

Developing Meuseuraya-Based Democracy Modules to Enhance Elementary Students' Critical Thinking Skills

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Abstract:

This research is motivated by fifth-grade students' low critical thinking skills, driven by conventional one-way learning and normative teaching modules that lack local culture-based innovation. Therefore, this study aims to develop and analyze the validity, practicality, and effectiveness of a Democracy Education Teaching Module based on Meuseuraya local wisdom to enhance students' critical thinking skills. The methodology employed is Research and Development (R&D) using the ADDIE model, involving 20 fifth-grade students as field trial subjects. Data were collected through observations, questionnaires, and critical thinking tests. The results showed that the developed module met high validity criteria, scoring 95.2% with material experts, 88.2% with design experts, and 82% with linguists. Practicality reached 92% based on teacher responses and 99.8% based on student responses. Furthermore, the module improved students' critical thinking skills, as shown by classical completeness rising significantly from 67% to 85% and a moderate N-Gain score of 0.55. In conclusion, this module is highly feasible, practical, and effective for elementary school students. This study suggests that integrating local wisdom into teaching modules can foster active, context-based learning and strengthen critical thinking skills.

Keywords: Critical Thinking Skills; Democracy Education; Learning Module; Meuseuraya Local Wisdom.

Introduction

Education is a deliberate process aimed at equipping learners with the knowledge, values, and skills needed to face the challenges of modern society. In the 21st century, primary education has shifted from emphasizing memorization to developing higher-order competencies, particularly the 4Cs (critical thinking, creativity, communication, and collaboration). According to Nurhaifa et al. (2020), teachers play a key role in fostering these competencies to prepare students for future challenges. Among them, critical thinking is particularly important because it enables students to analyze information, solve problems, and make reasoned decisions. (Rahman BP et al., 2022).

The development of critical thinking can be supported through democracy education in primary schools. In this context, democracy education is not limited to political concepts but focuses on cultivating democratic values such as respect for different opinions, open-mindedness, active participation, and collaborative problem-solving (Rahman et al., 2021). As a learning environment that reflects social life, schools provide opportunities for students to practice these values while strengthening their reasoning and critical thinking

skills (Karmaham & Mediatati, 2026). Nevertheless, international evidence indicates a decline in democratic practices, highlighting the urgent need to strengthen democracy education from the primary school level. One major challenge for elementary teachers is designing learning that connects democratic concepts with students' real-life experiences. Without meaningful contexts, democratic values are difficult for students to understand and practice. Therefore, democracy education should provide authentic learning experiences that actively engage students in applying democratic values in everyday school life (Ardhianto et al., 2025).

Integrating local wisdom offers a meaningful approach to contextualizing democracy education. In Aceh, the tradition of *Meuseuraya* embodies values of mutual cooperation, social solidarity, consensus-building, and shared responsibility that closely align with democratic principles. Incorporating these cultural values into classroom learning enables students to experience democracy through authentic social interactions while strengthening civic awareness, collaboration, and critical thinking (Triyanto & Mardhiah, 2020; Muryanti, 2023). However, the practice of *Meuseuraya* has gradually declined, particularly among younger generations due to increasing individualism and changing social lifestyles (Juraida et al., 2025). This situation reduces opportunities for children to experience democratic values through community life. Preliminary observations and interviews conducted at the research school revealed similar challenges in classroom practice. Democracy education remains predominantly teacher-centered and relies mainly on government-issued textbooks, which present democratic concepts in an abstract and normative manner with little integration of local cultural contexts. As a result, students have limited opportunities to participate actively in collaborative learning and develop critical thinking skills.

These findings indicate the need for innovative teaching materials that connect democracy education with students' cultural backgrounds. Teaching modules provide a structured learning resource that integrates learning objectives, instructional activities, and assessment into a coherent learning package (Al Azka et al., 2019). By incorporating local wisdom into instructional materials, learning can become more contextual, meaningful, and relevant to students' daily experiences.

Previous studies have demonstrated that local wisdom-based teaching materials can improve students' cultural literacy, conceptual understanding, and critical thinking skills (Dzakiyyatul Aula & Fithriyah, 2025; Wahyudi et al., 2025). However, existing studies have mainly focused on science and social science subjects, school management, or general local wisdom integration. Few studies have developed teaching modules specifically for elementary democracy education that integrate the Acehnese tradition of *Meuseuraya* to foster critical thinking skills. Therefore, this study aims to develop and validate a *Meuseuraya*-based democracy education module for elementary school students and examine its effectiveness in improving students' critical thinking skills.

Literature Review

Constructivism as a Foundational Research Framework

Recent studies consistently identify constructivism as one of the most effective learning approaches for promoting active and student-centered learning environments. Rather than receiving information passively, students are encouraged to construct knowledge through meaningful experiences, problem-solving activities, and social interaction (Thobroni, 2015). Previous research has demonstrated that constructivist-based instruction improves conceptual understanding, learning engagement, and higher-order thinking skills, particularly when authentic contexts and local environments are incorporated into learning activities (Mariati, 2025). These findings suggest that constructivism provides an appropriate theoretical foundation

for developing contextual teaching modules that enable elementary students to actively construct democratic knowledge through local cultural experiences.

Pancasila Education and Democratic Values in Primary Schools

Previous studies have consistently emphasized the important role of Pancasila Education in fostering democratic attitudes, civic responsibility, and national identity among elementary students (Parwati et al., 2023). Democracy education within this subject has been shown to encourage participation, cooperation, deliberation, and respect for diversity in classroom settings (Tri Wahyuni, 2024). However, existing studies primarily discuss democracy education from a conceptual perspective, while limited attention has been given to developing contextual learning resources that connect democratic values with students' local cultural experiences.

In primary schools, democracy education is defined as a systematic process to internalize democratic habits such as deliberation (*musyawarah*), cooperation, equality, active participation, and social responsibility within the learning community (Khaerah et al., 2021). By turning classrooms into interactive social laboratories, schools successfully teach young learners how to respect diversity, communicate opinions responsibly, and collaborate peacefully (Arianto, 2022).

Conceptual Structure and Components of Teaching Modules

Linguistically, a module is defined as a self-contained, structured unit of learning designed to attract students' attention and facilitate autonomous or small-group instruction. Under contemporary curriculum standards, a teaching module functions as a comprehensive instructional document that integrates explicit objectives, systematic learning steps, targeted media, and rubrics into a unified package. Developing structured modules requires a detailed analysis of student characteristics, including age differences, development stages, and cognitive readiness levels (Rahmi et al., 2021). A well-designed module allows elementary students to achieve specific learning competencies smoothly through balanced intellectual, social, and personal growth (Rahmi et al., 2021).

According to (Izzah Salsabilla et al., 2023), a comprehensive module integrates general information (identity, facilities, and learning styles), core instructional content, and systematic appendices. Its core section utilizes contextual insights, critical thinking trigger questions, and multi-tiered assessments spanning diagnostic, formative, and summative evaluations to measure competency growth (Budiono & Hatip, 2023). Complete with worksheets, readings, and a glossary in the appendix, the module ensures a structured, independent learning path.

Conceptually, student readiness (independent variable) shapes how the module's core content and trigger questions are designed, which in turn drive the learning path to achieve target competencies (dependent variable). While previous studies define standard module structures, their integration into an inquiry-based framework for elementary high-order thinking remains a critical research gap. This study addresses this gap by developing and validating an inquiry-based interactive learning module. By embedding guided inquiry steps directly into the core instructional content, this research advances previous models to optimize both structured learning and student cognitive growth.

The Meuseuraya Tradition as a Contextual Civic Medium

Meuseuraya is a prominent Acehnese traditional practice of mutual cooperation (*gotong royong*) rooted in local wisdom. Historically, this custom emerged as a natural response to shared socio-economic and cultural

needs, such as agricultural management and traditional ceremonies, based on values of absolute sincerity and voluntary participation, *Meuseuraya* emphasizes shared communal responsibility entirely free from commercial or transactional motives (Juraida et al., 2025).

In contemporary civic instruction, *Meuseuraya* serves as a rich contextual medium to translate abstract democratic principles into concrete behaviors for primary students. This custom embodies deliberative democracy, equality, and inclusive social participation, allowing students to practically grasp solidarity and civic duties through voluntary participation (Muryanti, 2023). Integrating *Meuseuraya* into Pancasila Education bridges regional identity with national citizenship competencies, allowing elementary students to experience democracy as a living, community-embedded cultural heritage (Lider & Dantes, 2018).

Critical Thinking Skills in 21st-Century Learning

Critical thinking is a foundational 21st-century cognitive process that empowers individuals to make objective, evidence-based decisions (Rahardhian, 2022). According to (Facione, 2015), it represents a purposeful, self-regulatory judgment—encompassing interpretation, analysis, and logical inference that transforms primary students from passive information consumers into active problem solvers. Structurally, evaluating this competency relies on observable behaviors, such as analyzing relationships, synthesizing information, solving contextual problems, and evaluating arguments (Puspita & Parma Dewi, 2021). Cultivating these skills early promotes open-mindedness and collaborative character, which educators can successfully foster through structured, problem-based tasks and democratic deliberation in the classroom (Adiansha et al., 2021).

Methods

Penelitian pengembangan (*Research and Development* atau R&D) ini dirancang untuk secara sistematis membuat, memvalidasi, dan mengevaluasi kelayakan instruksional serta efektivitas empiris dari modul pembelajaran Pendidikan Demokrasi yang baru dikembangkan dengan dioptimalkan menggunakan kearifan lokal *Meuseuraya* (Judijanto dkk., 2024). Penelitian ini dilaksanakan di SD Negeri Sungai Lueng Kota Langsa, Provinsi Aceh, dengan sasaran siswa kelas lima sekolah dasar selama semester genap tahun ajaran 2025/2026. Subjek uji coba lapangan melibatkan sampel menyeluruh sebanyak 20 siswa kelas lima (terdiri dari 11 siswa laki-laki dan 9 siswa perempuan) untuk menguji peningkatan kognitif, serta 2 pendidik profesional yang bertindak sebagai praktisi pembelajaran untuk mengevaluasi kegunaan praktisnya. Ukuran sampel sebanyak 20 siswa ini merupakan keseluruhan populasi aktif dari kelas lima di sekolah yang diteliti, sehingga menerapkan teknik sampel jenuh (*total sampling*) guna memastikan validitas ekologis yang maksimal dalam konteks sekolah spesifik tersebut. Secara operasional, penelitian ini menerapkan kerangka kerja lima tahap ADDIE yang terstruktur (*Analysis, Design, Development, Implementation, dan Evaluation*) yang dipelopori oleh Robert Maribe Branch, guna memastikan bahwa setiap fase pedagogis berfungsi sebagai tolok ukur sistematis menuju pembuatan instrumen pendidikan yang tervalidasi."

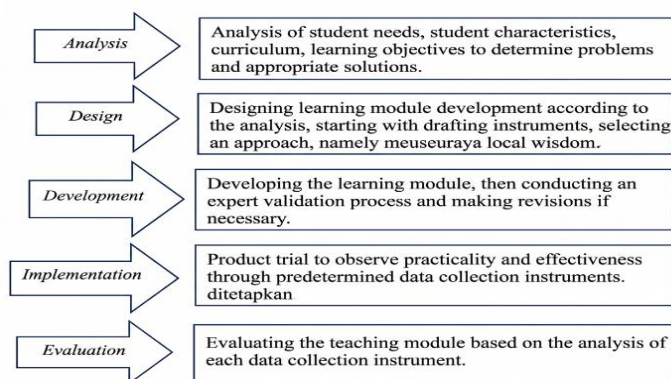


Figure 1. Schematic Workflow of the Meuseuraya-Based Democracy Module Development using the ADDIE Model Trajectory

(Source: Modified from Sugiyono, 2019)

Proses ADDIE dimulai dengan analisis kebutuhan, yang menunjukkan bahwa evaluasi Pendidikan Pancasila di lokasi penelitian masih didominasi tingkat kognitif rendah (C1–C3) sehingga siswa kelas V kesulitan dalam berpikir tingkat tinggi. Mengatasi hal ini, fase desain menghasilkan prototipe buklet berwarna *ivory* (21 x 28 cm) menggunakan Canva dan CorelDraw yang mengintegrasikan konsep kewarganegaraan dengan indikator kearifan lokal *Meuseuraya*.

Pada tahap pengembangan, draf awal tersebut melalui evaluasi *double-blind* oleh tim ahli materi, desain pembelajaran, dan bahasa, yang sarannya langsung digunakan untuk merevisi materi sebelum diuji coba di kelas. During the implementation phase, a pre-experimental One-Group Pre-test and Post-test Design was utilized. This layout was formalized to systematically track and isolate cognitive shifts resulting from the module intervention, as detailed in Table 1.

Tabel 1. Summary of Instrument Calibration and Item Metric Properties

Pre-test	Treatment	Post-test
O_1	X	O_2

(Source: Processed Research Design, 2026)

In this layout, O_1 denotes the baseline 20-item higher-order pre-test, X represents the instructional intervention using the *Meuseuraya*-based module, and O_2 signifies the post-test administered under identical parameters to capture cognitive gains. The instructional treatment (X) was executed over four sessions (2 x 35 minutes each) following Project-Based Learning (PjBL) syntax integrated with *Meuseuraya* mechanics. Initiated by a fundamental trigger question on authentic social issues, students formed collaborative groups to plan and schedule civic projects. This phase applied *Meuseuraya* values as students engaged in democratic deliberation musyawarah and mutual cooperation gotong royong to construct their projects. Acting as a facilitator, the teacher monitored progress while students autonomously executed, presented, and evaluated their projects directly exercising and assessing their critical thinking skills.

Data collection was executed using multi-layered instruments comprising structured observation checklists, semi-structured teacher interviews, professional evaluation rubrics, and standardized critical thinking tests.

To assess the validity of the module, numeric feedback from expert validation sheets and educator questionnaires was calculated using a mathematical percentage model:

$$V_{ah} = \frac{TS_e}{TS_h} \times 100\%$$

Where V_{ah} represents the final expert validation percentage, TS_e denotes the empirical total score accumulated from the items, and TS_h indicates the maximum total score expected from the rubric. Practicality dimensions were analyzed using Likert-scale response matrices scored from 1 (highly impractical) to 5 (highly practical), calculating aggregate responses from both education practitioners and student feedback questionnaires.

To rigorously test the empirical effectiveness of the instructional module in enhancing students' critical thinking skills, raw test scores were calculated through a normalized gain (N-Gain) formula:

$$N - Gain = \frac{Posttest\ Score - Pretest\ Score}{Maximum\ Possible\ Score - Pretest\ Score}$$

Prior to deployment, the 20-item test instrument underwent structural psychometric calibration. Item validity was computed using the point-biserial correlation coefficient r_{pbi} formula:

$$r_{pbi} = \frac{M_p - M_t}{SD_t} \sqrt{\frac{p}{q}}$$

Where M_p is the mean score of students answering the item correctly, M_t is the overall mean score, SD_t is the total standard deviation, p is the correct response proportion, and q represents the incorrect response proportion (1- p) (Sudijono, 2012). Internal reliability was verified using the Kuder-Richardson (KR20) formula:

$$r_{11} = \left(\frac{n}{n-1} \right) \left(\frac{SD_t^2 - \sum pq}{SD_t^2} \right)$$

Where r_{11} denotes the diagnostic test reliability index and n represents the total number of test items. Item difficulty parameters (P) were balanced using the ratio $P = \frac{B}{J_s}$, where B is the number of correct answers and J_s is the total number of examinees, while item discrimination values (D) were isolated using the group divergence formula $D = \frac{BA}{JA} - \frac{BB}{JB}$ to guarantee high psychometric validity (Sudijono, 2012).

Results

Analysis Stage

The instructional development trajectory initiated with the analysis stage to thoroughly diagnose existing baseline conditions and educational infrastructure across five distinct domains: teacher instructional needs, student cognitive profiles, learning devices, school curriculum, and operational learning objectives. To determine empirical teacher expectations, a structured baseline needs assessment was administered to two fifth-grade instructional practitioners, focusing on student interest, pedagogical utility, and instructional practicality. The quantified data reflecting teacher needs parameters is detailed in Table 1 below:

Tabel 2. Summary of Instrument Calibration and Item Metric Properties

No.	Assessment Dimensions	Mean Score	Percentage	Criteria
1	Requirements and Learning Interest	4.75	95%	Highly Required
2	Pedagogical Benefits and Outcomes	5.00	100%	Highly Required
3	Instructional Effectiveness and Practicality	5.00	100%	Highly Required
4	Critical Thinking and Democratic Dispositions	4.50	90%	Highly Required
Cumulative Average Index		4.81	96%	Highly Required

(Source: Processed Research Design, 2026)

Results from Table 1 highlight the high demand for a contextualized module, evidenced by a cumulative average index of 4.81 (96%). Field observations confirmed that existing ministerial modules lacked local cultural adaptations, resulting in conventional, teacher-centered, and monotonous learning environments.

Meanwhile, student analysis of twenty fifth graders showed that despite their age (10–11 years old) aligning with Piaget’s concrete operational stage, their critical thinking skills were underdeveloped due to the prevalence of low-level (C1–C3) assessments. Curriculum analysis confirmed the adoption of *Kurikulum Merdeka*, focusing on the *Bhinneka Tunggal Ika* element within the "Indonesian Cultural Diversity" theme. Ultimately, this phase formulated four operational learning objectives, successfully combining the cognitive analysis of cultural diversity with civic project skills integrated with *Meuseuraya* indicators

Design Stage

In the design stage, a prototype module was structured using a Project-Based Learning (PjBL) model integrated with *Meuseuraya* cooperative mechanics. This phase involved four key steps: constructing a 20-item HOTS pre/post-test to measure critical thinking, designing an interactive 21 x 28 cm booklet using Canva and CorelDraw, integrating regional problem-based cases to challenge students, and developing a 5-point Likert scale expert validation rubric alongside collaborative Student Worksheets (LKPD)

Development Stage

The development stage focused on producing the physical module prototype (Draft I) and executing psychometric calibrations for the validation instruments. To ensure structural eligibility, Draft I underwent evaluation by an expert panel consisting of content, design, and language specialists. The quantitative adjustments tracked through the initial expert reviews are presented in Table 2 below:

Table 3. Expert Validation Matrices for the Developed Module Prototype

No.	Evaluation Expert Panel	Validity Percentage	Qualitative Criteria
1	Content Material Expert Evaluation I	75.0%	Feasible / Valid
2	Content Material Expert Evaluation II (Post-Revision)	95.2%	Highly Feasible / Valid
3	Instructional Design Expert Evaluation	88.2%	Highly Feasible / Valid
4	Language and Linguistics Expert Evaluation	82.0%	Highly Feasible / Valid

The initial content validation yielded a score of 75%, indicating a need for revisions to expand on local Acehese cultural elements, tolerance behaviors, and the definition of *Meuseuraya*. Following these

adjustments, Content Expert II recorded a significantly improved validity index of 95.2%, certifying the content as highly valid. Additionally, the design validation reached 88.2%, highlighting a well-structured layout and distinct color configurations, while the linguistic evaluation scored 82%, confirming compliance with standard Indonesian grammatical rules. Figure 2 illustrates the visual transformation from the draft cover design to the finalized version:



Figure 2. Structural Visual Cover Comparison Before and After Expert Revision Phases

(Source: Documented Research Modification, 2026)

During calibration, a 30-item test pool was field-tested with 30 respondents using SPSS. Based on the validation threshold ($r > 0.361$), 20 items were retained and 10 invalid items were dropped. This finalized 20-item instrument demonstrated excellent internal consistency with a Cronbach's Alpha of 0.93. The items were distributed as 4 easy (20%), 11 moderate (55%), and 5 difficult (25%), with 18 items exhibiting 'good' or 'excellent' discrimination indices, confirming the instrument is highly optimized for experimental deployment

Implementation Stage

Field testing was conducted on February 26, 2026, with 20 fifth-grade students at SD Negeri Sungai Lueng Kota Langsa to assess both practicality and cognitive impact. Practicality evaluations yielded highly positive results: the class teacher scored the module at 92% ("Highly Practical"), while small-group student satisfaction averaged 99.8% (24.6 out of 25) due to its clear user pathways and excellent readability.

Beyond these usability metrics, the module demonstrated exceptional empirical effectiveness in fostering higher-order thinking skills. The post-test evaluation resulted in an outstanding mean score of 90.50 with a 100% classical completeness rate. Furthermore, a normalized gain analysis yielded an N -gain of 0.71, placing the module's instructional impact firmly in the "High" effectiveness category. These results prove that the *Meuseuraya*-based cooperative project tasks successfully translated high structural practicality into significant, measurable improvements in students' critical thinking capacities.

Discussion

The empirical findings demonstrate that the *Meuseuraya*-based Democracy Education module significantly advances primary citizenship education by addressing the lack of localized materials at SD Negeri Sungai Lueng Kota Langsa. Traditional textbooks isolate abstract civic concepts, whereas this module integrates regional Acehese cultural mechanics—such as *Hadih Maja* and the *Meuseuraya* cooperative philosophy—to anchor learning in the students' immediate surroundings. Crucially, this integration is not merely aesthetic; the *Meuseuraya* cooperative tasks act as a cognitive catalyst by scaffolding peer-to-peer dialogue and forcing students to collectively resolve real-world regional issues. This active cultural contextualization directly translates high usability and expert validation into measurable cognitive growth ($N\text{-gain} = 0.71$), proving that localized integration is essential for fostering deep, active civic reasoning in primary education (Yuniarti et al., 2021). This contextual framework directly targets early learning motivations, yielding exceptional empirical validation where media experts rated the module at 86%, material experts at 98%, and young learners expressed heightened academic engagement and satisfaction with a 98% approval rate (Yuniarti et al., 2021).

The high validity and design quality achieved by this module prototype align closely with contemporary trends in local wisdom-based instructional development across Indonesia. The validation scores of 95.2% for content, 88.2% for design, and 82% for language closely mirror the patterns recorded by Rahmatih et al. (2026), whose local wisdom-based Natural and Social Sciences (IPAS) module achieved an overall average validity score of 76.67%, placing it in the highly valid category. Similarly, the demand for such a developmental framework is strongly supported by the analysis of Eccia et al. (2025), which demonstrated that 91.7% of respondents agreed on the urgent need for localized teaching materials, while 77.8% of students rated such materials as highly important. These convergent validation points collectively prove that integrating indigenous frameworks into standard elementary instructional architecture provides a structurally sound and content-appropriate pathway for primary school students. Rahmatih et al (2026).

The operational utility metrics achieved during classroom deployment confirm that the *Meuseuraya*-based Democracy Education module is highly practical for elementary school environments. Specifically, the recorded teacher usability index of 92% and the small-group student readiness feedback of 99.8% closely parallel the findings of Waruwu et al. (2025). In their study, a module based on Nias local wisdom achieved an 88% usability rate, generating strong learner enthusiasm during collaborative P5 (Project for Strengthening the Profile of Pancasila Students) execution paths. The pedagogical relevance of integrating such cultural elements is further supported by Juraida et al (2025), who argue that the traditional practice of *meuseuraya* (mutual cooperation) serves as a fundamental mechanism for strengthening social solidarity and community resilience. Consequently, these outcomes indicate that when complex civic concepts—such as democratic deliberation, human equality, and group accountability—are anchored in regional customs like *meuseuraya*, the resulting instructional framework provides a culturally grounded pathway for primary students to internalize communal values naturally and effectively.

Most importantly, the quantitative improvement in students' critical thinking skills strongly validates the instructional effectiveness of the developed module. The observed shift in classical completeness from 67% to 85%, coupled with a moderate normalized gain ($N\text{-Gain}$) score of 0.71, aligns with the empirical findings of Franstito & Suryanti (2025), who achieved significant cognitive critical gains ($N\text{-Gain} = 0.7489$) by utilizing an ethnosemantic instructional model. The imperative to target these higher-order cognitive domains is further corroborated by the needs analysis of by Fitrianiingsih et al (2025), which revealed that 75% of educators explicitly prioritize the development of critical and creative thinking skills.

Furthermore, their study demonstrated strong empirical support for localized instructional frameworks, showing that 75% of teachers and 90% of students endorse the integration of ethnoecological and local potential approaches into project-based learning to effectively master complex topics. Additionally, the study by Pangsuma et al (2024) confirms that integrating local wisdom frameworks with problem-based learning designs systematically builds primary students' critical analytical faculties. By restructuring the classroom into a collaborative arena where social problems are analyzed through the cultural dynamics of *Meuseuraya*, this module transcends traditional consensus-driven instructional models. Instead, it actively prompts students to resolve authentic community conflicts through transformative dialogue and critical reasoning, operationalizing the critical pedagogical frameworks advocated by De Lissovoy (2018).

Conclusion

The development of the *Meuseuraya*-based Democracy Education Teaching Module offers a structurally sound, practical, and highly effective framework for primary citizenship education. Moving beyond a mere summary of empirical metrics, this study's primary scientific contribution lies in demonstrating how abstract, national civic values can be cognitively operationalized for concrete-operational young learners by integrating localized cooperative structures (such as *Meuseuraya*) with Project-Based Learning (PjBL) mechanics. This integration successfully transforms the classroom from a passive learning environment into an active, dialogical arena that naturally fosters critical reasoning and collective problem-solving. However, this study has notable limitations. The empirical evaluation was conducted over a limited timeframe with a relatively small sample size consisting of only 20 fifth-grade students at a single regional school (SD Negeri Sungai Lueng Kota Langsa). Consequently, the quantitative findings regarding cognitive growth and instructional effectiveness cannot be widely generalized to larger or culturally distinct student populations.

To address these limitations, future research directions should focus on several key areas. First, large-scale validation is needed through multi-site comparative trials involving larger and more diverse student cohorts across various districts in Aceh to establish broader generalizability. Additionally, longitudinal studies are highly recommended to evaluate the long-term retention of critical thinking skills while measuring how classroom cooperative habits actually translate into real-world, daily civic behaviors. Finally, further investigation into cross-cultural adaptation is crucial to explore how this module's instructional framework can be adapted using other regional Indonesian cooperative traditions, thereby determining its adaptability across diverse cultural settings.

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