

Can Citizen Projects Make Pancasila Education Measurable? Evidence Map Based on Pancasila Student Profile Stages

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Abstract

This study investigates how the Project Citizen model strengthens the Pancasila Student Profile (PPP) in Pancasila Education at MTs Muhammadiyah Purwokerto, Indonesia. A qualitative case study was conducted involving a Pancasila Education teacher and MTs students engaged in a full Project Citizen cycle. Data were collected from participatory classroom observations across the stages of Project Citizen, in-depth semi-structured interviews with the teacher and selected students, and document analysis of student project artifacts (e.g., issue analyses, evidence summaries, policy drafts, presentation materials, and reflective notes). Data were analyzed through iterative thematic coding aligned with the six PPP dimensions and emergent codes, strengthened by cross-source triangulation and an explicit evidence-density rubric. PPP development was stage-specific: critical reasoning intensified during problem identification and inquiry; collaboration and creativity peaked during deliberation and policy proposal design; global diversity became salient during public presentation; and moral integrity consolidated through reflection and evaluation. Co-occurrence analysis further indicated strong linkages among critical reasoning, collaboration, and moral integrity, suggesting PPP operates as an interconnected competency configuration rather than isolated outcomes. Project Citizen operationalizes PPP through evidence-informed civic inquiry, deliberative collaboration, and structured ethical reflection within Pancasila Education.

Keywords

Civic Inquiry and Deliberation; Pancasila Education; Pancasila Student Profile; Project Citizen; Qualitative Evidence Visualization

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1. INTRODUCTION

Curriculum policy transformation in Indonesia places the Pancasila Student Profile (PPP) as the orientation for character-competency achievement across subjects, including in Pancasila Education learning at the junior high school/*madrasah* level. Within the framework of the Independent Curriculum, strengthening the PPP is not only required as a "value" to be taught, but also as a capacity for action (reasoned action) that is evident in the way students reason about public issues, collaborate, make decisions, and reflect on their ethical consequences (Ministry of Education, Culture, Research, and Technology [Kemendikbudristek], 2024; Education Standards, Curriculum, and Assessment Agency [BSKAP], 2022). Operationally, national guidance for PPP-oriented projects emphasizes authentic issue-



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based learning, collaborative inquiry, and reflective evaluation so that profile dimensions are demonstrated through observable learning processes rather than declarative statements (Ayub et al., 2023; Pamungkas & Sudigdo, 2022). However, in school practice—including in the MTs context—challenges often arise at two crucial points: (a) how to transform Pancasila values into accountable policy inquiry practices, and (b) how to map PPP development in a more measurable and argumentative (rather than merely descriptive) manner throughout the learning activities.

One conceptually relevant approach to bridge this gap is Project Citizen —a portfolio-policy-based civic education model that encourages classes to work as learning communities to identify public issues, collect and evaluate evidence, formulate policy alternatives, draft policy proposals, design action plans, and then present portfolios to stakeholders (Education, 2006; Owen, 2024). Empirically, program-scale evaluations show that the Project Citizen design can improve civic knowledge and skills related to evidence-based public decision-making and participation (Owen, 2024). In the broader context of citizenship studies, the ICCS international report also emphasizes the importance of learning experiences that provide space for discussion, deliberation, and participation to strengthen students' civic knowledge and dispositions (Schulz et al., 2022, 2024). In Asia, several Project Citizen-based studies have demonstrated the contribution to strengthening democracy learning and developing citizenship/digital citizenship literacy through learning designs that require argumentation, collaboration, and value reflection (Komalasari et al., 2024; Sundawa & Dahliana, 2022).

From a pedagogical perspective, Project Citizen is consistent with research evidence on project-based learning that shows positive impacts on cognitive-affective outcomes such as problem solving, higher-order thinking skills, creativity, and learning engagement—especially when projects are contextually designed, require the production of meaningful artifacts, and require learners to test claims with data (Almulla, 2020; Guo et al., 2020; Zhang & Ma, 2023). Studies at the school level also show that well-orchestrated PjBL can strengthen creativity and creative thinking (e.g., through solution/product design, idea iteration, and feedback) and foster role-based collaboration (Achmad Basari Eko Wahyudi et al., 2024; Yanti et al., 2023). In addition, the quality of classroom discussions and structured argumentation practices are prerequisites for projects to go beyond mere "activities" and become a process of forming public reasoning—that is, the ability to listen to evidence, weigh alternatives, and take a position (Coopmans & Rinnooy Kan, 2023). This convergence of literature provides a theoretical basis for Project Citizen's potential as a vehicle to actualize the dimensions of PPP (critical thinking, creativity, cooperation, global diversity, independence, and noble character) in a more tangible and traceable manner across all stages of the activity.

However, there are still gaps in research on the detailed mapping of when and at what stage each dimension of PPP is strengthened, as well as how inter-dimensional relationships form throughout the Project Citizen cycle—especially in the context of MTs Muhammadiyah, which has its own institutional character and learning culture. Therefore, this study designed a qualitative case study that emphasized process-tracing of learning through participatory observation, in-depth interviews, and analysis of project documents/artifacts, with auditable thematic analysis procedures and credibility reinforcement through triangulation and validation practices (McKim, 2023; Miles, M.B., Huberman, a. m., & Saldana, 2015; Saldana, 2025; Stahl & King, 2020; Yin K. Robert & Campbell T. Donald, 2018). To improve the readability of evidence and the sharpness of the resulting arguments, this study also utilizes a visual-analytical approach to qualitative data—for example, mapping thematic intensity and inter-code relationships—which is increasingly recognized as a powerful way to display the density of evidence transparently and the interconnectedness of themes (Decuyper, 2020; Lloyd et al., 2024; Scharp, 2021). Thus, the contribution of this research not only answers the effectiveness of Project Citizen in developing PPP, but also provides a sharper model of evidence representation for reading the dynamics of PPP across stages in Pancasila Education learning.

Accordingly, this study aims to trace how Project Citizen strengthens the Pancasila Student Profile (PPP) across pedagogical stages in Pancasila Education at MTs Muhammadiyah Purwokerto. It

addresses three questions: (1) How is the Project Citizen cycle enacted in classroom practice as an evidence-producing learning process? (2) Which PPP dimensions intensify at each stage, and how do these intensities shift across the cycle? (3) How are PPP dimensions interrelated (co-activated) during learning activities? By integrating cross-source triangulation (observation–interviews–artifacts) with stage-based thematic mapping and inter-dimensional co-occurrence analysis, the study provides a process-traceable account of PPP development, anchored in verifiable evidence across stages.

2. METHODS

Research Design

This study uses a qualitative case study design to examine in depth the implementation process of Project Citizen and the dynamics of strengthening the Pancasila Student Profile (PPP) in Pancasila Education at MTs Muhammadiyah Purwokerto. A case study was chosen because it allows researchers to examine learning phenomena as a "bounded system"—that is, the interrelationship between classroom practices, teacher-student interactions, project artifacts, and the culture of the educational unit—and produces a stronger explanation of how/why than a surface survey (Creswell et al., 2006; Yin K. Robert & Campbell T. Donald, 2018). The learning design refers to the Level 1 Project Citizen cycle (problem identification, information gathering, portfolio development, presentation, and reflection) (Education, 2006), and is aligned with the principles of strengthening PPP through project-based learning as outlined in the national guidelines (Rajput & Gunnigan, 2011; Vinet & Zhedanov, 2011).

Case Unit

The case unit is a Pancasila Education class at MTs Muhammadiyah Purwokerto that implements Project Citizen as a series of learning projects. The *madrasah* context is maintained as an integral part of the case because PPP and Pancasila Education are implemented through pedagogical practices inherent in the school/*madrasah* ecosystem, including discussion norms, group work management, and value-based decision making (Hunaepi & Suharta, 2024).

Participants and Sampling Strategy

Participants included teachers and students in classes that ran the Project Citizen cycle. Participants were selected purposively to ensure information-rich cases, for example, by considering the variety of student roles (team leader, data researcher, script writer, presenter), so that the dynamics of PPP could be captured from diverse perspectives (Creswell et al., 2006; Patton, 1999). Participant reporting notes (number, general characteristics, and role positions) were presented in accordance with the principles of transparency in qualitative study reporting, with reference to COREQ for interview/focus group elements.

Data Sources and Data Collection Techniques

Participatory Classroom Observation

Observations were conducted at each core stage of Project Citizen to record process behaviors (e.g., evidence-based argumentation, decision negotiation, role sharing, ethical reflection) and social interactions relevant to the PPP dimension. Observations were recorded in structured field notes containing: (a) event descriptions, (b) key speech quotations, (c) initial interpretations, and (d) stage/session markers to facilitate cross-stage tracking (Miles, M.B., Huberman, a. m., & Saldana, 2015; Yin K. Robert & Campbell T. Donald, 2018).

Semi-Structured in-depth Interviews (Teacher–Student)

Interviews were used to capture participants' meanings, considerations, and reflections on the project process (e.g., why solutions were considered "fair," how evidence was selected, how conflicts of ideas were resolved). Interview guidelines were developed in line with the research objectives and PPP

dimensions, then tested to ensure the clarity of the questions. Reporting practices follow COREQ (Tong et al., 2007).

Analysis of Project Documents/Artifacts

The documents analyzed include policy portfolios, data summaries, issue analysis sheets, discussion minutes, task distribution logs, presentation scripts, and reflection journals. These artifacts are treated as "material traces" that can verify process claims and strengthen the traceability of findings (Sampson, 2020; Yin K. Robert & Campbell T. Donald, 2018).

Procedures for implementing Project Citizen and PPP mapping

The implementation follows the core stages of Project Citizen Level 1 (Center for Civic Education, 2006) with adjustments to the *madrrasah* schedule. During the cycle, each activity is explicitly linked to the PPP dimensions in accordance with the principles of dimension-element-subelement selection and formative assessment in PPP projects (Dewulf & Garvin, 2020; South et al., 2018). In addition, the research findings are positioned in an empirical evidence conversation that states that Project Citizen can strengthen citizenship learning and evidence-based participation practices (Owen, 2024).

Data Analysis

The analysis was conducted iteratively and incrementally, combining first-cycle coding and second-cycle coding to ensure that the findings had a robust and auditable structure (Miles, M.B., Huberman, a. m., & Saldana, 2015; Saldana, 2025). Key analysis steps:

a. Data management and segmentation of analysis units

Interview transcripts, observation notes, and artifacts are condensed into consistent units of analysis (e.g., per episode of activity or segment of argument) to enable cross-source and cross-stage comparisons (Miles, M.B., Huberman, a. m., & Saldana, 2015).

b. Thematic coding based on PPP dimensions and emergent codes

The initial coding framework was derived from six dimensions of PPP (deductive), then enriched with emergent codes from the data (inductive) to maintain context sensitivity (Creswell et al., 2006; Saldana, 2025). The coding process was conducted collaboratively (when there was a team) using the principle of team-based qualitative analysis with consensus code discussions, thereby increasing the stability of interpretation (Michelen et al., 2024).

c. Triangulation and evidence matrix formation (Triangulated Evidence Matrix)

For each PPP dimension, evidence from observations, interviews, and documents is mapped onto a single matrix to assess cross-source convergence. This methodological and data-analytical triangulation strategy aligns with recommendations to strengthen the rigor of case studies and the trustworthiness of findings (Patton, 1999; Schlunegger et al., 2024).

d. Evidence Density (ED) as an indicator of evidence density

The ED label (VH/H/M/L) is assigned based on explicit rules: (a) the number of sources that generate the indicator, and (b) cross-stage repeatability. This assignment is intended to maintain transparency and prevent "intuitive labeling" in evidence tables (Ahmed, 2024; Stahl & King, 2020).

Trustworthiness

The quality of findings is maintained through four criteria of trustworthiness (credibility, transferability, dependability, confirmability) with the following strategies: (1) Triangulation of sources and methods (observation–interview–documents) (Miller & Brewer, 2015; Schlunegger et al., 2024), (2) Audit trail (trail of analytical decisions: code definitions, segment examples, code revisions), (Patton, 1999; Stahl & King, 2020)(3) Directed member checking to test the validity of interpretations among

teachers/students (as confirmation of meaning, not "voting on truth"), (Stahl & King, 2020), (4) Reflexivity (researcher position notes and potential interpretation biases), and code discussion for consensus (Ahmed, 2024; Michelen et al., 2024). Reporting of methods and interview findings follows COREQ principles so that readers obtain adequate information regarding context, procedures, and analysis (Tong et al., 2007).

3. FINDINGS AND DISCUSSIONS

Findings

Implementation/Cycle of Project Citizen

To ensure process traceability and strengthen the audit trail in this qualitative case study, the research first mapped the Project Citizen implementation cycle as it occurred in Pancasila education at MTs Muhammadiyah Purwokerto. Project Citizen is a portfolio-based citizenship curriculum that guides students through structured action steps—from selecting public issues in their immediate environment to drafting policy proposals and holding public hearings (Education, 2022).

Pedagogically, this cycle is positioned as a "framework" for project-based learning, aligned with the mandate to strengthen character and Pancasila Student Profile competencies through contextual, collaborative, and civic-action-oriented projects. In the literature, project-based learning is considered effective in deepening learning engagement, activating collaboration, and strengthening authentic experiences—factors that are important when learning is directed at the internalization of civic values and practices, rather than merely the mastery of normative concepts (Almulla, 2020; Cai et al., 2019).

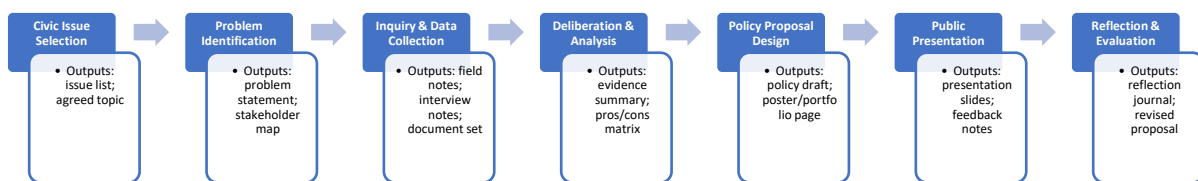


Figure 1. Project Citizen Pedagogical Process and Implementation Evidence

Figure 1 shows that the implementation of Project Citizen in the MTs context took place as a coherent process in seven stages: (1) Civic Issue Selection, (2) Problem Identification, (3) Inquiry & Data Collection, (4) Deliberation & Analysis, (5) Policy Proposal Design, (6) Public Presentation, and (7) Reflection & Evaluation. This series conceptually represents civic learning that places students as actors of investigation and solution formulators, in line with the character of Project Citizen, which emphasizes the skills of observing public issues, compiling evidence, weighing options, and communicating policy proposals responsibly (Education, 2006, 2022).

From the perspective of "evidence implementation," Figure 1 also emphasizes that each stage is not only understood as a sequence of activities, but as evidence-producing stages (evidence-producing stages). In the Inquiry & Data Collection stage, for example, evidence emerges in the form of observation notes, interview results, documentation, and information-gathering artifacts. The Deliberation & Analysis stage produces synthesized evidence—summaries of findings, option mapping, and data-based arguments. The Policy Proposal Design stage produces draft solutions, policy prototypes, and action plans, while the Public Presentation stage produces evidence of civic communication (presentations, peer/teacher feedback, and assessment tools). Finally, the Reflection & Evaluation stage demonstrates ethical reflection and learning consolidation through reflection journals or learning notes. This logic is important in qualitative research because it clarifies "why" and "where" the findings are drawn, so that interpretations do not depend solely on the researcher's opinion.

Thus, Figure 1 serves as a reading framework for Result 2 (mapping of the intensity and trajectory of the Pancasila Student Profile dimensions across stages). This means that the variation in dimension intensity on the heat map and the peak pattern on the trajectory plot (Result 2) can be logically explained through the cognitive-social demands of each stage: the initial stage requires issue selection and problem framing (value orientation and social sensitivity), the middle stage requires evidence-based inquiry and reasoning (evidence-based reasoning orientation), while the final stage requires solution design, public communication, and ethical reflection (civic responsibility orientation). This placement aligns with the guidelines for developing the Pancasila Student Profile project, which emphasize systematic planning, implementation, and evaluation, including reporting on the achievement of dimensions/sub-elements as project objectives.

Mapping the distribution of the intensity of the Pancasila Student Profile dimensions at each stage of Project Citizen

To present qualitative findings in a concise, readable, and accountable manner, this study mapped the intensity of the six dimensions of the Pancasila Student Profile (PPP) at each stage of Project Citizen through a thematic coding process. The intensity on the map (Low –Very High) is not interpreted as a quantitative score, but rather as the density of thematic evidence that is repeated and consistent in the three main data sources (observations, interviews, and project artifacts), thus being in line with the principles of analytic rigor in coding-based qualitative data analysis and data display.

This kind of visual approach is important because project-based learning often produces rich findings that can easily become "fragmented" if not presented in a strong, synthetic display. In PjBL studies, the readability of cross-stage patterns is key to explaining why a dimension emerges strongly at a particular stage—especially when learning aims to shape civic competencies (public discourse, deliberation, and social action) rather than just cognitive achievements.

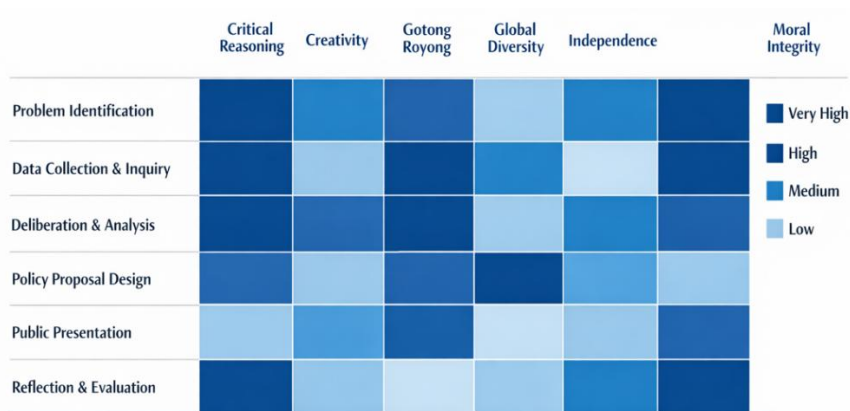


Figure 2. Thematic Intensity Heatmap of Pancasila Student Profile Dimensions Across Project Citizen Stages

Figure 2 shows that the strengthening of PPP dimensions is not uniform but shifts with pedagogical demands at each stage of Project Citizen. The Problem Identification stage shows high intensity in Critical Reasoning and Moral Integrity, which logically reflects the process of issue framing and initial ethical assessment—students do not simply name the problem, but weigh "why it is a public issue" and "why it is worth fighting for." This pattern is consistent with Project Citizen's character, which places identifying policy issues at the gateway to evidence-based citizenship learning and public responsibility. In the Data Collection & Inquiry and Deliberation & Analysis stages, the intensity of Critical Reasoning and *Gotong Royong* tends to increase, indicating that the inquiry process (gathering information and checking the validity of sources) and deliberation (weighing alternatives and consequences) encourage argument-based collaboration. This aligns with literature findings that PjBL, designed with structured inquiry and discussion stages, generally strengthens engagement, discourse, and reasoning quality, as students are "forced" to work with evidence and negotiate meaning in groups.

Next, in Policy Proposal Design, the map emphasizes dimensions related to Creativity and (contextually) Independence, which makes sense because this stage requires generating solutions (not just criticism), decision-making, and writing coherent policy proposals. Meanwhile, Public Presentation highlights dimensions of civic communication and orientation to public space, so, naturally, Global Diversity and Moral Integrity tend to strengthen: students must convey ideas in a civilized manner, consider others' perspectives, and formulate arguments acceptable to a wide range of audiences. This pattern aligns with the idea that effective civic education must build democratic discourse and civic capacity through authentic communication and deliberation practices.

Finally, in the Reflection & Evaluation stage, the heatmap confirms the reinforcement of Moral Integrity and the re-establishment of critical reasoning as a form of closing-the-loop learning: students reflect on the impact and limitations of solutions and on personal and collective responsibilities. The principle of reflection as part of the project cycle is also emphasized in the PPP project development guidelines, which stress the importance of evaluation, reporting, and follow-up as part of measurable, non-ceremonial character development. In summary, Figure 2 provides two key pieces of information: (1) stage-specific signature—each stage has a dominant PPP dimension "fingerprint"; and (2) distribution logic—the strengthening of dimensions is not coincidental, but follows the logic of task demands and social interactions at that stage. To avoid static interpretation, these findings are further explored through cross-stage dynamic analysis in Figure 3, revealing the trajectory (ups and downs) and peak stage for each dimension.

If heatmaps function as "landscape maps," then trajectory analysis is needed to answer more analytical questions: when a dimension begins to strengthen, at what stage its peak appears, and whether that strengthening is stable or episodic. Presentation in the form of lines makes it easier for readers to see the transitions between stages and the possible trade-offs, especially in citizenship education that requires a shift from inquiry → deliberation → public communication action → ethical reflection.

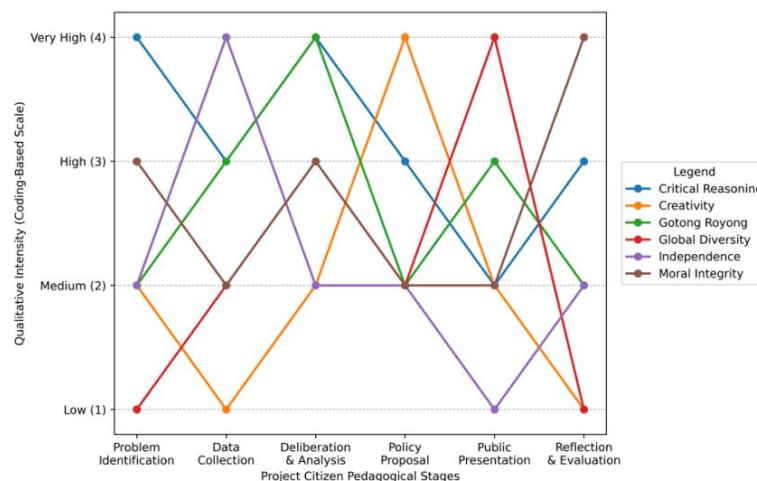


Figure 3. Trajectory of Pancasila Student Profile Dimensions Across Project Citizen Pedagogical Stages

Figure 3 shows that the PPP dimension develops in a dynamic, nonlinear pattern and tends to peak at stages that pedagogically "force" it to work. Critical Reasoning appears strong from the outset and re-emerges during phases that demand problem framing and evidence-based decision making; this confirms that Project Citizen functions as a reasoning engine—shifting learning from opinion to accountable argumentation. This emphasis on public reasoning and argumentation aligns with the findings of civic education studies, which place discourse, debate, and reasoning at the core of democratic capacity-building.

Meanwhile, Creativity tends to peak in the Policy Proposal Design phase, suggesting that creativity

in the context of citizenship is not merely aesthetic creativity but rather policy imagination: the ability to design alternatives, modify strategies, and transform inquiry findings into feasible solution designs. This pattern reinforces the PjBL argument that creativity emerges most strongly when students are given design space and meaningful product responsibility, rather than when they are merely collecting information.

The *Gotong Royong* dimension shows a peak pattern that tends to appear during the intensive group work phase (inquiry and deliberation), indicating that collaboration here is "task- and evidence-driven" (evidence-driven collaboration), rather than merely a division of administrative roles. At the same time, Global Diversity strengthens when learning enters the public sphere (presentation), as students are required to anticipate their audience, manage differences in perspective, and practice respectful communication—a component often associated in modern citizenship literature with strengthening dialogic and argumentative practices to build citizenship skills.

The other two dimensions, Independence and Moral Integrity, act as "guardians of stability" in the cycle: independence appears prominent in stages that require decision-making and task management (e.g., when designing proposals and closing reflections), while moral integrity is strengthened at the beginning (selection of valuable issues) and end (reflection on consequences, accountability), thus framing the entire cycle with an ethical orientation. This closing, which emphasizes reflection and evaluation, is consistent with the PPP project guidelines that require assessment, reporting, and follow-up to ensure that character development does not stop at momentary performance.

Overall, Figure 2 and Figure 3 do not mean the same thing but complement each other in a single research result: the heatmap shows "where the intensity of the dimension is concentrated," while the trajectory shows "how that intensity moves and reaches its peak" throughout the cycle. However, for these findings to be truly Q2-grade, the visual claims need to be supported by explicit triangulation evidence—that is, a matrix showing examples of observational evidence, interview quotes, and project artifacts that confirm the intensity and peak of each dimension. Therefore, the next result (Result 3) will formalize this validation through a Triangulated Evidence Matrix.

Triangulated Evidence (Using the Triangulated Evidence Matrix)

To ensure that the thematic intensity patterns in Result 2 (Figure 2—heatmap and Figure 3—trajectory plot) are not merely visually appealing, this study applies cross-source triangulation (observations, interviews, and project documents/artifacts) to increase trustworthiness. In the tradition of qualitative research, triangulation is used to test the convergence of meaning and reduce bias that may arise when findings are based on a single data source, thereby strengthening the credibility and confirmability of the findings.

Operationally, this convergence is summarized in the Triangulated Evidence Matrix (Table X), which maps: (1) indicators of behavior/processes observed in the classroom (observed enactment), (2) interpretations of meaning by teachers and students (interpreted meaning), and (3) traces left on project documents (material traces). This matrix format aligns with triangulation reporting recommendations that demand procedural transparency—that is, explicitly showing the "comparative traces" between sources so readers can assess the traceability of the arguments underlying the findings.

Table 1. Triangulated Evidence Matrix for Pancasila Student Profile (PPP) Development

PPP Dimension	Classroom Indicators (Process/Behavior)	Observation	Interview Meaning (Teacher-Student)	Project Document/Artifact Evidence	ED
Critical Reasoning	sharp problem formulation; argumentative evidence appraisal	Students emphasize "reasons" Q&A; and "supporting data" before drawing conclusions	issue-analysis worksheet; data summary; pro-con notes		VH

PPP Dimension	Classroom Indicators (Process/Behavior)	Observation	Interview Student	Meaning (Teacher-Project Evidence)	Document/Artifact	ED
Creativity	alternative solutions emerge; innovative poster/portfolio design; idea revision after feedback	poster/portfolio revision after	Students mention different solutions	"finding ways" to keep realistic and engaging	policy proposal draft; mock-up; revised versions	H
Collaboration	clear role division; coordination; negotiation of group decisions	work of responsibility complementary roles	narratives of shared task-allocation and discussion product		log; minutes; group product	VH
Global Diversity	respect for differing opinions; communication during debate; willingness to compromise	differing polite during to	students report "accept differences" and discuss without putting down	learning to and others	presentation transcript/outline; audience feedback notes	M-H
Independence	initiative in seeking data; completing tasks without being told; time management	without time	Students describe self-managed work and discipline in meeting targets		individual work notes; role-reflection sheet; evidence of self-check	H
Moral Integrity	ethical reflection; fairness considerations; empathy for affected stakeholders		Students judge solutions as "fair" and "not harmful."		Reflection journal; "ethical considerations" section in the proposal	VH

To prevent ED from being interpreted as a subjective label, this study uses the following classification criteria:

- VH (Very High): indicators appear consistently in three sources (observations, interviews, documents) and are detected repeatedly across stages of Project Citizen.
- H (High): clear indicators in ≥ 2 sources and repetitive, but not as extensive as VH.
- M (Medium): indicators appear in ≥ 2 sources but are uneven (only strong at certain stages).
- L (Low): sporadic and inconsistent indicators across sources.

This approach follows the practice of increasing qualitative rigor, which encourages the use of "repeated evidence" and cross-source documentation to support claims, including the use of semi-quantitative evidence (e.g., the repeated emergence of themes/indicators) to show that interpretations are based on the majority of data traces, rather than selected anecdotes.

Based on Table 1, the findings indicate strong convergence of evidence across the dimensions of Critical Thinking, Mutual Cooperation, and Noble Character (ED = VH). This convergence appears as a complete evidential chain: (a) observed classroom behavior (evidence-based argumentation, division of roles, ethical reflection), (b) recognition of meaning in interviews (emphasis on "reasons," collective responsibility, and principles of justice), and (c) project artifacts that contain traces of students' decisions and reasoning (issue analysis sheets, task logs, reflection journals). Methodologically, this pattern is a strong indicator that PPP reinforcement works not only on the "final product," but is internalized as a verifiable learning practice across sources.

The Creative and Independent dimensions show strong evidence (ED = H), but with more stage-specific characteristics: creativity strengthens when students enter the solution design stage (e.g., policy alternatives, poster design, and idea revision), while independence strengthens in the inquiry and portfolio maturation phases (initiative in seeking data, time management, and self-check). Meanwhile,

Global Diversity tends to be in the moderate–strong range (M–H). It is most evident in deliberation and public presentation spaces, when students must manage differences of opinion politely, develop argumentative compromises, and practice the ethics of dialogue. This pattern is important because it explains "why" the heatmap and trajectory in Result 2 show different peaks of intensity between stages: some dimensions are indeed easier to manifest when the pedagogical demands are aligned (e.g., deliberation for diversity; policy design for creativity).

Thus, the Triangulated Evidence Matrix serves as a validation bridge between thematic visualizations (Figures 2–3) and substantive research claims: the visualized intensity represents the density of verified evidence, not merely the researcher's impression ranking. Triangulation reporting practices that reveal cross-source traces, such as this, simultaneously improve the traceability of the analytical process and reinforce the standards of transparency increasingly emphasized in reputable qualitative publications.

Relationships between dimensions (using Co-occurrence matrix heatmap 6×6)

To go beyond the "dimension-by-dimension" reading of Result 2, this study analyzes the relationship between the dimensions of the Pancasila Student Profile (PPP) through code co-occurrence—namely, the tendency for two dimensions to appear simultaneously in the same data unit (observation segment, interview excerpt, or project artifact section). Co-occurrence analysis is relevant in qualitative research because it helps reveal the structure of thematic interrelationships (rather than just frequency), enabling readers to understand whether PPP dimensions function as stand-alone competencies or as mutually reinforcing (interdependent configuration) (Scharp, 2021). Procedurally, the 6×6 matrix is constructed from the same thematic coding results as Result 2, then converted into indicators of co-occurrence strength (L/M/H/VH). This approach aligns with the practice of visualizing code networks/relationships in qualitative analysis, where code connectivity is used to interpret relationship patterns and the role of "connecting nodes" in the overall thematic construction (Decuyper, 2020; Pokorny et al., 2018).

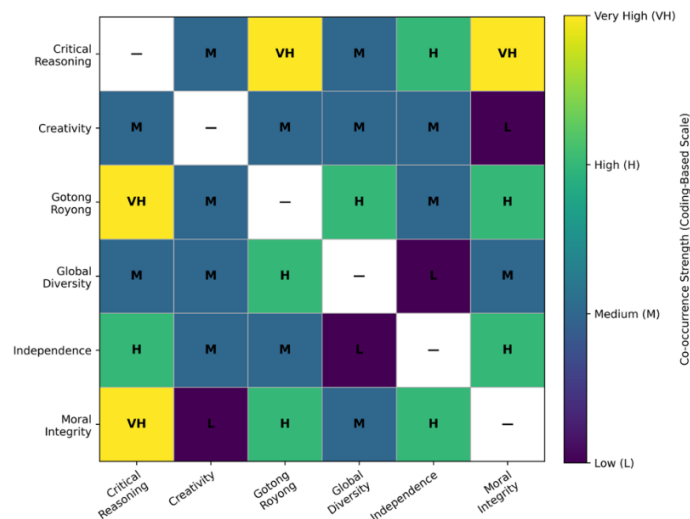


Figure 4. Co-occurrence Heatmap (6×6): Inter-Dimension Relationships of Pancasila Student Profile

Reading notes: Cells marked VH/H/M/L indicate the strength of two-dimensional co-occurrence in the same data unit; diagonals are marked (—) because they do not apply.

Based on Figure 4, the relationship among the PPP dimensions follows a non-random pattern. The co-occurrence of Very High (VH) is most prominent in the pairs Critical Thinking–Mutual Cooperation and Critical Thinking–Noble Character. Substantively, this confirms that evidence-based reasoning formed during inquiry and deliberation tends to operate in tandem with collaborative practices (role sharing, decision negotiation) and ethical considerations (fairness, impact, responsibility). This pattern

is consistent with the character of Project Citizen, which demands public argumentation as well as social deliberation, so that reasoning is not separated from collective work and moral compass (Scharp, 2021).

Furthermore, several High (H) relationships show more specific "reinforcement paths": Gotong Royong–Global Diversity and Independence–Noble Character (as well as several other pairs at the H level). This means that collaborative practices in projects tend to be a prerequisite for the polite management of differences of opinion (global diversity). In contrast, the independence that arises in the management of tasks and personal decision-making often goes hand in hand with ethical reflection at the closing stage (reflection-evaluation). Methodologically, this relationship map reinforces Finding 2: certain dimensions peak at different stages, but co-occurrence shows that these peaks remain connected through mechanisms of deliberation, collaboration, and reflection (Decuyper, 2020; Pokorny et al., 2018).

Conversely, pairs with co-occurrence of Low (L) indicate a less frequent, more situational relationship. The finding of a "low relationship" does not mean that the dimension is not developing, but rather indicates that the two do not often appear in the same data unit, so that the strengthening of both is likely to occur through different pedagogical spaces (for example, creativity is strongly reinforced when designing proposals, while global diversity is reinforced during public presentations). This interpretation is important to avoid misinterpretation: Result 2's heatmap explains "at what stage" a dimension is strengthened, while Figure 4 explains "with which dimension" the strengthening is usually paired.

As an analytical implication, Figure 4 supports the argument that PPP in Project Citizen learning works as an interlocking configuration of competencies—not six separate lists of achievements. Therefore, the most effective learning design is one that deliberately places students in pedagogical moments that trigger the co-activation of key dimensions (e.g., evidence-based deliberation to activate critical thinking, cooperation, morality; public presentations to activate global diversity linked to communication ethics). This conclusion provides a strong bridge to the theoretical discussion: why Project Citizen is structurally well-suited to strengthen PPP in Pancasila Education.

Discussion

The four research results form a consistent common thread: strengthening the Pancasila Student Profile (PPP) through Project Citizen does not appear as six dimensions taught separately, but rather as civic competencies that grow from practice, ranging from public issue inquiry, deliberation, policy proposal design, advocacy through presentations, to ethical reflection. This pattern aligns with the direction of project-based learning in strengthening PPP, which emphasizes collaborative processes, authentic problem-solving, and process-product-based assessment (Baporikar, 2021; Das Aundhe & Narasimhan, 2016).

The outline of this reinforcement mechanism is clearly evident in Result 2, interpreted as a "step-by-step pattern" that follows the pedagogical demands of each phase. In the early stages—from problem identification to inquiry—the dimension of Critical Reasoning stands out because students must frame the issue, select information, and verify the relevance of the data. This finding is consistent with the project-based learning literature, which asserts that higher-order cognitive achievements are typically strengthened when students work on authentic problems and are bound by explicit inquiry procedures (Almulla, 2020; Guo et al., 2020). As the process shifts toward deliberation and proposal design, the intensity of *Gotong Royong* (cooperation) and Kreatif (creativity) increases because learning requires idea negotiation, role sharing, design iteration, and alignment of solutions with the evidence that has been collected—a characteristic of "strong" PjBL because the product is not born from intuition, but from a cycle of analysis–revision cycle (Guo et al., 2020).

The next transition—entering the public presentation room—makes the dimension of Global Diversity more sensitive to emerge and strengthen, as students must test ideas in front of an audience,

manage differences of opinion, and maintain discourse ethics. Literature on citizenship-related classroom discussion shows that productive citizenship discussions are highly dependent on teacher facilitation strategies to ensure that disagreements remain a source of learning rather than polarization (Coopmans & Rinnooy Kan, 2023). At the same time, the closing stage (reflection and evaluation) reinforces noble character through reflection on consequences, consideration of justice, and social accountability—which, within the PPP project framework, is emphasized through formative assessment, reflection, and achievement reporting (Jos & Tompkins, 2004; Kiersch & Gullekson, 2021).

However, visual pattern reading will be weak without procedural verification. This is where Result 3 (Triangulated Evidence Matrix) plays a critical role: it elevates claims from "visible patterns" to "patterns that can be traced back to data." Within the framework of trustworthiness, the convergence of observations, interviews, and documents helps strengthen the credibility and confirmability of findings, while also providing an audit trail that allows readers to assess the traceability of interpretations (Ahmed, 2024; Creswell et al., 2006; Patton, 1999; Schlunegger et al., 2024). The practice of summarizing cross-source evidence is also in line with modern qualitative analysis recommendations that emphasize transparency in the coding process and data display as part of rigor (Miles, M.B., Huberman, a. m., & Saldana, 2015; Saldana, 2025).

In addition to validating the intensity, this study expands understanding through Result 4 (6×6 co-occurrence), which shows that the PPP dimensions form a relational network. High co-occurrence in the pairs Critical Reasoning–Mutual Cooperation and Critical Reasoning–Noble Character indicates a mechanistic core: evidence-based reasoning in Project Citizen tends to go hand in hand with group deliberation and ethical considerations (Scharp, 2021). These findings are also in line with comparative civic education research, which identifies public issue discussion, perspective-taking, and democratic norms as important conditions for strengthening civic competence (Schulz et al., 2022). In other words, PPP in this context does not work as a "checklist," but rather as a configuration of competencies that are interlocked throughout the class-based policy process.

Low correlations between some pairs of dimensions should not be interpreted as weaknesses in the results, but rather as pointers for instructional design: certain dimensions may develop in different pedagogical spaces and will only "connect" when teachers add instructional bridges. For example, the low co-occurrence of Creative ↔ Noble Character can be followed up with an ethical checkpoint in the proposal design phase—impact test, fairness test, and affected party test—so that the creativity of the solution does not stop at novelty, but is bound by social responsibility. This reading remains consistent with the PPP project principle that requires selecting elements/sub-elements and assessments to ensure the target dimensions are actually trained (Jos & Tompkins, 2004; Kiersch & Gullekson, 2021). Methodologically, the use of co-occurrence as an analytic lens is also in line with CAQDAS practices and code relationship visualization studies, with the caveat that researchers must return to the data segment to ensure that meaning is not "over-summarized" by intensity labels (Decuyper, 2020; Limeri et al., 2020; Michelen et al., 2024; Pokorny et al., 2018).

Overall, these findings indicate that the strength of Project Citizen lies in its cyclical design: it structures the learning experience so that the PPP dimensions emerge at the "most likely" moment—and then reinforce each other through deliberation, public communication, and ethical reflection. In classroom practice, the consequence is the need for explicit scaffolding: evidence-based argumentation protocols, source quality rubrics, accountable group work mechanisms, and structured moral reflection spaces to ensure that the PPP reinforcement trail remains consistent from the initial stage to the closing stage (Miles, M.B., Huberman, a. m., & Saldana, 2015; Saldana, 2025).

4. CONCLUSION

The findings of this study confirm that implementing Project Citizen in Pancasila Education at MTs

Muhammadiyah Purwokerto is effective as a pedagogical cycle that gradually and contextually strengthens the dimensions of the Pancasila Student Profile. Visualization of intensity (heat map) and dynamics (trajectory) shows that the strengthening of PPP follows the requirements of each stage: the problem identification and inquiry phase emphasizes critical reasoning; the deliberation and proposal design phase strengthens cooperation and creativity; the public presentation phase activates dialogical practices related to global diversity; while reflection-evaluation reaffirms the orientation of noble character and social accountability. This evidence is not limited to visual patterns. However, it is verified through triangulation of observation-interviews and artifacts, and deepened by co-occurrence analysis, which shows that the PPP dimensions form a relational network—especially the strong connection between critical reasoning, cooperation, and noble character—so that PPP in this context works as a configuration of interlocking civic competencies.

The implication is that Project Citizen can be positioned as an operational project-based learning model for developing PBL through authentic citizenship practices, provided that teachers provide explicit scaffolding: evidence-based argumentation protocols, accountable group work management, source quality rubrics, and structured ethical reflection at the design and closing stages. The limitations of this study lie in its focus on a single case study context and its qualitative coding-based intensity; therefore, further research is recommended to expand to multiple cases across madrasas/schools, test the consistency of findings with inter-rater reliability or rubric reinforcement, and explore the longitudinal impact on student citizenship habits after the project cycle is complete.

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