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# APPLYING PROBLEM-BASED LEARNING TO IMPROVE SIXTH-GRADE STUDENTS' LEARNING OUTCOMES ON RIGHTS AND OBLIGATIONS IN CIVIC EDUCATION: CLASSROOM ACTION RESEARCH IN PEMATANGSIANTAR, INDONESIA

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## ABSTRACT

*Understanding rights and obligations is a core aim of civic education, yet many elementary students memorise definitions without being able to distinguish rights from obligations or act on them. This study aimed to improve the learning outcomes of sixth-grade students at UPTD SD Negeri 121246, Pematangsiantar, North Sumatra, on rights and obligations through problem-based learning (PBL). Classroom action research was conducted in two cycles of planning, acting, observing, and reflecting with ten students. Each lesson followed five PBL phases built around everyday problems at home, at school, and in the community; Cycle II added a learning video and more structured question-and-answer. Learning outcomes were measured with a five-item essay test and analysed descriptively against a minimum mastery criterion of 70, supported by observation, lesson videos, and reflection. The class mean rose from 67.1 to 86.8, and classical mastery increased from 50% to 90%. Every student improved, by 10 to 30 points, and one student remained just below the criterion. The findings indicate that PBL becomes effective for civic topics when real dilemmas are combined with clear multimedia input and a teacher who manages the phases confidently.*

***Keywords:*** *Problem-Based Learning, Civic Education, Rights And Obligations, Classroom Action Research, Elementary School*

## 1. INTRODUCTION

Civic education in Indonesian elementary schools aims to prepare children to live as responsible members of their families, schools, and communities. One of its central topics is rights and obligations: what children may claim as students, family members, and citizens, and what they are expected to do in return. Elementary children themselves regard civic education as important; in one study, all ten children interviewed said that civic education was very important for them, especially for strengthening their love of their country (Alfiyana & Dewi, 2021). The subject is also expected to carry much of the burden of character education in elementary schools (Anatasya & Dewi, 2021). International research shows that the way rights are taught matters. A review of 38 studies found that students' understanding of their rights is largely intuitive and is shaped by rights-based school practices and school relationships (Perry-Hazan, 2021), and a meta-synthesis of research in primary schools recommended that schools adopt rights-based approaches and that school staff develop literacy in children's rights (Hareket & Kartal, 2021).

Teaching rights and obligations well is not straightforward. A comparison of Grade 3 children in diverse South African schools found that education advances children's understanding of their rights and responsibilities, but also revealed gaps in that education and showed that children's basic needs influence how they understand their rights (Van Aardt, Venketsamy, Thuketana, & Joubert, 2021). Research on child rights education has therefore also examined how far primary teachers know, apply, and believe in it (Vranješević, Cicvarić, Žunić-Cicvarić, & Jovanović, 2022). When the topic is taught mainly through lectures and memorisation, students may be able to recite definitions without being able to tell rights from obligations in real situations or to act on them.

Problem-based learning (PBL) is a promising response to this challenge. In PBL, learning begins with a real problem; students work in groups to investigate it, present solutions, and reflect on the process. Indonesian research suggests that PBL suits integrated thematic learning in elementary schools, strengthens retention of concepts, and fosters problem solving (Rahmatia & Fitria, 2020). A meta-analysis of 16 studies found that PBL had a high positive effect ($g = 1.05$) on primary school students' mathematical abilities compared with conventional learning (Suparman, Tamur, Yunita, Wijaya, & Syaharuddin, 2021), and a meta-analysis of 50 studies examined how sample, instructional, and contextual factors moderate the effect of PBL interventions on critical thinking (Liu & Pásztor, 2022). In civic education specifically, classroom action research has reported gains when PBL was applied to rights and obligations: mastery rose from 24% before the action to 92% in Cycle II in a third-grade class (Rabumi, Wahyuni, & Umigati, 2023), and

classical achievement on obligations at home rose from 40% to 80% across two cycles (Saputro, Prihanta, & Sucipto, 2023). PBL has also improved the cognitive outcomes of civic education in grade V (Mafuliatun, 2021) and has been applied to rights and obligations in grade IV (Lubis, Juwita, Siregar, Hartati, & Ritonga, 2024). Teachers' roles are central: a study of PBL on rights and obligations found that it also contributed to students' critical thinking, problem solving, and collaboration, with the teacher acting as the key facilitator (Ariska, Parida, & Warkintin, 2025).

The evidence is not uniformly positive, however. An Indonesian comparison found that discovery learning produced higher critical-thinking scores than PBL in elementary school (Cahyo Winoto & Prasetyo, 2020), and most PBL studies on rights and obligations involve lower grades and report outcomes without explaining what changed between cycles. Few studies examine how PBL works with older elementary students, who are expected to reason about more complex dilemmas, or how supporting media and teacher practice interact with the PBL phases. The present study addresses this gap in a sixth-grade class at UPTD SD Negeri 121246 in Pematangsiantar, North Sumatra. Preliminary observation on 14 October 2024 showed that students could not yet distinguish clearly between rights and obligations, that some did not complete assignments or follow instructions, and that some daily test scores were below the school's minimum mastery criterion (Kriteria Ketuntasan Minimal, KKM) of 70. The study therefore aimed to improve students' learning outcomes on rights and obligations through PBL and to explain how the revisions made between cycles shaped the outcome. Across two cycles, the class mean rose from 67.1 to 86.8 and classical mastery from 50% to 90%.

## 2. RESEARCH METHODE

This study used classroom action research (CAR) following the spiral model of planning, acting, observing, and reflecting associated with Kemmis and McTaggart, as in recent CAR in Indonesian elementary schools (Erlin & Saptono, 2025). Two cycles were conducted, and the plan for Cycle II was revised on the basis of the reflection on Cycle I (Figure 1).

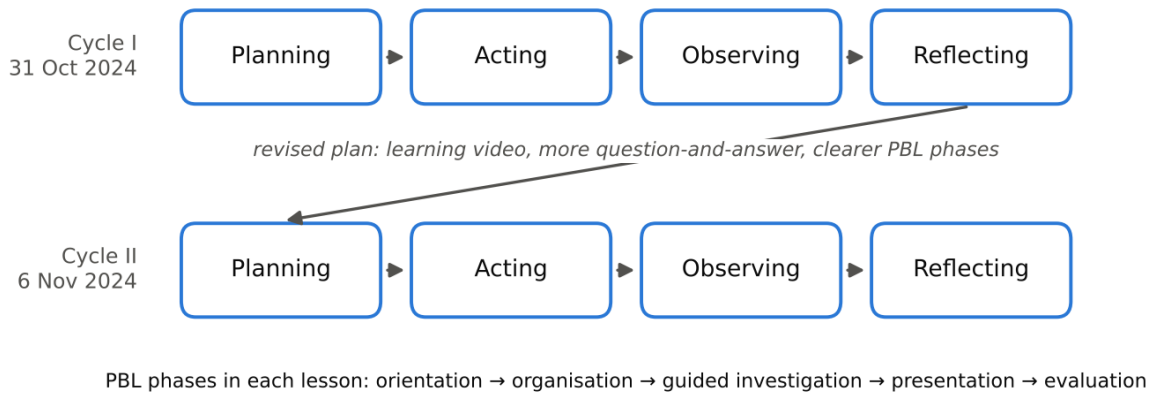



**Figure 1.** Classroom action research cycles applied in this study

The study took place at UPTD SD Negeri 121246, a public elementary school in Marihat Jaya, Siantar Marimbun District, Pematangsiantar City, North Sumatra, Indonesia. The participants were all ten sixth-grade students in the first semester of the 2024/2025 school year. Cycle I took place on 31 October 2024 and Cycle II on 6 November 2024, each in one 70-minute civic education lesson (08.00–09.10). The lessons used Theme 3, *Tokoh dan Penemuan* (Figures and Discoveries), of the national Grade 6 thematic textbook.

Each lesson followed five PBL phases. In *orientation*, the teacher posed a trigger question, presented slides, and led a short ice-breaking activity. In *organisation*, students formed two groups of five and received a worksheet with three open problems: whether rights and obligations are the same at school, at home, and in the community; whether fulfilling obligations or claiming rights is more important; and how to build awareness among friends and family so that rights and obligations stay balanced. In *guided investigation*, groups discussed the problems while the teacher circulated, helped, and assessed. In *presentation*, groups chose how to present their solutions, in writing or as a drawing or poster. In *evaluation*, the teacher confirmed answers, reinforced key ideas, and gave an individual test. Cycle II added a learning video on rights and obligations, a new trigger question ("What are your rights as a student?"), and more structured question-and-answer.

Learning outcomes were measured with an individual essay test of five items worth 20 points each, asking students to define rights and obligations, explain the consequences of neglecting obligations at school, list obligations at home and in the community, and give three examples of student rights with the obligations that make them possible. Presentations and attitudes were rated on four-level rubrics, complemented by lesson videos and reflection notes. Test scores were analysed descriptively with Equations (1)–(3).

$$S = \frac{score\ obtained}{maximum\ score} \times 100 \quad (1)$$

$$\overline{X} = \frac{\Sigma X}{N} \quad (2)$$

$$K = \frac{n}{N} \times 100\% \quad (3)$$

In these equations, $S$ is the individual score, $\overline{X}$ the class mean, $\Sigma X$ the sum of all students' scores, $N$ the number of students, $n$ the number of students scoring at or above the KKM, and $K$ the percentage of classical mastery. The action was declared successful when the class mean reached at least 70, the school's KKM. Students' names are replaced with the codes S1–S10.

## 3. RESULT AND DISCUSSION

### Results of Cycle I

In Cycle I, the teacher prepared a lesson plan, slides, two worksheets, and an evaluation sheet. The lesson opened with the trigger question "Why should we fulfil our obligations before claiming our rights?", followed by the slide presentation, an ice-breaking activity, and group work on the three problems. Groups presented their answers, the teacher confirmed and reinforced them, and students completed the individual test. The scores of both cycles are presented in Table 1.

**Table 1.** Students' test scores on rights and obligations in Cycle I and Cycle II

| Student | Cycle I | Status | Cycle II | Status | Gain |
|---|---|---|---|---|---|
| S1 | 52 | Not mastered | 67 | Not mastered | +15 |
| S2 | 75 | Mastered | 95 | Mastered | +20 |
| S3 | 55 | Not mastered | 85 | Mastered | +30 |
| S4 | 77 | Mastered | 97 | Mastered | +20 |
| S5 | 71 | Mastered | 91 | Mastered | +20 |
| S6 | 83 | Mastered | 100 | Mastered | +17 |
| S7 | 50 | Not mastered | 75 | Mastered | +25 |
| S8 | 68 | Not mastered | 88 | Mastered | +20 |
| S9 | 77 | Mastered | 87 | Mastered | +10 |
| S10 | 63 | Not mastered | 83 | Mastered | +20 |
| **Total** | **671** | | **868** | | **+197** |
| **Mean** | **67.1** | | **86.8** | | **+19.7** |
| **Students ≥ 70** | | **5 (50%)** | | **9 (90%)** | **+4** |

Five of the ten students (50%) reached the KKM in Cycle I, and the class mean was 67.1, just below the success criterion of 70. Scores ranged from 50 to 83 ($SD$ = 11.60), and three students (S1, S3, and S7) scored 55 or lower. The

video review and reflection explained this result. The teacher had not yet mastered the sequence of the PBL phases, so transitions between the presentation of material, group investigation, and presentation were not smooth, and the class was not fully conducive to learning even though the activities were completed. Input on the concept itself relied mainly on slides, which gave students few concrete examples of rights and obligations in action before they had to reason about the problems. The reflection concluded that Cycle II needed audio-visual input on rights and obligations and a more interactive orientation phase.

### Results of Cycle II

In Cycle II, the teacher opened with the question "What are your rights as a student?" and showed a learning video on rights and obligations before the slides. The orientation phase included more question-and-answer between teacher and students before group work began. The group investigation, presentation, and individual test then followed the same PBL phases as in Cycle I. The reflection indicated that the teacher now managed the PBL phases confidently and that the class became active, orderly, and focused.

As Table 1 shows, nine students (90%) reached the KKM in Cycle II and the class mean rose to 86.8, so the success criterion was met and the cycle was not continued. Table 2 summarises the changes between the cycles, and Figure 2 shows each student's scores.

**Table 2.** Summary of learning outcomes by cycle

| Indicator | Cycle I | Cycle II | Change |
|---|---|---|---|
| Class mean | 67.1 | 86.8 | +19.7 (+29.4%) |
| Standard deviation | 11.60 | 10.08 | −1.52 |
| Lowest score | 50 | 67 | +17 |
| Highest score | 83 | 100 | +17 |
| Students ≥ KKM (70) | 5 (50%) | 9 (90%) | +40 percentage points |
| Students scoring ≥ 85 | 0 | 7 | +7 |
| Success criterion (mean ≥ 70) met | No | Yes | - |

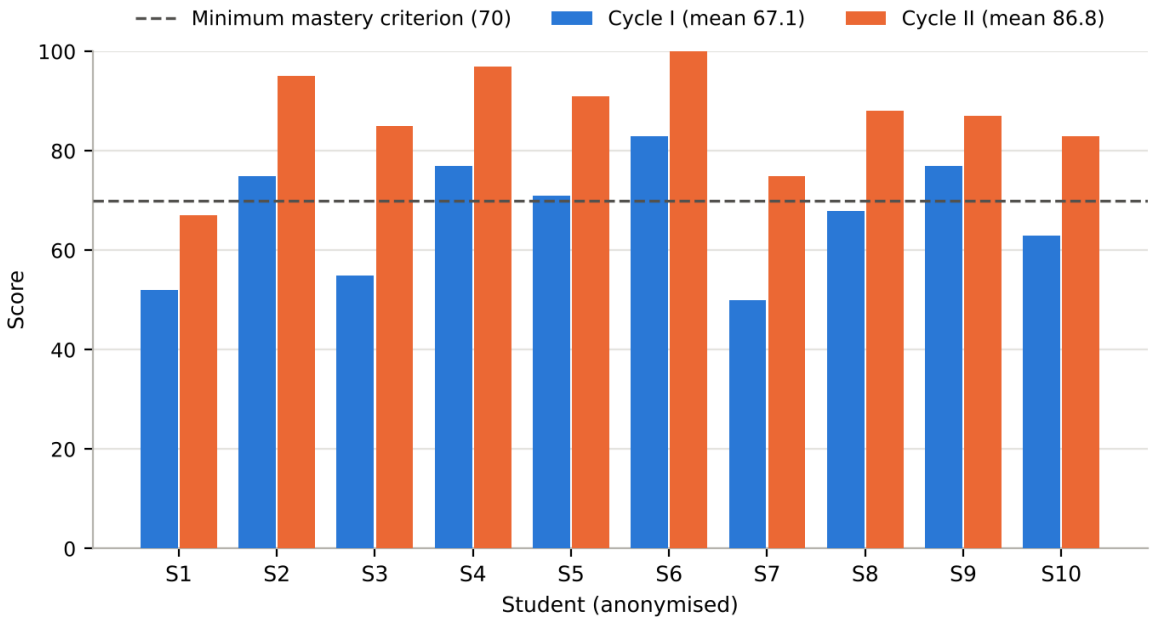



**Figure 2.** Individual test scores in Cycle I and Cycle II

Three features of these results deserve emphasis. First, every student improved, with gains ranging from 10 to 30 points, and the whole distribution moved upward: the lowest score rose from 50 to 67 and the highest from 83 to 100. Second, the largest gains came from students who had struggled in Cycle I. S3 gained 30 points and S7 gained 25, and both crossed the KKM. Gains were moderately and negatively correlated with Cycle I scores ($r$ = −0.50). Third, S1 remained below the KKM at 67 despite a 15-point gain, which shows that at least one learner needs further support.

## Why Problem-Based Learning Supported Understanding of Rights and Obligations

The improvement is consistent with the view that PBL makes concepts meaningful by placing them in real problems (Rahmatia & Fitria, 2020). The worksheet problems did not ask students to recite definitions; they asked whether rights and obligations differ across settings, which matters more, and how to keep them in balance. To answer these questions, students had to apply the concepts to their own lives at school, at home, and in the community, which is exactly what the essay test required. This alignment between the PBL problems and the assessment helps explain why the gains appeared within two lessons. The pattern agrees with earlier classroom action research on rights and obligations, in which mastery rose substantially across two PBL cycles (Rabumi et al., 2023; Saputro et al., 2023), with improved civic education outcomes in higher elementary grades (Mafuliatun, 2021), and with

meta-analytic evidence that PBL has a large effect on primary students' learning compared with conventional teaching (Suparman et al., 2021).

The structure of the PBL lesson may also have contributed through retrieval. After discussing and presenting their solutions, students answered the essay questions individually. Retrieving recently learned ideas in this way is a form of retrieval practice, which produced medium or large benefits in most of the classroom experiments reviewed by Agarwal, Nunes, and Blunt (2021). Group discussion therefore did not replace individual accountability; it prepared students for it.

The content of the problems also matters for civic learning. Rights and obligations are best understood as reciprocal: a student's right to learn depends on classmates fulfilling their obligation not to disturb the lesson, and a child's right to care at home is linked to obligations within the family. The comparison of Grade 3 children by Van Aardt et al. (2021) highlighted this reciprocity in children's own experiences. By asking whether rights and obligations are the same in every setting and which should come first, the worksheet invited students to discover this reciprocity themselves rather than receive it as a rule. This may be particularly appropriate for sixth graders, who can reason about competing claims more readily than younger children, and it connects the topic directly to the classroom behaviour problems that motivated the study, such as unfinished assignments and inattention during instructions. Allowing groups to choose whether to present their solutions in writing or as a drawing or poster also gave students a degree of choice, a form of autonomy support that self-determination theory links to stronger engagement (Ryan & Deci, 2020).

## The Role of Multimedia Input and Teacher Practice

PBL alone did not produce the full effect, because the same phases were used in Cycle I, when half of the class remained below the KKM. The main changes in Cycle II were the learning video, the more interactive orientation, and the teacher's growing command of the phases. The video gave students concrete scenes of rights and obligations before they reasoned about the problems. This fits the principle that people learn more deeply from words combined with pictures than from words alone (Mayer, 2020), and a systematic review found that adding video to existing teaching produced strong learning benefits ($g = 0.80$; Noetel et al., 2021), although that review concerned higher education. The video and the question-and-answer likely reduced the gap between abstract definitions and the real situations that the PBL problems required students to analyse.

Motivation also appears to have mattered. The original identification of problems noted that students were bored, did not focus, and sometimes disturbed their classmates during lessons. Short ice-breaking activities are

reported to increase elementary students' interest in learning and to create an enjoyable classroom climate (Algivari & Mustika, 2022; Harianja & Sapri, 2022), and the video and personal trigger question in Cycle II invited students to start from their own experience. Self-determination theory holds that such support for students' sense of autonomy, competence, and relatedness strengthens the forms of motivation that predict lasting learning (Ryan & Deci, 2020), and motivation is a stronger predictor of competence than anxiety in elementary-age children (Pollack et al., 2021).

Finally, the teacher's own learning was central. The reflection after Cycle I attributed the modest result to the teacher's incomplete mastery of the PBL sequence, and the reflection after Cycle II attributed the improvement partly to her more confident management of the phases. This agrees with findings that the success of PBL on rights and obligations depends heavily on the teacher's role in guiding the process (Ariska et al., 2025). The teacher's review of her own lesson videos after each cycle is also a form of video-based professional learning; a systematic review of video-based programmes describes how such activities can develop teachers' noticing of classroom events (Santagata et al., 2021).

### Remaining Gaps and Limits of Group Work

Although the distribution moved upward as a whole, one student remained below the KKM. Group work does not benefit all students equally. A meta-analysis of the Jigsaw cooperative method found highly variable effects on achievement across studies (Cochon Drouet, Lentillon-Kaestner, & Margas, 2023), and in groups of five, less confident students may rely on others to solve the problem. PBL is also not always the most effective option: in one Indonesian comparison, discovery learning produced higher critical-thinking scores than PBL (Cahyo Winoto & Prasetyo, 2020). For S1 and students like S1, short individual conferences, clearly assigned roles within each group, and an additional practice item could help ensure that each student, not just each group, constructs an understanding of rights and obligations.

### Implications for Civic Education in Elementary Schools

The study suggests a practical sequence for teaching rights and obligations in upper elementary grades. Lessons can begin with a short video and a personal question that connects the topic to students' own lives, move to group investigation of two or three genuine dilemmas, allow groups to choose how to present their solutions, and end with a brief individual essay that requires students to apply the concepts. This sequence responds to calls for rights-based approaches and greater children's-rights literacy in primary schools (Hareket & Kartal, 2021) and to evidence that students' understanding of their rights is shaped by school practices and relationships (Perry-Hazan,

2021). It also turns civic education from memorisation into practice in reasoning about fairness, which is consistent with the role of civic education in character formation (Anatasya & Dewi, 2021).

## 4. CONCLUSION

This classroom action research shows that problem-based learning improved the learning outcomes of sixth-grade students at UPTD SD Negeri 121246, Pematangsiantar, on rights and obligations. Across two cycles, the class mean rose from 67.1 to 86.8 and classical mastery from 50% to 90%, so the success criterion was met; all students improved, and two of the weakest students in Cycle I crossed the mastery criterion. The improvement did not come from the PBL phases alone, which were already used in Cycle I. It emerged when real dilemmas about rights and obligations were preceded by concrete audio-visual input and an interactive orientation, and when the teacher managed the phases with greater confidence. Theoretically, the results suggest that PBL is most effective for abstract civic concepts when multimedia input makes the concepts concrete, group investigation is aligned with individual assessment, and teachers refine their practice through reflection.

In practice, elementary teachers can apply this sequence with simple resources: a short video, a personal trigger question, two or three open dilemmas, flexible presentation formats, and a brief individual essay. Teachers should also assign clear roles within groups and provide individual follow-up for students who remain below the mastery criterion. Future research should include a quantitative pre-test, more meetings in each cycle, a comparison class, and delayed measures of students' understanding and behaviour regarding rights and obligations.

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