



Project-based learning in Indonesian language: Systematic literature review

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ABSTRACT

The Indonesian language is a mandatory subject designed to enhance student literacy, communication, and language mastery. One of the strategies to achieve the goals is utilizing project-based learning (PjBL), as it fosters more active learning through real-world projects. Albeit PjBL has been broadly implemented, it remains challenging to understand how to conduct PjBL in Indonesian language learning to facilitate instruction and whether the implementation is aligned with its impact on student learning outcomes. This study aims to investigate the implementation of PjBL in Indonesian language learning and analyze its effect on students' learning outcomes within the K12 education context. Using the Systematic Literature Review, this review analyzed 71 articles published between 2015 and 2024. The significant findings reveal that PjBL mostly implemented standard group project models, integrating with technologies using active learning and learning media, contextualizing with culture and local wisdom, and utilizing supplementary instructional approaches. The topics delivered vary, ranging from the type of text structure to the literature learning. Moreover, PjBL effectively increases students' learning outcomes, motivation, creativity, active learning, and writing, which are the most cultivated skills.

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ABSTRAK

Bahasa Indonesia adalah mata pelajaran wajib yang dirancang untuk mengembangkan literasi, komunikasi, dan penguasaan bahasa. Salah satu strategi yang digunakan untuk mencapai tujuan tersebut adalah menerapkan pembelajaran berbasis proyek (PjBL), karena metode ini mendorong pembelajaran yang lebih aktif melalui tugas proyek yang nyata. Walaupun PjBL telah diimplementasikan secara luas, hal ini tetap menjadi tantangan untuk dapat memahami bagaimana melaksanakan PjBL dalam pembelajaran Bahasa Indonesia, dan apakah implementasi yang dilakukan berbanding lurus dengan hasil belajar yang didapat oleh peserta didik. Studi ini bertujuan untuk menelusuri implementasi PjBL pada pembelajaran Bahasa Indonesia dan menganalisa dampak yang diberikan pada hasil belajar peserta didik dalam konteks pendidikan K-12. Menggunakan Systematic Literature Review, studi ini menganalisa 71 artikel yang dipublikasikan dari tahun 2015 sampai 2024. Temuan-temuan penting menunjukkan bahwa sebagian besar PjBL diimplementasikan menggunakan strategi kelompok belajar pada umumnya, mengintegrasikan dengan teknologi media pembelajaran, kontekstualisasi dengan budaya dan kearifan lokal, serta pendekatan pengajaran tambahan. Selain itu, topik yang diajarkan juga bervariasi dari jenis-jenis teks hingga sastra. Terkait hasil pembelajaran, PjBL efektif meningkatkan hasil belajar, meningkatkan motivasi, kreativitas, dan pembelajaran aktif, dan menulis adalah keterampilan yang paling banyak dikembangkan.

Kata Kunci: hasil pembelajaran; implementasi; pembelajaran bahasa Indonesia; pembelajaran berbasis proyek; pendidikan K-12

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INTRODUCTION

Indonesian language is a compulsory subject studied at all levels of Education, without exception at the K-12 education level. Indonesian language lessons conducted in the K-12 education setting are vital in developing students' literacy skills and communication in the language dimension. Based on the Badan Standar, Kurikulum, dan Asesmen Pendidikan in 2022 on the learning targets, the goal of Indonesian language lessons is to create a generation that values their national language, holds language and literacy skills, critical thinking, cares about culture and environment, and contributes at the global level. Moreover, it is paramount to improve younger generations' intelligence and character and shape the nation's culture and identity (Andriyanto et al., 2024; Kardika et al., 2023). In addition, the Indonesian language contributes to someone's cognitive, affective, and social skills (Monigir, 2023). However, challenges remain in force for students learning Indonesian language subjects. For example, some schools still apply traditional strategies and methods to deliver instruction; hence, less interaction and less engagement led students to lack motivation to learn the Indonesian language (Elviya & Sukartiningsih, 2023; Kurniawan et al., 2020; Nurindah & Kasman, 2021). This aligns with the PISA 2022 results for Indonesia, where literacy remains low in related aspects such as reading and writing (Janul & Sunendar, 2024). This highlights the need to improve the implementation of the Indonesian language subject in classroom settings through an approach that can enhance overall learning outcomes that lead to both academic achievement and communicative skills.

In light of the difficulty, project-based learning (PjBL) is presented as one of the national directions for tackling the challenge and improving the best educational experience for students, establishing a more effective teaching model of instruction, including Indonesian language learning. Through the Kurikulum Merdeka highlighting PjBL, teachers can choose and develop learning materials based on students' characteristics and needs (Wahyudin et al., 2024). Project-based learning fosters students' problem-solving skills when constructing a project with tangible outputs (Fazarini et al., 2024; Khaedar et al., 2023). This approach emphasizes students' exploration, assessment, interpretation, and synthesis of information meaningfully (Khairunnisa et al., 2024). PjBL also promotes students' more profound understanding of the subject matter since students can participate in projects that require them to conduct projects, collaborate with peers, write reports, and escalate their conceptual and practical understanding (Kurniati et al., 2024). This method is necessary for developing 21st-century skills so students can think critically, communicate, collaborate, and be creative (4C) (Khairunnisa et al., 2024; Wulandari et al., 2024). It also provides a more profound learning experience and fosters more active engagement in Indonesian language learning. Since its emphasis on student active learning and practical exploration, PjBL has been broadly utilized in Indonesian language learning to improve students' Indonesian language acquisition and academic performance. However, it is frequently challenging for teachers and students to implement and undergo learning experiences regarding how students learn, how teachers teach, and how they connect (Karismawati, 2021). Moreover, little is known regarding the comprehensive understanding of PjBL implementation and learning outcomes through a more prominent dimension of study regarding Indonesian language learning in K-12 Education since its utilization for the last decade from the Kurikulum 2013 to the current Kurikulum Merdeka.

Previous studies have explored the literature review on PjBL in K-12 Education, including general education practices and specifically Indonesian language learning. The study conducted regarding PjBL in general multidiscipline subjects identified emergent research trends, skills, and research methods, showing results on the need to improve learning activity through PjBL (Yusri et al., 2024). Another paper reviews research for 30 articles conducted to explore types of digital media mainly used in Indonesian language learning, showing the significance of digital media in improving the learning experience (Septiari & Suwandi, 2024). In contrast, a study analyzed the success of the project-based learning teaching method

by analyzing 15 articles, showing that PjBL is effective in the learning practice (Salsabila & Hindun, 2024). Moreover, the literature review is conducted regarding the project-based learning implementation to improve learning outcomes and high school students' creative thinking skills, showing that project-based learning models positively impact creative thinking skills and student learning outcomes (Fidela & Fadilah, 2024). Despite much research regarding PjBL in all disciplines, studies that conduct paper reviews specifically to explore the implementation of PjBL and the learning outcomes in Indonesian language learning in the K-12 context are still limited. Previous studies focused on improving reading, writing, and critical thinking separately, yet no in-depth research systematically unites all findings. Therefore, this study aims to investigate the implementation of project-based learning in Indonesian language learning and analyze its impact on students' learning outcomes in the K-12 Education context using the systematic literature review. This systematic review will depict the implementation and learning outcomes of Indonesian language learning using PjBL in K-12 Education and contribute to potential research and the upcoming study to explore related aspects that have not been widely discussed.

LITERATURE REVIEW

Project-Based Learning (PjBL)

If we trace its origins, Project-Based Learning (PjBL) is rooted in John Dewey's approach in 1897, which emphasizes that "learning by doing" has a vital role and foundation in more effective education. Afterward, Kilpatrick recreated a significant role in presenting "projects" in teaching, further constructing the development of Project-Based Learning (Kilpatrick, 1918). PjBL aims to promote the learning experience through real-practice collaboration for authentic work with problem-solving skills requiring collaborative, creative, and critical thinking attributes (Andargie et al., 2025). In other words, it helps enhance active engagement by accomplishing collaborative work and actualizing conceptual knowledge in practical contexts. The education transformation leading to the needs of modern society for fundamental skills and abilities prepared for the labor industry has changed the paradigm of education that remakes schools' approach from providing traditional education to more active and dynamic education practices (Azevedo et al., 2025). Given the shift from teacher-centered instruction, many schools have globally adopted the Project-Based Learning approach (Zhao, 2024). Indeed, project-based learning increases academic achievement and learning aspects such as curiosity and creativity and moves from traditional models like memorization for assessment to incorporating obtained knowledge into real contexts of life (Stoica, 2024).

Indonesian Language Learning

Language has a pivotal role in an individual's intelligence, interpersonal, and emotional development since it has a mode of communication and interaction through social engagement that helps Indonesians unite through language. Indonesian language learning is instructed at a gradual level, from the primary school level to higher education, to increase students' proficiency in listening, reading, speaking, and writing, as well as maintain the nation's proud language identity. The student-centered approach is embraced in the Kurikulum 2013, with teachers as facilitators, emphasizing Indonesian language learning to improve literacy, critical thinking, and communication skills (Arlinda et al., 2023). Moreover, in the Merdeka Curriculum, Indonesian language learning acquired a key position as an instrument for communication and character-building in the national education aims, supported by its education approach with numerous innovations and enhancements (Judijanto et al., 2024). Indonesian language instruction has a prevalent objective for all education levels: to provide students with pertinent Indonesian communication and direct them to appropriately communicate and interact using the Indonesian language based on its function (Purwanti et al., 2024). However, it is undeniable that challenges in learning Indonesian are still encountered, for example, dominated by the role of teachers, lack of space for creativity and innovation,

and inequality in cognitive aspects alone, so learning planning is needed for the Society 5.0 era (Lestari, 2022). Teachers must unravel this concern to implement effective strategies to achieve learning objectives and students' language acquisition (Farisia et al., 2024). We need a big step forward to change the approach to be more student-centered learning, providing them with meaningful learning experiences to enhance their active, problem-solving, and critical thinking skills relevant to real life. Therefore, the task of educators in language learning is to make different steps so that students are motivated and actively involved in learning (Hamzah & Khoiruman, 2021).

Project-Based Learning in Indonesian Language Education at the K-12 Level

Project-based learning (PjBL) in Indonesian language learning in K-12 education emphasizes active student participation in meaningful, real teamwork. The lesson in the Merdeka Curriculum experiences a reconstruction from the Kurikulum 2013 (Agustina & Mustika, 2023). The implementation of project-based learning has been widely used, particularly in the Merdeka curriculum, which highlights student-centered instruction with experiential learning and fosters critical thinking, creativity, and problem-solving. At this point, teachers are strongly reassured that they can employ distinct and innovative teaching models that effectively lead students in problem-solving scenarios requiring higher-order thinking skills (HOTS) (Ndiung & Menggo, 2024). As facilitators, teachers are encouraged to apply practical methods, such as PjBL, directly involving students in producing a masterwork (Puspitasari, 2020). PjBL in the Indonesian language has been used in numerous learning topics, for example, improving Indonesian language writing skills (Harefa et al., 2023; Mudiono, 2024), reading literacy, collaboration, and student activity (Kristiyani, 2023; Oppusunggu & Hasibuan, 2023).

METHODS

A systematic Literature Review is a proof synthesis in which writers develop eligibility criteria, gather the studies that meet the criteria, and then choose, assess, and synthesize the results that minimize errors and biases (Brignardello-Petersen et al., 2025). This systematic review used the PRISMA (Preferred Reporting Items for Systematic Reviews and MetaAnalyses) methodology. The PRISMA was an established approach that helped authors accomplish transparent reviews and complete reporting of the review summary (Liberati et al., 2009). The review was conducted from January 2015 to December 2024. The steps include eligibility criteria, search strategy, selection process, and quality assessment.

Eligibility Criteria

Table 1. Eligibility Criteria

No	Criteria	Inclusion Criteria	Exclusion Criteria
1	Period	2015-2024	Time range outside 2015-2024
2	Type of Article	Research articles or proceedings published in journals or conferences	Theses, dissertations, systematic reviews/meta-analyses, or unpublished papers
3	Language	Indonesian or English Articles	Not written in Indonesian or English
4	Study Focus	The research discusses the implementation of PjBL and the learning outcomes in Indonesian language learning.	Research that does not discuss the implementation and learning outcomes of PjBL in Indonesian language learning
5	Education Level	K-12 education	Outside K-12 education

No	Criteria	Inclusion Criteria	Exclusion Criteria
6	Geographical Area	Studies conducted in Indonesia or related to the context of Indonesian education.	Studies conducted outside Indonesia or not relevant to the Indonesian education context

Source: Data Processed 2025

Search Strategy

The search for articles used Google Scholar and Garuda as the database since these databases have a wide range of article collection to the related studies. The search process used various keywords and search strings to ensure the topic could be reached. Keywords including "PjBL and Indonesian language learning," "Project-based learning and Indonesian language subject," "Pembelajaran berbasis proyek dan Bahasa Indonesia," and "PjBL dan pembelajaran bahasa Indonesia" were used to refine the search. Some search strings were deeply implemented, such as "Project-Based Learning" OR "PjBL") AND ("Bahasa Indonesia" OR "Indonesian language," "Project-Based Learning" OR "PjBL") AND ("Bahasa Indonesia" OR "Indonesian language") AND ("implementation" OR "application" OR "classroom practices") AND ("K-12" OR "primary school" OR "secondary school", and "Project-Based Learning" OR "PjBL") AND ("Bahasa Indonesia" OR "Indonesian language") AND ("learning outcomes" OR "academic achievement" OR "student engagement" OR "motivation") AND ("K-12" OR "primary school" OR "secondary school." These search strings were generated to retrieve relevant studies in both English and Indonesian. The retrieved articles were then transferred to Microsoft Excel for systematic organization.

Selection Process

The next step is to conduct a study selection for the articles using the PRISMA framework.

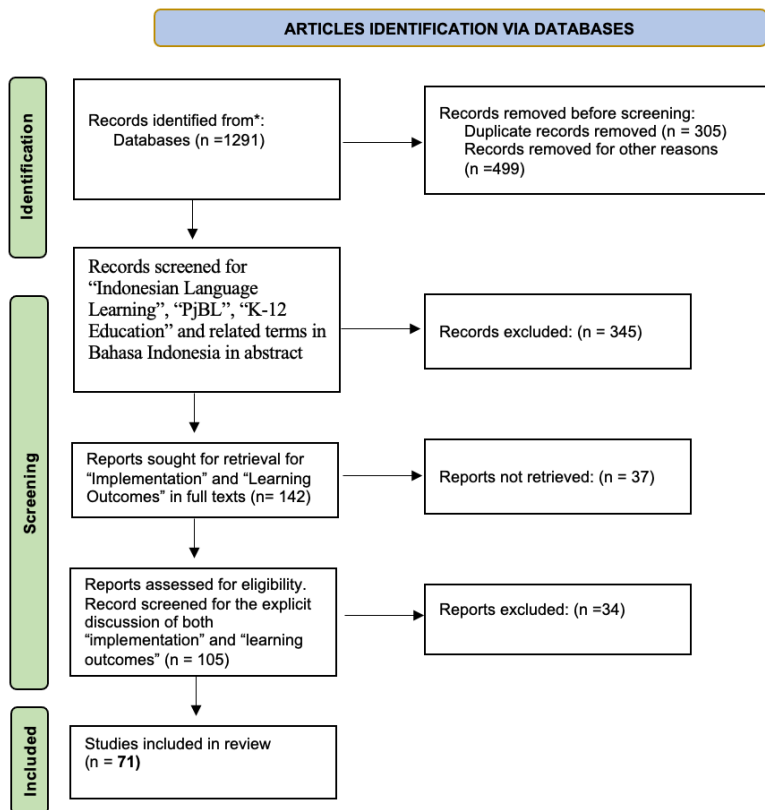


Figure 1. PRISMA Flowchart of Article Selection
Source: Data Processed 2025

In the identification step, the search collected 1291 articles based on the keywords and string words provided, then 305 articles were removed due to duplication, and 499 articles were removed since the title focused on variables other than Indonesian language subjects and PjBL and the source was a book version. In the screening process, 345 articles were removed as the paper abstract did not discuss "Indonesian Language Learning," "PjBL," "K-12 Education," and related terms in Bahasa Indonesia. Still, in the screening process, the articles were retrieved and read in full text with 142, yet 37 could not be retrieved as the article required special access, a subscription, an invalid link, or a broken page. Articles then screened for eligibility, ensuring that the paper presents an explicit discussion of "implementation" and "learning outcomes, eliminating 34 that did not explain that frankly. Finally, 71 articles met all the criteria and screening process for the review.

Quality Assessment

The quality of papers was assessed to ensure a rigid assessment. The article's qualities are measured by considering the type of publications and the sample size used in the research (Peixoto et al., 2021). The paper published in a journal scored 3 points, a paper published in a conference with a full text scored 2, and the short papers submitted in the conference scored 1 point. Meanwhile, for the sample size, if the size exceeded the baseline, it gained 3 points; if the size was suitable, then it got 2 points; and if it was under recommendation, it was given 1 point.

Table 2. Quality Assessment Results

Criteria	Score 1	Score 2	Score 3	Total	Percentage
Publication Type	0	4	67	71	5.63% (Score 2) 94.37% (Score 3)
Sample Size	0	7	64	71	9.86% (Score 2) 90.14% (Score 3)

Source: Data Processed 2025

Among the 71 articles assessed, 94.37% were published in scientific journals, and 5.63% were published in proceedings or conferences, which means no articles with short papers were published in conferences. Therefore, the articles had an average overall quality score of 2.95. Regarding the sample size used in the research, 90.14% of articles had more than sufficient samples, rating 3 points, while 9.86% had samples classified as moderate with 2 points, given the average score of 2.90. Although just a few papers received a score of 2 in either sample size or publication type, they were still considered relevant to the research objectives included in the analysis. In short, all 71 articles are qualified for further analysis.

RESULTS AND DISCUSSION

The results of this systematic review provide an overall overview of the articles on implementing PjBL and the learning outcomes in Indonesian language learning.

Overview of PJBL Research in Indonesian Language Learning

Publication Year

Table 3. Publication Year

No	Year	Number of Studies
1	2024	26
2	2023	29
3	2022	5
4	2021	5
5	2020	2
6	2019	1
7	2018	1
8	2017	3
9	2016	0
10	2015	0

Source: Data Processed 2025

As shown in **Table 3**, the last two years have been the peak season for publication topics related to PjBL and Indonesian language learning, especially understanding how PjBL is implemented and the learning outcomes from the learning model. Additionally, the related research from 2015 to 2022 did not show significant numbers, ranging from zero to up to only five publications per year.

Education Level

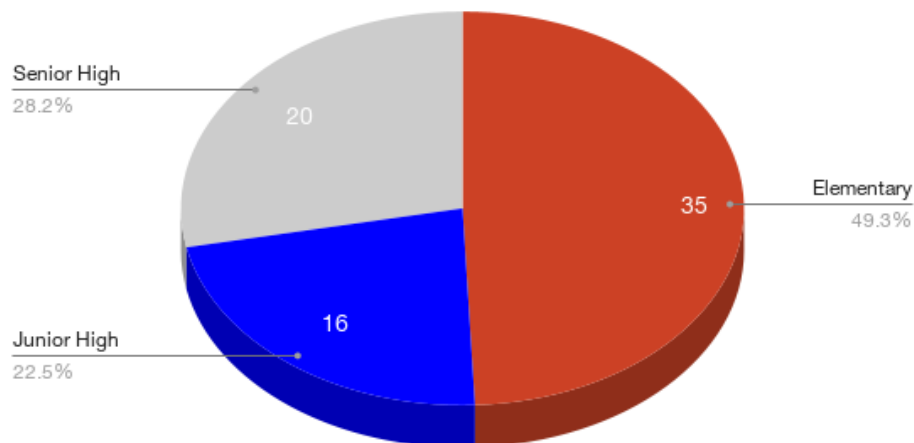


Figure 2. Education Level
Source: Data Processed 2025

Figure 2 illustrates that the research conducted for project-based learning in the Indonesian language learning context with the specification in its implementation and learning outcomes experienced the highest number at the elementary level, with almost half of the total publications assessed in 71 articles. Research conducted at the senior high school and junior high school levels gained less, with 20 articles and 16 articles for each discussing the topics within the time framework between 2015 and 2024.

Project-Based Learning (PjBL) Implementation

Strategies for PjBL Implementation

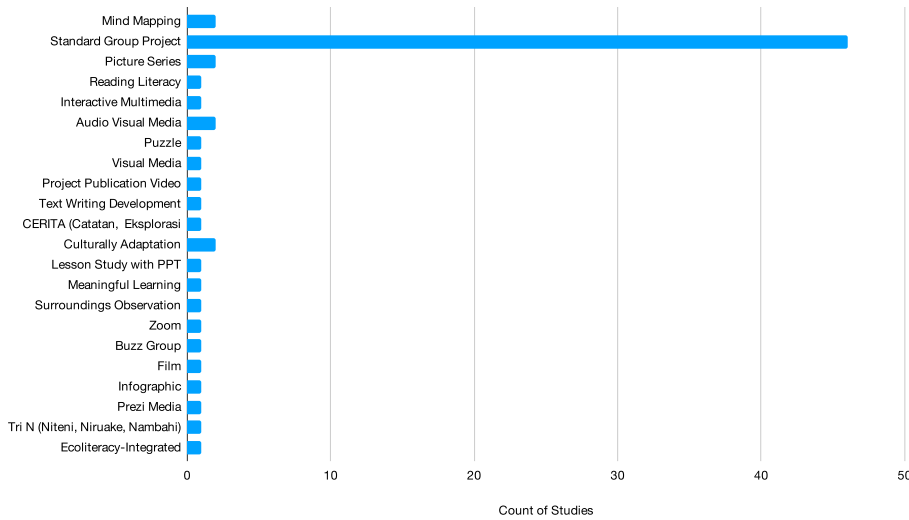


Figure 4. Strategies for PjBL Implementation
 Source: Data Processed 2025

Figure 4 illustrates that the standard group project is the most frequently utilized method used in completing tasks in classroom practice, with 46 studies showing the dominance of collaborative learning in K-12 education. Meanwhile, the other studies used many strategies, but each appeared in only one study. Some studies use strategies such as Buzz group, Mind Mapping, Picture Series, and Lessons with PPT. Meanwhile, cultural and environmental approaches, such as cultural adaptation, Eco literacy, and Tri N, showcase the integration of local wisdom into learning. Tools like Zoom, Prezi Media, Interactive Multimedia, Audio-Visual Media, and Infographics were also used to serve as key instructional materials, enhancing content delivery.

Topic Included in the Studies

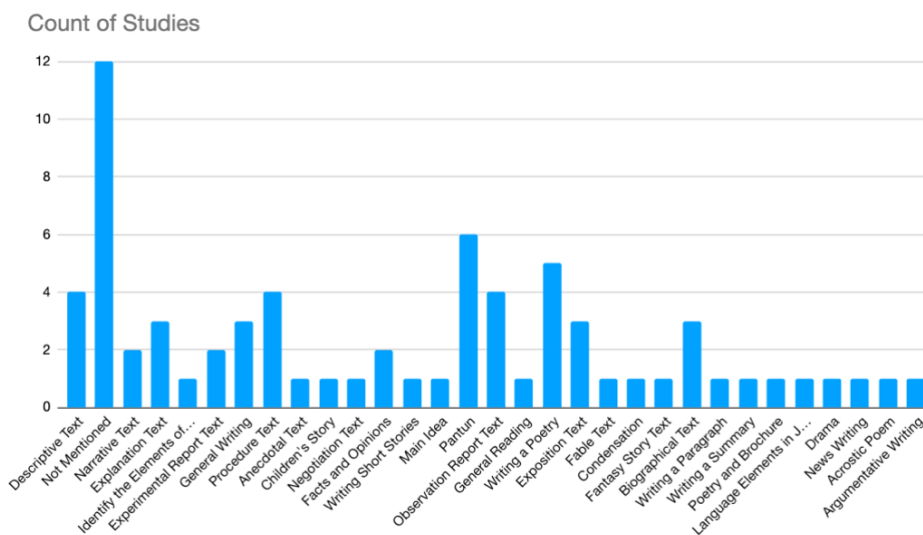


Figure 5. Research on Subject Topics
 Source: Data Processed 2025

Figure 5 shows the topics in the articles studied the PjBL in Indonesian language lessons, such as types of texts, including narrative, expository, and argumentative texts, emphasizing the focus on writing skills. In addition, there is a concentration on *pantun*, poetry, and drama, leading to literature learning. Essay writing and basic skills such as paragraphing, sentences, and conclusions are also utilized to improve original writing structures. At the same time, several articles did not mention the language topics in the study.

The Learning Outcomes

Cognitive Outcomes

Table 5. Cognitive Outcomes

No	Outcomes	Number of Studies
1	Increase	60
2	Positively Increase	4
3	Effective	2
4	Remain the Same	2
5	Positively Influenced	1
6	Improve	1
7	Sufficiently Increase	1

Source: Data Processed 2025

These findings indicate that most of the articles analyzed showed an increase in cognitive learning outcomes, with 97% of studies showing an increase and several studies suggesting positive effects using terms such as "Improve," "positively increase," "positively influenced," and "sufficiently increase." Meanwhile, fewer studies suggested that learning outcomes remained the same or were deemed effective than showing explicit improvement.

Affective Outcomes

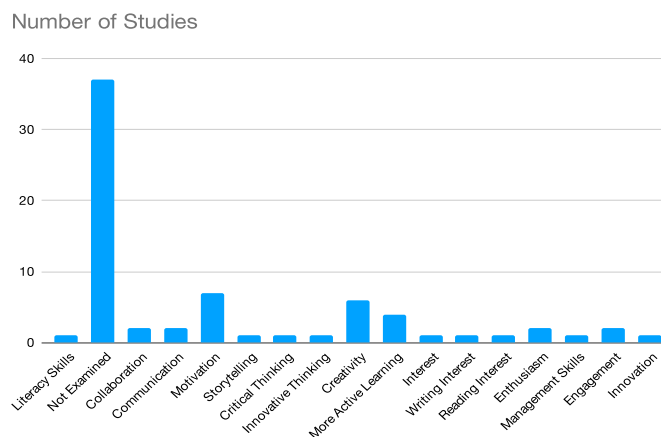


Figure 6. Affective Learning Outcomes

Source: Data Processed 2025

The papers measured soft skills such as literacy, collaboration, communication, enthusiasm, active learning, etc. Meanwhile, several articles did not focus on this aspect, showing no examined characteristics of nonacademic elements of this study discussed within Indonesian language learning using PjBL.

Skills Outcomes

Table 6. Skills Outcomes

No	Outcomes	Number of Studies
1	Writing	44
2	Not Mentioned	14
3	Reading	4
4	Viewing	4
5	Reading and Writing	2
6	Speaking	2
7	Writing and Speaking	1

Source: Data Processed 2025

Most of the papers aimed to improve writing mastery, showing that 62% focused on improving students' writing skills. Other language skills such as reading, viewing, and speaking gained less priority in studies showing fewer than five papers for respected categories. In contrast, the rest of the papers did not discuss improving specific language skills.

Discussion

Before reaching the central questions of the literature in understanding the implementation and the learning outcome of project-based learning in Indonesian language learning, it is important to understand the current state of the theme before diving into it. The study has shown that the most productive years for publishing research regarding project-based learning in Indonesian language learning are around 2023 and 2024. This tendency is growing as project-based learning instruction can cultivate students to gain 21st-century skills needed in the actual work demand (Almazroui, 2022). Project-based learning also leads to the current society's 5.0 demand, which needs skills for problem-solving, critical thinking, teamwork, good use of technology, interdisciplinary working, establishing communication, and creativity (Baran et al., 2021). Moreover, the review suggested that most research was conducted in elementary schools with various purposes and learning materials. This is aligned with the study about PjBL in elementary school, showing that Project-based learning is a significant way to improve academic achievement since it engages students in learning as part of their educational journey, and the skills and knowledge gained make them successful in real situations. Moreover, the research mainly conducted on this theme is classroom action research, which is considered to meet teachers' needs in improving real learning situations in the classroom, improving the quality of learning, and increasing student learning outcomes (Dinawati & Arianti, 2024; Haloho et al., 2024; Khairunnisa et al., 2024; Kurniawati et al., 2023; Setyawati et al., 2022).

Implementing PjBL in Indonesian language learning in K-12 education showed how teachers apply it in many instructional practices. The dominant preference in standard group projects, meaning the instruction is preferred more fundamentally due to its alignment with existing curricula frameworks fostering students

to complete tasks from planning research, scheduling, monitoring, and evaluating the results with topics like daily routines and personal experiences that will influence learning activities and produce learning outcomes (Adelia et al., 2024; Aji & Budiono, 2023; Andini & Fadly, 2024). These are consistent with the studies showing that integrating PjBL with more accessible tasks and concerning everyday routines and relatable activities enhances their creativity in more contextual problem-solving (Fitri et al., 2024; Girgin & Coştu, 2024; Sulikhah et al., 2022).

Moreover, the strategies to implement PjBL were also conducted using visual and creative methods, helping students attain the material optimally. For instance, the use of visual media is efficacious in improving students' language ability regarding improving their writing skills and learning motivation (Chicho & Zrary, 2022; Huda et al., 2024), and mind-mapping techniques as well are efficacious in enhancing learning motivation (Faturrohman et al., 2023). These align with the studies suggesting that visual aids can effectively enhance students' learning experience and engagement (Dey & Munshi, 2025) and foster knowledge, understanding, and critical thinking despite their respective learning preferences (Qasserras, 2024).

Technology integration in PjBL implementation in Indonesian language learning is used widely with various approaches. For instance, technological tools with media Prezi effectively improve writing skills (Ardian & R, 2024), and integrating infographics, besides logically improving writing skills, can enhance students' creativity (Muzaqi et al., 2023). Moreover, using interactive media in learning is effective in enriching learning outcomes (Pratiwi et al., 2018), using audio-visual media is significant in optimizing students learning outcomes, verbal mastery, and deep understanding (Wardani et al., 2023), and utilizing Zoom meetings is beneficial in improving learning quality and meaningful learning experiences (Sudiro, 2020). These are in line with the research presenting that technology integration in project-based learning is effective in impacting students' motivation and interest and achieving academic excellence (Al-Abdullatif & Gameil, 2021; Amrin & Ritonga, 2024; Dewi et al., 2022).

Moreover, besides using technology, integrating project-based learning into Indonesian language lessons emphasizes the importance of local cultural wisdom and allows students to engage with their surroundings. For example, using contextualized local culture is ideally adaptable and appropriate with PjBL (Adelia et al., 2024); integrating cultural values into instruction can optimize Indonesian language acquisition (Utami & Rochmiyati, 2024) and explore the environment with eco-literacy awareness also effectively in language acquisition and creative thinking skills (Chaesar & Andayani, 2024). These are similar to research suggesting that learning Indonesian based on local characteristics through school effectively preserves and maintains our cultural and national identity (Misriani et al., 2023).

Types of text have become prevalent topics in Indonesian language learning using PjBL. The topics help learners enhance their writing skills since writing mastery is at the highest level of language acquisition (Harefa et al., 2023; Margawati, 2021). Writing is a process of thinking expressed thoughtfully, allowing students to organize, articulate, and communicate their ideas (Hartutik, 2021; Khaedar et al., 2023; Mugiarto et al., 2017). Meanwhile, Indonesian literature works are also significant; for instance, project-based learning implemented in drama with authentic assessment provides satisfactory student performance results (Wajdi, 2017). Moreover, practicing writing the Pantun is efficacious in improving learning achievement and developing creative thinking (Astuti et al., 2024; Pangkey et al., 2023) since, in this digital era, students still need enhancement and enforcement in producing creative writing based on a local identity that does not depend too much on digital and the internet to search for inspiration (Saffawati et al., 2024).

In terms of learning outcomes, PjBL in Indonesian language learning is proven effective in increasing students' active learning and academic achievement (Dinawati & Arianti, 2024; Pratiwi et al., 2018; Rindengan, 2023), improving writing skills (Febrianika et al., 2022; Kurniawati et al., 2023; Pitriani & Cunandar, 2024), and increasing students' reading interest toward writing a text (Rumasni et al., 2019).

PjBL in Indonesian language learning effectively enhances learning performance by fostering students' courage in learning and collaborating with peers and improving their cognitive, affective, and psychomotor skills (Nurfita, 2023; Siman, 2023). The review also highlights that affective outcomes are becoming a significant aspect; one notable one is increasing motivation for learning (Adelia et al., 2024) since motivation develops persistently when facing learning challenges, even when facing obstacles or difficulties (Huda et al., 2024). The outcomes also highlight students' creativity (Chaesar & Andayani, 2024; Dinawati & Arianti, 2024), creative thinking, and more active learning (Mudiono, 2024; Mufidah et al., 2023), which serves as an essential indicator of learning and problem-solving skills.

Besides academic achievements, this review also highlights the language skills developed in Indonesian language learning in the PjBL framework, showing that writing is the most cultivated skill in Indonesian language learning, as shown in Table 6. Writing is paramount as it is the most complex skill compared to other skills (Khaedar et al., 2023), with its nature as a productive skill that enables an individual to organize ideas and convey them in written format (Mugianto et al., 2017; Saripah et al., 2022) with a good command of language rules (Siman, 2023). Reading and viewing skills topics are also becoming a focus. As a receptive skill, reading must be cultivated, leading to improved literacy skills in understanding information, analyzing text, and expressing effectively (Kristiyani, 2023; Shufairo et al., 2024). Viewing skills as current ability in the digital era after the four primary skills is crucial as it enables students to interpret and decode visual illustrations and information effectively (Mulyadi & Wikanengsih, 2022; Oktavianto et al., 2025).

CONCLUSION

Using the systematic literature review, this study investigated project-based learning (PjBL) implementation in Indonesian language learning and analyzed its impact on students' learning outcomes in K-12 education. The results showed that the PjBL was implemented primarily with standard group projects, followed by integrating with technology, incorporating local and cultural values, and supplementary instructional approaches. The learning topics covered from types of text structure to literature forms. Moreover, the learning outcomes suggest that most of the PjBL implementation in Indonesian language learning is effective regarding cognitive aspects. The impact on affective aspects is less explored since few studies focus on assessing this domain. Besides, language skills improved, specifically writing skills, which were mainly cultivated. Given this review's insight into PjBL implementation in Indonesian language learning with more approaches in the cognitive domain, future research can explore PjBL implementation in affective domains such as motivation, collaboration, critical thinking, and creative thinking. More studies on other significant language skills can also be explored, such as verbal communication and reading practice in the context of Indonesian language education.

AUTHOR'S NOTE

The author declares that there is no conflict of interest about the publication of this article and guarantees that the data and content are free from plagiarism.

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