' multiliteracy skills. The study employed a quasi-experimental design with a posttest-only control group design. The sample consisted of 35 students, with 18 assigned to the experimental group and 17 to the control group. Data were collected using an observation sheet comprising 30 items and were analyzed using descriptive and inferential statistical techniques. An independent-samples *t*-test was conducted to examine differences in multiliteracy skills between the two groups. The findings revealed that daily-life-based PjBL was associated with significantly higher multiliteracy skills among students in the experimental group than among those in the control group. The experimental group ($M = 140.78$, $SD = 7.06$) outperformed the control group ($M = 115.18$, $SD = 7.29$), $t(33) = 12.09$, $p < .001$, with a very large effect size (Cohen's $d = 3.57$). These findings indicate that daily-life-based PjBL may be an effective approach for supporting the development of elementary school students' multiliteracy skills. For elementary school teachers in Merauke, South Papua, integrating students' everyday experiences and local environments into PjBL may help make learning more relevant, contextual, and meaningful. Projects can be adapted to available local resources to support the development of multiliteracy skills within authentic learning contexts.

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Introduction

The changing times, marked by the rapid advancement of digital technology, have brought profound impacts on various dimensions of human life, including the field of education. Elementary school students today face far more complex challenges than previous generations. It is no longer sufficient for them to simply be able to read and write they are now required to navigate and adapt to a variety of media and increasingly diverse cultural environments. Education is a process of developing every individuals potential holistically through the provision of meaningful learning experiences (Sinaga et al., 2024) Education is also considered a key to preparing individuals for adult life and enabling them to contribute to national development (Risdiyany, 2021). Furthermore, education plays a crucial role as a tool to foster a superior and progressive national civilization through mastery of science, technology, and life skills (Patras et al., 2019) Achieving educational goals requires a long-term effort, and one of the essential processes in this journey is learning. Learning is a process of transformation undertaken by an individual to bring about changes in patterns of thinking and behavior as a result of interaction with the surrounding environment based on personal experiences. Learning can also be defined as a planned system that is implemented and regularly evaluated to ensure that learners can achieve educational objectives



comprehensively. Various learning models can be applied to optimize the teaching and learning process. One way to deepen learning is through the application of literacy. Literacy is understood as a set of social, historical, and cultural practices of making meaning through texts grounded in real life experiences (Muttaqin & Rizkiyah, 2022).

Literacy refers to an individuals ability to read, write, speak, calculate, and solve problems in accordance with the level of expertise required in daily life. Literacy encompasses not only the ability to comprehend written and digital information but also involves critical thinking, contextual understanding, and clear, effective communication (Harahap et al., 2022). Alongside technological advancement, literacy skills have become increasingly essential. Today, literacy is not merely the ability to read and write, but also the ability to understand and process information delivered through various media and technologies. Collectively, these are known as multiliteracy. Multiliteracy introduces a new approach to education, particularly in the realm of literacy learning (Yuliati et al., 2021). The concept of multiliteracy emphasizes the ability to understand and convey information through various modes text, images, symbols, and multimedia. It represents a shift from conventional literacy, which focused primarily on reading and writing printed text. In line with advancements in education, multiliteracy is becoming increasingly relevant, as today students interact with technology and require broader knowledge and skills to navigate the digital and multimedia rich world (Nuryani et al., 2019).

The development of multiliteracy reflects a significant shift in how society utilizes technology as a means of interaction. At the elementary school level, conventional literacy approaches are often deemed insufficient to equip students with the skills needed to face the challenges of the digital era. Therefore, integrating multiliteracy learning into the primary education curriculum is a crucial step toward enhancing students' comprehensive literacy competencies (Firdausiyah et al., 2024). Research has shown that the implementation of multiliteracy can improve students' critical thinking and creativity skills. Moreover, it enables students to become more responsive to various texts and media they encounter in daily life (Puspita, 2019). However, conventional teaching methods are often ineffective in developing these multiliteracy competencies. Instructional models that rely solely on memorization and theory fail to adequately prepare students for real world challenges. Consequently, there is a need for more creative, innovative, and interactive learning models to support students in optimally developing their multiliteracy skills.

PjBL can serve as an alternative to conventional teaching methods, which have several limitations. PjBL engages students in real life relevant projects and challenges them to think critically, collaborate, and communicate effectively (Darmawan, 2020). Through this learning model, students are guided to learn via direct experience-commonly referred to as experiential learning. This concept is implemented in PjBL because it involves learners in solving authentic, everyday problems. The solutions derived from this process are manifested in the form of concrete projects (Efendi et al., 2020). Problem solving and project based learning enable students to enhance higher order thinking skills. This method also provides opportunities for students to express their creative ideas while working on specific projects. Through this type of learning, students can develop critical and analytical thinking more deeply (Natalia et al., 2023). These findings are supported by research indicating that the application of PjBL improves problem solving and critical thinking skills in basic statistics learning (Susanto et al., 2020). Other studies have also revealed the effectiveness of PjBL in strengthening students' critical thinking abilities (Safaruddin et al., 2020). PjBL allows students not only to understand academic content but also to acquire 21st century skills,



including multiliteracy competencies. As such, PjBL serves as an innovative solution to the shortcomings of conventional methods while preparing students to face global challenges. Previous studies have shown that PjBL can enhance critical thinking, problem-solving, collaboration, and other learning outcomes. However, limited research has examined PjBL using students' everyday experiences to develop multiliteracy skills, particularly in elementary schools in 3T areas with different learning resources and experiences. This study addresses this gap by examining everyday-life-based PjBL among fourth-grade students at SD Wasur 2 in Merauke, South Papua.

Initial findings show that fourth-grade students at SD Wasur 2, Merauke, have limited reading interest and rely mainly on teacher explanations. The use of digital and print resources is also limited, which may hinder multiliteracy development. Everyday-life-based PjBL can address this situation by using students' experiences and local surroundings to encourage information seeking, problem-solving, and communication. This finding is supported by interviews with the Grade IV homeroom teacher, who stated that the lack of reading interest has led to changes in student characteristics-students have become passive and tend to rely solely on teacher explanations. As a result, students struggle to comprehend learning materials, and the implementation of student centered learning is hindered. This condition also affects the execution of the schools literacy movement. Although various reading resources, both digital and printed, are available, they have not been utilized optimally. Teachers face challenges in facilitating learning activities that encourage students to actively seek information from multiple sources. Consequently, efforts to foster reading interest and improve reading skills have become increasingly difficult. Furthermore, many students perceive reading as a boring activity, which further reduces their motivation to read.

The implementation of daily life based project based learning in elementary schools holds great potential for enhancing students multiliteracy skills. This method can foster students competitiveness, as hands on experiences help strengthen their retention of subject matter and sharpen their collaboration skills in solving problems and completing group tasks. Students social interactions are also further developed as they work together in teams. Literacy skills play a crucial role in enhancing lifelong learning abilities, which are key determinants of a child future success. This study aims to evaluate the impact of implementing daily life based project based learning on improving elementary students multiliteracy skills. The results of this research are expected to provide deeper insights into how this form of PjBL can effectively support the development of students multiliteracy competencies. In addition, the findings are intended to help teachers better understand how to design more innovative and effective learning strategies to enhance students literacy skills.

Research Method

This research adopted a quasi-experimental approach using a posttest only control group design (Rogers & Revesz, 2019). The participants were assigned to two groups, namely an experimental group and a control group. Students in the experimental group participated in PjBL activities contextualized within their everyday lives, whereas the control group followed the regular learning process without the PjBL intervention. At the end of the intervention, both groups completed a posttest designed to assess their multiliteracy skills. The comparison of posttest results was used to identify differences in students' multiliteracy performance after the implementation of daily life based PjBL. The study was carried out at SD Wasur 2, Merauke Regency. Two classes were selected through a random selection procedure, with one designated as the experimental group and the other as the control group.



The experimental group comprised 18 students, while the control group consisted of 17 students.

This study employed data collection methods through questionnaires, observations, and documentation. The primary instrument used was an observation sheet related to the implementation of daily life based project based learning and its effect on students' multiliteracy skills. The instrument utilized a Guttman scale with binary responses: "yes" and "no." Following the preparation of the observation sheet, the instrument underwent a validity test by experts, followed by revisions, a trial run, analysis of the trial results, and the development of a final test instrument used to collect data on the implementation of project-based learning and its impact on students multiliteracy. To further explain the tools and techniques used in data collection, the instrument blueprint is presented in Table 1.

Table 1. Observation Checklist for the Implementation of Daily Life-Based Project-Based Learning

No	Dimension	Indicator	Item Number
1)	Implementation of Daily Life Based Project Based Learning	Types of learning media used	1,2
		The Novelty of the Learning Media Used	3,4
		Utilization of Learning Facilities and Infrastructure	5,6,7
		Student Engagement in Learning	8,9
		Students' Interest in Participating in Learning Activities	10,11,12
		Evaluation Instruments Used	13,14
2)	Needs Analysis and Implementation of Daily Life-Based PjBL	Learning Model Used	15
		Preparing Learning Tools and Learning Resources	16,17
		The Required Learning Model	18
		Implementation of Daily Life-Based Project-Based Learning on Students Multiliteracy Skills	19,20,21

Table 2. Multiliteracy Performance Test

No	Dimension	Indicator	Item Number
1)	Reading Literacy	Ability to comprehend, use, and reflect on various types of written texts	22,23
2)	Problem-Solving Literacy	Ability to use concepts, procedures, and facts to solve everyday problems	24,25
3)	Information Literacy	The capacity to recognize problems, develop new knowledge, and formulate meaningful learning conclusions.	26,27
4)	Digital Literacy	Ability to understand, use, and utilize technology	28, 29
5)	Cultural Literacy	Demonstrating appreciation for local culture while showing interest in learning about other cultures.	30

The analysis involved both descriptive and inferential statistical procedures. Descriptive analysis was conducted by examining the mean, standard deviation, minimum and maximum scores, as well as the range of the data. Inferential analysis was conducted using a t-test to examine the research hypothesis. Before the t-test, normality and homogeneity tests were performed to verify the required assumptions. The t-test was conducted to determine whether the independent variable had a statistically significant effect on the dependent variable. The significance of the effect was evaluated by comparing the obtained t-statistic with the critical t-value and examining the p-value. An effect was



considered statistically significant when the calculated t-value was greater than the critical value and the significance level was less than 0.05 ($\alpha = 5\%$) (Sugiyono, 2019). The statistical analysis was carried out using SPSS software.

Results and Discussion

The findings demonstrate a significant difference in the multiliteracy performance of fourth-grade students at SD Wasur 2 between those exposed to daily life-based Project Based Learning (PjBL) and those in the control group. As shown in Table 2, students in the experimental group achieved a mean score of 140.78 (SD = 7.06), whereas the control group recorded a mean of 115.18 (SD = 7.29). This resulted in a mean difference of 25.60 points, with the experimental group showing higher multiliteracy scores than the control group. The independent-samples t-test further confirmed that the difference between the groups was statistically significant, $t(33) = 12.09$, $p < .001$. These findings indicate that students who participated in daily life based PjBL demonstrated significantly higher multiliteracy performance than students in the control group.

Table 3. Descriptive Analysis Results of Daily Life Based PjBL on Students Multiliteracy Skills

Descriptive Statistics						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Multiliteracy_control	17	27.00	99.00	126.00	115.1765	7.29071
Multiliteracy_experiment	18	25.00	123.00	148.00	140.7778	7.06737
Valid N (listwise)	17					

The study results were examined using a t-test after the required assumption tests had been completed. The normality test showed that the data met the normality assumption, with a significance value above 0.05. The homogeneity test also indicated equal variances, as Levene's the analysis yielded a significance value of 0.607, which is greater than 0.05. These findings confirm that the statistical assumptions were fulfilled, allowing the t-test to proceed.

The t-test results demonstrate that the implementation of daily life based PjBL significantly influenced students' multiliteracy skills. This conclusion is indicated by the significance value of 0.00, which is below the 0.05 threshold. The complete statistical results are presented in Table 4. The findings further suggest that PjBL provides opportunities for students to engage actively and independently in the learning process, thereby supporting the development of their multiliteracy skills. The daily life based PjBL model is designed to engage students in active learning through projects that require collaboration, research, and experimentation. By utilizing real life problems, students become more interested and actively involved in their learning process. This active engagement positively influences their multiliteracy abilities. Thus, this finding provides strong evidence that the implementation of PjBL can serve effective strategy for enhancing students multiliteracy.

Table 4. Results of the Independent Samples Test

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
Students Multiliteracy	Equal variances assumed	.270	.607	12.0 92	33	.000	26.43464	2.18604	21.9871 0	30.88218
	Equal variances not assumed			11.9 99	29. 95 2	.000	26.43464	2.20298	21.9352 5	30.93403

The results show that everyday life based PjBL contributed to the development of multiliteracy skills among students at SD Wasur 2, Merauke, South Papua. By linking project activities to students' daily experiences and local surroundings, learning became more relevant and engaging. The approach encouraged students to observe, read, gather information, discuss, write, and present their project outcomes actively. For the students, the surrounding environment served as a learning resource closely connected to their experiences and sociocultural context. Utilizing the environment and students' everyday experiences also helped address the limited availability of digital and printed learning resources while providing opportunities for students to develop various multiliteracy skills through authentic and meaningful learning experiences.

The analysis revealed a statistically significant difference in multiliteracy skills between students involved in daily life based PjBL and those who did not receive the intervention. This finding may be associated with the characteristics of PjBL, which promote active student involvement and provide learning experiences that support the development of multiliteracy skills. Daily life based PjBL involves students in solving real world, everyday problems through projects that foster the enhancement of higher order thinking abilities (Hernández-Pérez et al., 2021). By centering learning around problems and projects, students become accustomed to exercising higher-order thinking. Project based learning has been shown to be effective in developing students cognitive abilities. Such learning approaches habituate students to engage in higher order thinking activities, which in turn positively influence their multiliteracy competencies.

In the daily life based project based learning process, students are presented with real life problems to solve with guidance from teachers and parents. Students are expected to determine appropriate solutions to the given problems through a process of material analysis and evaluation. This activity demonstrates the application of critical thinking, involving students in examining information, articulating ideas, supporting their viewpoints, comparing alternatives, formulating conclusions, assessing arguments, and addressing problems (Pramestika et al., 2020). Critical thinking refers to the capacity to communicate viewpoints with confidence by relying on sound reasoning and credible evidence (Meilana et al., 2020). This skill enables students to draw on various information sources to develop solutions (Polat & Aydın, 2020). Developing critical thinking is regarded as a fundamental learning outcome in education (Hart et al., 2021; Yu et al., 2021), and it is highly relevant for addressing everyday problems (Odebiyi & Odebiyi, 2021). Based on the preceding discussion, PjBL can foster students critical thinking by engaging them in activities that require them to identify problems and develop appropriate solutions. Such skills can be strengthened through



innovative learning environments that encourage students to actively analyze, evaluate, and respond to challenges (Silberman et al., 2021). In this context, PjBL provides meaningful opportunities for students to develop critical thinking while also supporting the enhancement of their multiliteracy skills.

The skills students need to survive and compete in the 21st century include creativity and innovation, which reflect flexible thinking, openness, and positive behavior. Creative thinking refers to a cognitive process through which individuals explore various possible solutions by applying higher order skills, including analysis, experimentation, problem solving, communication, and scientific inquiry (Redifer et al., 2021). These abilities encourage students to generate a variety of ideas and perspectives, formulate meaningful questions, respect alternative viewpoints, and respond openly to differing opinions. Well developed creative thinking abilities can contribute positively to students' learning outcomes (Hidayatulloh et al., 2020). Students with high levels of creative thinking tend to achieve better academic performance (Resien et al., 2020). Through engaging and varied activities, students can develop their creativity, particularly in creative thinking. Therefore, daily life based project based learning can serve as an effective strategy for enhancing students' creativity skills.

In project based learning, students are taught to work in peer groups and build positive interactions with one another. They develop strong collaboration skills, adapt well within groups, and appreciate each group members contributions. Simply put, project based learning offers students opportunities to engage directly in activities with their peers, both in group and individual learning contexts. This process helps students interact, cooperate, and respect their peers, thereby fostering the development of their collaboration skills. The present findings are consistent with earlier studies showing that Project Based Learning can foster the development of students' collaborative skills (Yanti & Novaliyosi, 2023).

In project based learning, students are given the opportunity to express ideas from their own perspectives. Furthermore, when presenting the products they have created, students are expected to communicate with clear volume, appropriate intonation, and good articulation. This learning process encourages students to explore and construct their own knowledge, making them more confident in expressing and communicating the ideas they develop. Through practice in delivering ideas, students also develop their communication skills effectively. Communication skills are essential for students, as they represent the ability to convey thoughts clearly and effectively to others. These skills enable students to build meaningful relationships with others and connect with the broader world.

Based on the above explanation, daily life PjBL has proven to be effective in enhancing students multiliteracy skills. This approach encourages students to actively engage in solving problems through project work. Through these activities, students develop their multiliteracy competencies, while the learning process itself fosters an engaging classroom atmosphere and increases students' motivation to learn.

Conclusion

The implementation of daily life based PjBL was effective in improving the multiliteracy skills of students at SD Wasur 2, Merauke, South Papua. The higher mean score obtained by the experimental group compared with the control group provides evidence of this outcome. The findings further suggest that daily life-based PjBL may enhance students' multiliteracy development by engaging them in project activities that integrate classroom learning with their everyday experiences and the surrounding environment.



Recommendation

For Elementary School Teachers and Curriculum Developers: daily life based PjBL can be used as a learning approach to develop students' multiliteracy skills by integrating their everyday experiences and surrounding environment into project activities. For School Administrators and Policymakers: schools can support the implementation of contextual PjBL by providing relevant learning resources and encouraging the use of the surrounding environment as a learning resource, particularly in schools with limited access to digital and printed learning materials. For Future Researchers: future studies may examine the implementation of daily life based PjBL across different school settings and student characteristics, involving larger samples to provide broader evidence of its contribution to multiliteracy development.

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