

Strategies For Strengthening Literacy And Numeracy Through Project-Based Indonesian Language Learning In Elementary Schools: A Literature Review

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Abstract. Literacy and numeracy is foundation important for student in face demands academic . But in reality draft This Still there is constraint in its implementation and still Far under standard expected concept. This research aim For study effectiveness implementation PjBL in Indonesian language learning as a strategy for increase ability literacy and numeracy student school basic. The method used is *systematic literature review*, research This analyze articles and journals. Research results show that implementation PjBL in a way significant can increase ability think critical, creative, and collaborative students, as well as competence literacy and numeracy they. Through context authentic and meaningful learning, PjBL help student linking draft academic with situation life real, so that strengthen understanding conceptual and ability implementation practically. In Overall, Indonesian language learning is based on project is an effective pedagogical strategy For grow culture collaborative, reflective, and innovative learning in prepare student face global challenges in the digital era.

Keywords: Literacy, Numeracy, *Project-Based Learning*, Basic Indonesian.

INTRODUCTION

Ability literacy and numeracy is foundation essential for participant educate in face challenge academic and life everyday, as well as crucial For quality live in the future (Fajri , 2024) (Dianastiti , 2024) . Improvement interest reading and ability mathematics in students base in a way significant influence level literacy and numeracy they , which are reflected from response positive to interactive education (Dianastiti , 2024) . In line with matter This is learning that utilizes digital media and approach innovative like project based problems are also evident effective in increase understanding draft mathematical and abilities solution problem practical (Asrida , 2022) . Improvement This No only limited to results learning, but also includes development ability think level tall mathematical through method *Problem-Based Learning* Although has happen various progress, students Indonesia still show ability literacy low numeracy compared to with standard international like PISA and TIMSS tests, which highlight difficulty sustainable in understand and apply information numeric in context practical (Anggraeni, 2024).

Therefore that, there is need urge For explore and apply pedagogical strategies alternatives, such as learning based project namely PjBL integrated with learning Indonesian, for the purpose of push involvement more students deep as well as implementation practical skills literacy and numeracy. Approach integrated become important especially in context education base, For reversing the downward trend competence literacy as well as overcome problem systemic that goes beyond results Study individual (Aryanto, 2025).

This research study effectiveness integration learning based project with Indonesian language teaching as a strategy for increase skills literacy and numeracy student school basis (Adnyana, 2024). Integrated strategy This assessed important For strengthen ability read basic, pushing think level high, and prepare student with skills literacy the necessary mathematics For face challenges in the future (Aryanto, 2025).

Utilise support inherent communicative and cognitive in Indonesian language learning, learning based project can create atmosphere authentic for student For apply reasoning numerical and skills think critical, so that push development more competence holistic (Ndiung, 2024). Approach This in line with commitment of the Indonesian Ministry of Education to learning based project, which is recognized own potential For increase ability think critical, solving problems, and creativity, especially remember low Indonesia's PISA scores in general consistent (Pratami, 2024).

Low score the reflect problem systemic that is not only impact on the results Study individual, but also affirming need urge will intervention For strengthen skills literacy basic and develop ability think level high (Aryanto, 2025). In addition, integration PjBL in education mathematics, especially for prospective teachers, it is very important For increase ability solution problems and prepare educator quality high (Astuti, 2023). The curriculum emphasizes reasoning, problem solving problems, and various track solution the more strengthen relevance implementation of this strategy, in line with standard evaluation international like TIMSS and PISA (Ramdhani, 2025). Evidence in empirical show that learning model based project more effective in increase think creative and skill solution problem compared to with method conventional, especially in education basic (Ndiung, 2024).

This matter confirm the need development professional teachers in general systematic For prepare For facing learning strategies contextual and based project, so that can empowering student For Study independent, tough, and creative, all at once grow development holistic (Ramdhani, 2025). However Thus, success implementation PjBL often depends on suitability between question essential and planned projects, which are challenge alone for educators (Wahyuni , 2025).

RESEARCH METHOD

This research was conducted using a library research method *to* examine strategies for strengthening literacy and numeracy through Indonesian language learning. This method was chosen because it can be used to analyze relevant research results and simultaneously identify findings for further research (Aditya, 2010).

The data sources used were relevant articles and national and international journals. The data collection methods used were literature review, identification, and content analysis, which allowed for exploration of literacy and numeracy strengthening strategies through Indonesian language learning using project-based learning methods. Qualitative descriptive data analysis techniques were used (Fiantika, 2022).

RESULTS AND ANALYSIS

Result of study This show several synthesized findings from review library that shows that PjBL in a way effective increase ability cognitive, achievement academic and skills think level tall, including think critical and creative, at the same time push trust self, motivation, and participation active among student school medium in framework Independent Curriculum (Pratiwi, 2023). Approach this also contributes in a way significant to improvement results Study cognitive and psychomotor child, especially in demanding learning implementation skills practical and literacy science (Fitriani, 2023).

In addition, involvement emotional growth through PjBL proven increase satisfaction learning and perseverance student in finish project, so that strengthen his role in push learning deep learning. PjBL is also proven increase skills collaborative and thinking creative students, especially when integrated with activity interesting like storytelling and writing creative (Wahyuni, 2025).

Implementation of pedagogical models This can build atmosphere open and contextual learning, encouraging student For explore various perspective as well as produce results concrete and meaningful (Mubarok, 2025). Integration of the design process engineering in STEM makerspace

the more strengthen benefit said, in particular in topic energy renewable, with grow think critical, development cognitive, achievement learning and process skills scientific (Abdurrahman, 2023). Approach this also has an impact significant to skills think level tall students, in particular in education technique, with demand they For apply problem-solving strategy problem complex in real-world context (Hidayat, 2024). Implementation Combined PjBL with approach STEM, for example, it is proven in a way significant increase ability solution problem, allows student For adapt with challenge globalization and becoming breaker tough problem in situation real (Syaifuddin, 2025).

Framework strong pedagogical this also increases important 21st century skills, such as creativity and culture collaborative, which is very crucial for demands modern education (Mubarok, 2025). In the context of education, PjBL proven in a way significant increase ability solution problems, collaboration, and communication, as well as push think critical and creative the essential For face real world challenges (Fitriani, 2023).

Other studies also show that integration PjBL capable increase ability student For innovate and creative face global challenges, with emphasis on solving problem real world based (Kusmahardhika, 2023). Approach pedagogical kind of This No only increase retention knowledge, but also strengthen ability think critical, trust self, as well as involvement student in eye lessons (Haase, 2023).

With Thus, PjBL support student For understand material in a way deep at a time prepare they For career related future with STEM fields (Mokoka, 2023). Effectiveness PjBL the more strengthened by his abilities in increase attitude positive to eye lesson like mathematics, as well as grow collaboration and engagement active students (Rehman, 2024).

Approach comprehensive This equip student with tool thinking and skills important For face complex global challenges, encouraging innovation and collaboration cross discipline science (Syaifuddin, 2025). Consistency results from various study confirm that PjBL is approach pedagogical strong constructivism, which deepens understanding content at a time hone competence essentials needed For success academic and pathways future career (Velmurugan, 2023).

Based on results study literature that has been presented, in the section following will discussed in a way more deep what is the learning strategy based project can contribute to strengthening literacy and numeracy in schools base .

This research show that approach pedagogical This in a way significant increase engagement and achievement Study student in field academic main said, at the same time push creation experience learn more dynamic and student- centered. Through involvement student in activity communication, collaboration, reasoning, and problem solving problem, PjBL allows they For build knowledge in a way independent as well as create results meaningful work.

Learning methods based project This proven to be very effective in context school basic, especially For increase skills literacy, because approach This can integrated in a way harmonious to in system management learning use develop comprehensive curriculum strategy, including source learning, media, and methods assessment (Hussain, 2021). This integration facilitate approach holistic education, enabling student For apply knowledge theoretical in context real, while develop digital competence and skills creative (Fami, 2023).

Implementation approach this also answers limitations of learning models traditional teacher-centered, with method push involvement active student as well as give they chance For take initiative and be creative in a way independent (Wahyuni, 2025) In addition, the implementation of PjBL in Indonesian language learning at the elementary level school base has proven capable increase ability think critical thinking, creativity, and collaboration students, in line with theory learning constructivist emphasize on participation active student in build knowledge (Hidayat, 2025).

In line with mandate of the Indonesian Ministry of Education which requires all institution education For integrate learning based project to in curriculum, with emphasize investigation deep to real world problems, not just memorization material (Pratami, 2024). In addition, the approach This grow skills digital literacy the important thing is to prepare student For face demands of the modern world based on technology, with implant ability adaptation and problem solving problem through

project authentic real world based (Family, 2023). Compliance approach This with policy national, such as initiative Freedom to Learn on an Independent Campus, emphasized importance learning student-centered And flexible curriculum, which empowers student For develop relevant competencies with future career they (Astuti, 2023).

Integration of wisdom local to in the learning model based the project also improves knowledge Study with connect content academic with context culture students, so that learning become more meaningful and relevant (Zaki, 2024). Additionally, merging values culture local in PjBL can also strengthen ability think critical and problem solving problem students, with present problem contextual real in a way culture in the learning process (Zaki, 2024).

The approach that structured and systematic This support development think critical, creativity, collaboration, and ability solution problem, which becomes base for formation ability think computational in various level education (Zhang, 2024). Comprehensive strategy This No only prepare student face complexity 21st century, but also helpful reach standard global education, as measured through PISA scores, with push understanding deep conceptual and application practical from knowledge (Pratami, 2024).

Approach this is also in direct overcome superficiality learning transformational which often found in many room class, with provide structured and supportive learning model which bridges gap between expectation curriculum and field practice (Wahyuni, 2025).

Based on results research and discussion, above can concluded that *Project-Based Learning (PjBL)* is a learning model that is capable of increase quality of process and results Study student in a way computer reprehensive. Approach This effective in develop ability think critical, creative, collaborative, and skills solution the problem that is needed in face challenge 21st century. PjBL No only strengthen ability cognitive and psychomotor, but also foster motivation, confidence self, and participation active student through activity contextual and real-world-oriented learning. In the context of education basics, application PjBL contribute significant to improvement literacy and numeracy, as well as in line with Spirit *Independent Learning* which places student as center learning. Integration of values culture local and digital technology in PjBL also makes learning more meaningful, relevant, and powerful use, so that capable form a creative, adaptive and ready generation face global demands.

CONCLUSION

Review library systematic This in a way comprehensive examine How learning based Project-Based Learning PjBL project in context teaching Indonesian at the elementary level school base in a way significant increase results Study literacy and numeracy students. Approach pedagogical This proven capable grow ability think critical, creativity, and skills collaborative, at the same time prepare student face demands of the modern world based on technology and in line with policy education national as well as standard global. Besides that, learning model this is very important in grow habits collaborative, reflective, and creative learning, with emphasize the role of teachers as facilitator who creates experience Study authentic and meaningful For grow Power creation as well as innovation students. Findings study show that implementation PjBL capable support learning Indonesian with increase collaboration, mastery science and technology, as well as ability think creative and problem solving problems, especially in learning mathematics.

This integration is also strengthened by various studies that show that implementation Deep Learning approach in activity based project like storytelling, drama, and short film production can in a way significant increase ability think critical thinking, creativity, and collaboration students. Approach This in line with theory learning constructivist who emphasizes role active student in build knowledge than just accept information in a way passive

In a way overall, approach This answer demands education 21st century, which demands student For beyond just mastery knowledge basic and develop ability think critical, creative, and skills solution innovative problems. With Thus, integration Project-Based Learning in Indonesian language learning in schools base be an effective strategy For strengthen literacy and numeracy, simultaneously prepare student become learners adaptive and innovative in the global era.

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