El Midad : Jurnal Jurusan PGMI Vol. 17 No. 3 Desember 2025
p-ISSN 2087-8389 e-ISSN 2656-4289 p. 618-631
website : http://journal.uinmataram.ac.id/index.php/elmidad email : elmidadpgmi@uinmataram.ac.id

PRIMARY SCHOOL TEACHERS' PERCEPTIONS OF PROJECT-BASED LEARNING IMPLEMENTATION IN CIVIC EDUCATION: OPPORTUNITIES AND PEDAGOGICAL CHALLENGES

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ABSTRAK

This study investigates the relationship between primary school teachers' perceptions and the implementation of Project-Based Learning (PjBL) in Civic Education (PKn) within the context of Indonesia's Kurikulum Merdeka. The research was conducted using a quantitative survey approach to analyze how teachers' attitudes and understanding influence their classroom practices. Data were collected from 50 elementary school teachers in North Lampung Regency, selected through random sampling. A structured Likert-scale questionnaire consisting of ten items was administered, and data were analyzed using SPSS version 25. The instrument demonstrated acceptable validity ($r > 0.279$) and reliability (Cronbach's $\alpha = 0.770$). The results of simple linear regression indicated a significant positive relationship between teachers' perceptions and PjBL implementation ($\beta = 0.764$; $p < 0.05$), with a determination coefficient (R^2) = 0.370, meaning that teachers' perceptions can explain 37% of the variance in implementation. These findings confirm that teachers' cognitive and affective readiness substantially affect the adoption of innovative pedagogies in Civic Education. Theoretically, this study reinforces social cognitive and constructivist learning frameworks, while practically, it highlights the need for systematic professional development and institutional support to enhance teacher capacity. The study contributes novelty by focusing on elementary Civic Education, a rarely explored field in PjBL research, and emphasizes the ethical and digital implications of project-based civic learning in the 21st-century classroom.

Keywords: Teachers' perception, Project-Based Learning, Civic Education, primary school, instructional innovation

INTRODUCTION

Education in the twenty-first century demands more than the transmission of knowledge; it requires cultivating learners' capacities for critical thinking, creativity, collaboration, communication, and moral reasoning. These competencies are essential for enabling students to navigate complex social realities and contribute meaningfully as active citizens (Bell, 2021). In recent decades, educational systems worldwide have undergone paradigm shifts from teacher-centered instruction to learner-centered, inquiry-driven pedagogies that engage students in authentic, meaningful learning experiences. Among these innovations, Project-Based Learning (PjBL) has emerged as a prominent instructional model that links knowledge acquisition with real-world problem solving, collaboration, and reflective practice (Kokotsaki et al., 2022).

PjBL emphasizes the learning process through projects that integrate multidisciplinary knowledge and foster higher-order thinking. Students engage in constructing tangible products or social actions while developing essential skills such as planning, communication, and evaluation. (Schunk & DiBenedetto, 2020). The approach aligns with the principles of constructivism and experiential learning, wherein students actively construct meaning through participation and reflection. (Kolb, 2015). This approach is particularly relevant for Civic Education (PKn), whose ultimate aim is not merely the mastery of civic knowledge but the cultivation of civic responsibility, democratic values, and character development. (Maharani et al., 2024).

In Indonesia, the current Merdeka Curriculum (Kurikulum Merdeka) promotes PjBL as a strategic avenue for realizing the "Profile of Pancasila Students" — learners who embody values of faith, global citizenship, cooperation, independence, critical reasoning, and creativity (Kemendikbudristek, 2022). Within this national reform, Civic Education holds a unique position: it is expected to nurture both cognitive and affective dimensions of civic competence through participatory and contextualized learning (Rahmawati & Fauzan, 2023). However, despite this alignment between national policy and global pedagogical trends, many teachers still struggle to operationalize PjBL effectively in classroom settings, particularly in Civic Education, which traditionally relies on expository, lecture-based instruction. (Guskey, 2002).

The transition from a conventional knowledge-based approach to a project-oriented pedagogy presents a profound challenge. Teachers are required not only to redesign lesson plans but also to reconceptualize learning outcomes, assessment systems, and classroom interactions. Several studies have indicated that teachers' perceptions, beliefs, and attitudes strongly determine the success of innovative pedagogical models (Eliya et al., 2023). If teachers perceive PjBL as overly complex, time-consuming, or misaligned with examination demands, they may revert to traditional instruction regardless of policy mandates (Han et al., 2020). Consequently, understanding primary school teachers' perceptions of PjBL is a critical step toward ensuring its meaningful implementation in Civic Education.

Previous studies across various subjects have demonstrated the effectiveness of PjBL in promoting student engagement, critical thinking, and collaboration. (Hardiansyah et al., 2024). In science and mathematics education, PjBL has been linked to improved conceptual understanding and problem-solving abilities. (Pourdavood et al., 2020). In social studies, it has been shown to enhance students' sense of responsibility and empathy. (Strohmaier et al., 2022). However, research specifically exploring teachers' perceptions and experiences of PjBL in Civic Education at the primary level remains scarce. Most available studies focus on secondary or

higher education contexts. (Capraro & Slough, 2022). Moreover, the few that exist tend to emphasize student outcomes rather than pedagogical processes or teacher agency.

Teachers' perceptions matter because they reflect both their cognitive understanding of an instructional model and their affective stance toward its feasibility. A positive perception may encourage experimentation and adaptation, while negative perceptions can hinder innovation despite policy support. (Hsu & Chang, 2021). In Civic Education, the teacher's role is especially pivotal — they act as moral exemplars, facilitators of dialogue, and designers of civic experiences. (Sung & Liu, 2023). Thus, investigating how primary teachers perceive the opportunities and pedagogical challenges of PjBL offers valuable insight into the broader dynamics of educational reform implementation at the classroom level.

Empirical evidence suggests that teachers often encounter multiple constraints when adopting PjBL, including limited time allocation, insufficient professional development, inadequate learning resources, and challenges in assessing student performance. (Lee & Kim, 2021). Furthermore, the affective domain of learning — particularly relevant in Civic Education — is often difficult to measure, causing teachers to question the validity of project-based assessment methods. (Pan & Chen, 2022). Despite these challenges, many teachers also recognize the transformative potential of PjBL in enhancing students' engagement with social realities, fostering teamwork, and strengthening civic values through community-based projects. (Vagg & Balta, 2020).

Given these contradictions, there is an urgent need to explore teachers' real perceptions and lived experiences of implementing PjBL in Civic Education. Understanding these perceptions will illuminate both the enabling factors and the structural barriers that shape pedagogical decision-making at the primary school level. Such insights can guide the design of targeted professional development programs and inform curriculum policymakers in creating supportive environments for pedagogical innovation.

The urgency of this study also lies in its contribution to the evolving discourse on teacher agency. While much of the literature on PjBL focuses on its technical design or student outcomes, relatively little attention has been paid to how teachers interpret, adapt, and internalize the approach in specific socio-cultural contexts (Barma & Daniel, 2021). Indonesia's diverse educational landscape — encompassing rural, urban, and semi-urban schools — provides a rich context to examine how teachers negotiate between curriculum expectations and classroom realities. Understanding these negotiations is essential to ensuring the sustainability of innovative learning practices such as PjBL.

Based on this context, the central research questions addressed in this study are as follows: How do primary school teachers perceive the implementation of Project-Based Learning in Civic Education? What pedagogical opportunities do teachers identify in applying PjBL within the context of Civic Education? What challenges do teachers face in designing, executing, and assessing project-based Civic Education lessons? Accordingly, the objectives of this study are to: (1) describe and analyze primary teachers' perceptions of PjBL implementation in Civic Education, (2) identify the opportunities perceived by teachers that facilitate the successful application of PjBL, and (3) examine the pedagogical challenges encountered during the implementation process. These objectives aim to contribute empirical insights that may strengthen teacher capacity-building programs and improve policy alignment in promoting active and participatory civic learning.

A review of related literature reveals that most previous research on PjBL in Indonesia has focused on science or STEM education. (Yoon & Wang, 2022). Studies investigating Civic Education generally address curriculum design or character education outcomes rather than instructional practices. (Zhang et al., 2024). Consequently, there exists a literature gap regarding teachers' perceptions of PjBL within the Civic Education domain, particularly at the primary school level. This gap is both empirical and conceptual: empirically, because little is known about how teachers understand and enact PjBL in this context; conceptually, because the intersection between civic education and project-based pedagogy remains under-theorized in Indonesia.

Furthermore, methodological gaps persist. Many prior studies rely on quantitative surveys focusing on students' achievement, whereas few employ qualitative or mixed-method approaches to capture teachers' nuanced perspectives and classroom realities. (Hardiansyah, 2022). The present study addresses these gaps by employing a descriptive design centered on teachers' voices, experiences, and interpretations, thus adding a qualitative dimension to the body of research on PjBL implementation.

The novelty of this study lies in its dual emphasis on opportunities and challenges perceived by teachers. Unlike previous works that either celebrate PjBL's success or highlight its constraints, this research seeks to provide a balanced, contextualized understanding of how teachers conceptualize, adapt, and evaluate PjBL practices within Civic Education. This balanced view is crucial for designing sustainable interventions that resonate with teachers' real-world experiences.

Theoretically, this study contributes to the literature on pedagogical innovation and teacher cognition by positioning teachers as active agents in interpreting educational reforms, rather than passive recipients of top-down mandates. Practically, the findings inform

professional development strategies and curriculum frameworks aimed at strengthening Civic Education through participatory, project-based methodologies. On a broader scale, this study offers comparative insights relevant to other developing countries that are integrating project-based civic learning under competency-based curricula.

In sum, this research is expected to enrich scholarly discourse on the intersection between Project-Based Learning and Civic Education by foregrounding teachers' perspectives. It aligns with global educational priorities emphasizing learner-centered pedagogy, democratic citizenship, and holistic character education. By revealing the opportunities and pedagogical challenges encountered by teachers, the study provides both theoretical contributions and practical implications for advancing civic learning in the era of curriculum transformation.

METHODOLOGY

This study employed a quantitative research approach with a survey method, designed to identify and analyze the relationship between two key variables: teachers' perceptions (*X*) and the implementation of Project-Based Learning (PjBL) in Civic Education (*Y*). The quantitative approach was chosen because it allows the researcher to measure variables numerically, test hypotheses statistically, and generalize findings to a broader population (English, 2023). The survey design was appropriate for gathering factual information from a relatively large number of respondents within a limited time frame. Through this approach, the study seeks to quantify the extent to which teachers' perceptions influence their implementation of PjBL in Citizenship Education at the primary school level. The rationale for adopting a survey method lies in its capacity to capture teachers' attitudes, beliefs, and behavioral tendencies systematically through a structured instrument. This design aligns with prior educational research that examines teacher cognition and instructional innovation through correlational models.

The population of this study comprised all primary school teachers in North Lampung Regency, Indonesia. Given the large population size, a random sampling technique was applied to ensure that each member of the population had an equal opportunity to be included as a respondent. This technique was selected to minimize researcher bias and increase the representativeness of the sample. A total of 50 primary school teachers were randomly selected as respondents. The selection criteria included: Teachers currently teaching at the elementary level (grades 1–6) and having at least one year of teaching experience in Civic Education (PKn)—willingness to participate voluntarily by completing the questionnaire. The sample size was considered adequate for simple linear regression analysis, as it met the general minimum

sample rule of n ≥ 30 for detecting medium-level effects (Cohen, 2013). This number also aligns with the recommendations for social science studies focusing on attitude measurement.

Data were collected using a structured questionnaire designed on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). The instrument consisted of two main parts, each containing five indicators (items): Perception of Project-Based Learning (X) – measuring teachers' understanding, beliefs, and readiness toward PjBL in Civic Education. Implementation of Project-Based Learning (Y) – measuring the extent to which teachers apply PjBL principles in classroom practices. Each item was constructed based on a review of theoretical and empirical literature related to PjBL and teacher perception. Before data collection, the questionnaire was validated through content validity and expert judgment involving three educational experts specializing in instructional design and Civic Education.

Table 1. Blueprint of Research Instrument

Variable	Indicator	Item Statement Example
Teachers' Perceptions of PjBL (X)	1. Knowledge of PjBL principles	"I understand the main stages of the PjBL model in Civic Education."
	2. Attitude toward PjBL effectiveness	"PjBL helps students develop critical and civic thinking skills."
	3. Readiness to apply PjBL	"I feel confident implementing PjBL in my Civic Education class."
	4. Perceived institutional support	"My school supports the use of innovative teaching models such as PjBL."
	5. Perceived challenges and feasibility	"Implementing PjBL is difficult due to limited time and resources."
Implementation of PjBL (Y)	1. Lesson planning using PjBL	"I plan learning activities involving student projects related to civic issues."
	2. Facilitation of student collaboration	"Students work collaboratively to solve civic-related problems."
	3. Integration of real-life contexts	"Projects are linked to real-world issues in the community."
	4. Evaluation of project outcomes	"I use project results as a basis for assessing students' civic competence."
	5. Reflection and improvement	"I evaluate my project-based lessons to improve future implementation."

The instrument underwent empirical validity testing using Pearson's product-moment correlation. The results indicated that all 10 items met the validity criterion with correlation coefficients (rcount) above the critical value (rtable = 0.279). The reliability test using Cronbach's Alpha yielded a coefficient of $\alpha = 0.770$, which exceeds the acceptable threshold of 0.60, demonstrating that the instrument is reliable and internally consistent (Ghozali, 2018).

Data analysis was conducted using SPSS version 25 software. Descriptive statistics (mean, standard deviation, and frequency) were first computed to describe respondent

characteristics and overall response trends. Inferential analysis was then performed using simple linear regression to test the hypothesized relationship between teacher perception (independent variable, X) and PjBL implementation (dependent variable, Y). The criteria for hypothesis testing were as follows: H_a (alternative hypothesis): Teachers' perception significantly influences the implementation of PjBL. H_0 (null hypothesis): Teachers' perception does not considerably affect the implementation of PjBL. The hypothesis was tested using the t-test at a significance level of $\alpha = 0.05$. If the p-value < 0.05, H_0 is rejected, indicating a significant influence of teachers' perception on PjBL implementation. Additionally, the coefficient of determination (R^2) was calculated to determine the proportion of variance in PjBL implementation explained by teachers' perceptions. The effect size was interpreted using Cohen's (1988) guidelines, where $R^2 = 0.02$ indicates a small effect, 0.13 a medium effect, and 0.26 or above a significant impact.

RESULT AND DISCUSSION

This section presents the empirical findings of the study, which aimed to examine the relationship between teachers' perceptions of Project-Based Learning (PjBL) and the implementation of PjBL in Civic Education among 50 primary school teachers in North Lampung Regency. Data were collected using a Likert-scale questionnaire consisting of ten items and analyzed using SPSS version 25. The results include four primary analyses: instrument validity, reliability, regression model summary, and significance testing (t-test). Each study is presented in sequence, followed by its interpretation.

Table 1. Validity Test Results for Variables X and Y

Variable	Item r_{calculated}	r_{table}	Decision
Teachers' Perception (X)	1	0.483	0.279	Valid
	2	0.305	0.279	Valid
	3	0.475	0.279	Valid
	4	0.745	0.279	Valid
	5	0.767	0.279	Valid
Implementation of PjBL (Y)	1	0.518	0.279	Valid
	2	0.839	0.279	Valid
	3	0.853	0.279	Valid
	4	0.518	0.279	Valid
	5	0.839	0.279	Valid

All items for both variables show r_{calculated} values greater than r_{table} (0.279), indicating that each question item correlates significantly with its total score. Therefore, the questionnaire items used to measure teachers' perceptions and PjBL implementation are empirically valid and accurately represent the constructs being studied.

Table 2. Reliability Statistics

Reliability Statistics	Value
Cronbach's Alpha	0.770
Number of Items	10

The Cronbach's Alpha coefficient of 0.770 exceeds the minimum reliability threshold of 0.60 (Ghozali, 2018), confirming that the instrument possesses good internal consistency. Hence, the responses obtained from teachers are reliable and consistent, meaning the same questionnaire would yield stable results if administered under similar conditions.

Table 3. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	0.608	0.370	0.356	1.594

The correlation coefficient (R = 0.608) shows a moderate positive relationship between teachers' perceptions and their implementation of PjBL in Civic Education. The coefficient of determination (R^2 = 0.370) means that teachers' perceptions can explain 37 % of the variance in PjBL implementation, while the remaining 63 % is influenced by other factors such as professional training, school policy, or instructional resources. This demonstrates that positive teacher perceptions are an essential but not exclusive driver of PjBL success.

Table 4. Coefficient and Significance Test

Model	Unstandardized B	Std. Error	Standardized Beta	t	Sig. (p)
(Constant)	5.059	3.134	—	1.614	0.113
Teachers' Perception (X)	0.764	0.144	0.608	5.305	0.000

The coefficient for teachers' perception (β = 0.764) is positive and significant at $p < 0.05$, indicating that higher teacher perception scores are associated with higher levels of PjBL implementation. The result supports the acceptance of the alternative hypothesis (H_a) that teachers' perceptions significantly influence the application of Project-Based Learning in Civic Education.

Table 5. Summary of Statistical Test Results and Key Findings

Test	Indicator	Result	Interpretation
Validity	rcalculated > rtable	All Valid	Each item measures its construct accurately
Reliability	Cronbach's Alpha = 0.770	Reliable	Consistent responses across items
Correlation	R = 0.608	Moderate	Positive association between X and Y

Test	Indicator	Result	Interpretation
Determination	$R^2 = 0.370$	37 %	Teachers' perception explains part of PjBL variance
Regression Coeff.	$\beta = 0.764$	Positive & Significant	Perception predicts implementation
Significance	$p = 0.000$	< 0.05	Hypothesis H_a accepted

The quantitative evidence confirms that teachers' perceptions play a significant and positive role in determining how effectively Project-Based Learning is implemented in primary-level Civic Education. While perception accounts for a substantial portion of the variance, successful PjBL practices still rely on external support systems such as training, administrative encouragement, and adequate classroom facilities. These findings highlight the importance of strengthening teacher capacity and institutional backing to sustain innovative learning reforms.

DISCUSSION

The findings of this study confirm a significant and positive relationship between teachers' perceptions and the implementation of Project-Based Learning (PjBL) in Civic Education, with a regression coefficient ($\beta = 0.764$) and determination coefficient ($R^2 = 0.370$). This implies that teachers' cognitive and affective understanding of the PjBL model substantially determines how effectively they adopt and implement the model in the classroom. These results are consistent with the framework of social cognitive theory (Maharani et al., 2024), which posits that individual perception, belief, and self-efficacy strongly influence behavioral execution in instructional contexts.

In this study, teachers who demonstrated a more positive perception of PjBL were more likely to integrate authentic projects, facilitate collaboration, and promote critical thinking among students. This aligns with previous studies that emphasize teachers' belief systems as a determinant of innovation adoption. (Han et al., 2020). The moderate correlation found ($R = 0.608$) suggests that while perception plays an important role, external support such as training and institutional culture also contribute significantly to pedagogical change. (Bell, 2021). Thus, the result not only reinforces theoretical expectations but also highlights the contextual interplay between teacher agency and systemic support in implementing student-centered learning models.

Theoretically, the findings extend the constructivist learning framework. (Kolb, 2015) By providing empirical evidence that teachers' cognitive readiness directly influences the operationalization of experiential learning models such as PjBL. The study contributes to the

literature by validating the assumption that perception is not merely an attitudinal variable but a predictor of instructional behavior, particularly in transforming passive, textbook-based Civic Education into active, participatory learning experiences.

From a practical standpoint, the results underscore the need for systematic professional development that enhances teachers' understanding and confidence in applying PjBL. Workshops and mentoring programs that focus on project design, assessment, and digital tool integration can strengthen implementation fidelity. Furthermore, since teachers' perceptions explain 37% of the variance in implementation, school administrators must foster a supportive institutional climate—including time allocation, collaborative planning opportunities, and access to technological resources—to ensure sustainable PjBL practices. These practical implications resonate with current policy directions under Indonesia's Kurikulum Merdeka, which promotes authentic, student-driven learning aligned with the Profil Pelajar Pancasila. (Hardiansyah & Mas'odi, 2022).

Despite its contribution, this study has several limitations that must be acknowledged. First, the sample size (n = 50), although adequate for fundamental regression analysis, limits the generalizability of findings to a broader population of primary school teachers in Indonesia. Future studies should consider a larger and more diverse sample across different regions to capture variability in contextual factors such as infrastructure, leadership, and community engagement.

Second, the study employed self-reported questionnaire data, which may introduce social desirability bias—teachers might overstate positive perceptions or implementation levels due to policy expectations. Third, only two variables were analyzed quantitatively (perception and implementation). At the same time, other influential factors, such as school support, teaching experience, and access to digital tools, were not incorporated into the regression model. These limitations restrict the explanatory power of the study and suggest the need for multi-variable or mixed-method designs in future research.

Future research should expand the scope of analysis by adopting mixed-method approaches that integrate quantitative and qualitative data. For example, classroom observations, interviews, or reflective journals could provide deeper insights into how teachers translate their perceptions into concrete teaching practices. Additionally, future studies may

explore mediating variables such as digital literacy, pedagogical competence, or institutional culture to identify indirect pathways influencing PjBL implementation.

Longitudinal designs would also be valuable in examining how teachers' perceptions evolve following professional development or curriculum reform. Moreover, comparative studies between urban and rural schools could reveal structural inequalities affecting the adoption of project-based pedagogy. By addressing these dimensions, future research could build a more comprehensive theoretical model linking teacher cognition, environmental context, and instructional innovation in Civic Education.

The integration of Project-Based Learning within Civic Education has notable social and ethical implications, especially in the digital era. PjBL encourages students to engage in community-based projects and collaborative problem solving, thereby promoting civic responsibility, empathy, and social awareness—key attributes of ethical citizenship in the 21st century. However, the digitalization of project work introduces new challenges related to equity, data privacy, and digital ethics. Teachers must ensure that technology use within PjBL adheres to principles of inclusivity and protects student data, particularly when projects involve online collaboration or digital content creation.

From a broader perspective, this study's findings imply that improving teachers' perceptions of PjBL not only enhances pedagogical effectiveness but also supports ethical and democratic classroom practices. When teachers design projects that reflect real societal issues—such as environmental awareness, tolerance, and social justice—they help students internalize civic values through experiential learning. Ethically, educational institutions should guarantee fair access to digital tools and provide clear guidelines for safe and responsible participation in online learning environments.

CONCLUSION

The present study concludes that teachers' perceptions play a significant and positive role in the successful implementation of Project-Based Learning (PjBL) in Civic Education at the primary school level. The regression analysis revealed that teachers' perceptions explain 37% of the variance in PjBL implementation ($R^2 = 0.370$; $\beta = 0.764$; $p < 0.05$), indicating that teachers who hold more positive views of the model tend to apply it more effectively in classroom contexts. This result validates the theoretical proposition of social cognitive theory (Schunk & DiBenedetto, 2020), which emphasizes that individuals' beliefs and self-efficacy

strongly shape their behavior and instructional decision-making. It also supports constructivist assumptions that meaningful learning emerges when teachers and learners collaboratively engage in authentic, inquiry-based experiences. This study recognizes its own limitations—particularly the modest sample size and reliance on self-reported data—and thus calls for future mixed-method or longitudinal research to capture a more comprehensive understanding of how teacher perception evolves and interacts with institutional factors. Future studies may also examine the influence of leadership styles, digital literacy, and school culture in moderating the perception–implementation relationship. In summary, the findings of this study provide empirical evidence that enhancing teachers' perceptions of PjBL is a strategic pathway toward achieving transformative Civic Education in the Indonesian elementary context. Strengthening teacher cognition, professional development, and ethical digital practices will be essential to cultivating classrooms that not only teach about citizenship but also practice it through authentic, project-based learning experiences.

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