

Project Citizen and Resistance to Independent Waste Villages: A Case-Based Learning Approach in Matesih, Indonesia

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ABSTRACT

Project Citizen can connect Civic Education with authentic public issues by engaging students in evidence-based inquiry and policy problem-solving. This study examined its implementation through a case-based learning approach using community resistance to the Independent Waste Village Program in Matesih, Indonesia, as the central civic issue. A descriptive qualitative case-study design was employed involving senior high school students who participated in classroom discussions, field observations, stakeholder interviews, collaborative analysis, portfolio development, and policy presentations. Data were collected through observations, semi-structured interviews, student learning artefacts, and contextual information from community stakeholders. The data were analyzed thematically through coding, categorization, and comparison across data sources. Students identified several forms of resistance, including non-participation, token compliance, fee avoidance, alternative waste disposal, public skepticism, and uneven participation across neighborhoods. They interpreted these responses as being influenced by service unreliability, economic considerations, limited communication, perceived unfairness, and public distrust. The learning process supported the development of civic knowledge, inquiry, communication, collaboration, evidence-based reasoning, environmental responsibility, empathy, and policy advocacy. The findings indicate that community resistance can serve as a meaningful case for contextual Civic Education because it enables students to examine complex relationships among citizen responsibility, institutional performance, and public trust. However, the study was limited by its single-case qualitative design and the absence of standardized measures of competency development. Future studies should use broader samples, comparative designs, and validated assessment instruments.

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1. INTRODUCTION

Waste management is a multidimensional environmental challenge shaped by population growth, changing consumption patterns, institutional capacity, and community behavior. In many rural areas of Indonesia, household waste increasingly consists of mixed organic and inorganic materials, while collection, sorting, and processing facilities remain limited. These conditions often lead residents to burn waste, dispose of it in rivers, or use unauthorized dumping sites, creating environmental and public health risks (Sugara & Rahayu, 2023; Tarigan et al., 2020; Trushna, 2024). Although national and local policies have promoted source-based waste management, waste banks, and community participation, the success of such programs depends on whether residents understand, trust, and consistently support their implementation.

The Independent Waste Village Program in Matesih, Indonesia, represents a local effort to strengthen community-based waste governance through household sorting, organized collection, waste-bank activities, and collaboration among the village government, Village-Owned Enterprises, and community members. However, formal program implementation does not automatically result in meaningful participation. Residents may be administratively registered but submit waste irregularly, comply only symbolically, avoid service fees, or continue using traditional disposal practices. Limited service reliability, unclear material benefits, insufficient communication, and unequal access to program benefits may further weaken public trust and participation. These conditions demonstrate that community resistance should not be understood merely as individual unwillingness. Instead, resistance may reflect wider tensions involving institutional capacity, perceived fairness, economic interests, local practices, and relationships between citizens and public institutions.

Community participation is an important element of sustainable environmental governance because citizens are expected to contribute to decision-making, program implementation, benefit utilization, and evaluation (Kalpikawati & Pinaria, 2023; Nurhidayat et al., 2024). Participation also involves cognitive, affective, and behavioral dimensions. Citizens need to understand the program, perceive it as relevant and fair, and translate their attitudes into consistent action. Previous research has examined community participation, local waste-management practices, and barriers to policy implementation (Kalpikawati & Pinaria, 2023; Yanto et al., 2024). Nevertheless, such issues are not only relevant to environmental governance. They can also serve as authentic learning resources through which students examine public problems, compare stakeholder perspectives, evaluate policies, and develop evidence-based recommendations.

In Civic Education, authentic public issues are important because they enable students to connect citizenship concepts with social realities. Project Citizen is a participatory learning model that engages students in identifying a public problem, gathering evidence, considering policy alternatives, developing a portfolio, and presenting policy recommendations (Atherton, 2000). The model positions students not as passive recipients of civic knowledge but as active participants in public inquiry and democratic problem-solving. Its educational value is consistent with the broader goals of citizenship education, including the development of civic knowledge, civic skills, civic dispositions, critical thinking, communication, collaboration, and responsible participation (Kerr, 2016; Torney-Purta et al., 2015).

Project Citizen can be strengthened through case-based learning because real community cases expose students to ambiguity, conflicting interests, incomplete information, and multiple interpretations. Community resistance to a waste-management program is particularly suitable as a civic case because it requires students to examine the relationship between citizen responsibility and government performance. Students must consider why residents do not participate, whether public services are reliable, how benefits are distributed, and how policies can be redesigned to become more responsive. Through observation, stakeholder interviews, group deliberation, portfolio development,

and public presentation, students can learn that public problems rarely have a single cause or a simple solution.

Existing studies have emphasized the potential of participatory and contextual approaches for strengthening civic engagement. However, limited attention has been given to how students learn from community resistance as an authentic public-policy case. Previous research has more commonly examined resistance from the perspectives of program implementation, collective action, or community participation. Consequently, insufficient empirical explanation is available regarding how students investigate resistance, interpret competing stakeholder perspectives, and transform field evidence into policy recommendations. There is also a need to clarify which civic competencies emerge during different stages of the Project Citizen process and what pedagogical challenges arise when students engage directly with a sensitive community issue.

This study addresses that gap by examining the implementation of Project Citizen through a case-based learning approach in a senior high school Civic Education context. Community resistance to the Independent Waste Village Program is positioned as the authentic issue investigated by students, while the primary focus of analysis is the students' learning process. The study examines how students collect and interpret evidence, analyze the forms and causes of resistance, deliberate on alternative solutions, and develop policy recommendations. It also investigates the civic knowledge, civic skills, and civic dispositions demonstrated throughout the learning activities. By focusing on the educational use of a local environmental-governance problem, the study is expected to contribute to the development of contextual Civic Education and provide practical guidance for teachers implementing Project Citizen.

Accordingly, this study addresses the following research questions:

1. How is Project Citizen implemented through a case-based learning approach using community resistance to the Independent Waste Village Program as an authentic civic issue?
2. How do students investigate and interpret the forms and causes of community resistance to the program?
3. What civic knowledge, civic skills, and civic dispositions are demonstrated by students during the Project Citizen learning process?
4. What pedagogical challenges arise during the implementation of Project Citizen?

2. METHOD

2.1 Research Design

This study employed a descriptive qualitative case-study design to examine the implementation of Project Citizen through a case-based learning approach in a senior high school Civic Education setting. The case was bounded by the implementation of a Project Citizen learning program that used community resistance to the Independent Waste Village Program in Matesih, Indonesia, as an authentic civic issue.

The primary focus of the study was the students' learning process, including how they investigated a local public problem, interpreted evidence from different stakeholders, developed policy alternatives, and demonstrated civic competencies. Community resistance to the waste-management program was therefore positioned as the case investigated by the students rather than as a separate program-evaluation study.

The learning process followed five main stages of Project Citizen: identifying a public problem, collecting information from multiple sources, examining alternative policy solutions, developing a class portfolio, and presenting policy recommendations. These stages were integrated with case-based learning activities, including classroom discussion, field observation, stakeholder interviews, collaborative analysis, reflective activities, and public presentation.

2.2 Research Setting and Participants

The study was conducted in a senior high school Civic Education learning context in Matesih, Indonesia. The participants were senior high school students who took part in a Project Citizen-based Civic Education program. They were selected purposively because they participated directly in classroom discussions, group investigations, field visits, stakeholder interviews, collaborative data analysis, portfolio development, and policy presentation activities. The primary participants were the students because the study examined their learning experiences and the development of civic knowledge, civic skills, and civic dispositions.

Village officials, Village-Owned Enterprise administrators, waste-management volunteers, community leaders, and residents were involved as contextual informants. They provided information about the implementation of the Independent Waste Village Program, patterns of community participation, and the forms and causes of resistance encountered in the community. Their accounts served as contextual evidence that students collected and analyzed during the learning process. They were not treated as the primary participants in the analysis of student learning outcomes.

2.3 Project Citizen Learning Procedure

In the first stage, students identified a public problem related to the Independent Waste Village Program. The teacher introduced the general issue through classroom discussion, village documents, news reports, and preliminary information about waste-management practices. Students discussed the relevance of the issue and formulated inquiry questions concerning community participation and resistance.

In the second stage, students collected information from multiple sources. They reviewed relevant documents, conducted field observations, and interviewed village officials, program administrators, volunteers, and community members. Before conducting fieldwork, students received guidance on interview procedures, research ethics, respectful communication, and note-taking.

In the third stage, students analyzed the collected evidence and examined alternative policy solutions. Working in groups, they identified forms of community resistance, classified their possible causes, compared stakeholder perspectives, and evaluated the strengths and limitations of the existing program. Students then considered alternative strategies for increasing participation, improving communication, strengthening service reliability, and building public trust.

In the fourth stage, students developed a Project Citizen portfolio. The portfolio contained a description of the public problem, evidence collected from the field, an analysis of existing policies, proposed policy alternatives, and an action plan or recommendation. Students organized the evidence collaboratively and developed arguments to support their proposals.

In the final stage, students presented their portfolios and policy recommendations. The presentation was followed by questions, discussion, and reflection. This stage allowed students to defend their arguments, respond to different perspectives, and reflect on their roles as citizens participating in public problem-solving.

2.4 Data Sources and Data Collection

Data were collected through classroom and field observations, semi-structured interviews, student learning artefacts, and documentation of portfolio presentations. The use of multiple data sources enabled the researchers to examine the learning process from different perspectives and to compare participants' accounts with observed activities and written products.

2.4.1 Observations

Observations were conducted throughout the Project Citizen learning process. The researchers observed classroom discussions, group investigations, field visits, stakeholder interviews, collaborative data analysis, portfolio development, and presentation sessions.

The observations focused on students' participation, collaboration, communication, inquiry strategies, evidence use, problem-solving, deliberation, and decision-making. The researchers also documented how students responded to conflicting information, negotiated different viewpoints, and connected field findings with concepts in Civic Education.

Observation data were recorded using field notes. A total of classroom and field sessions were observed.

2.4.2 Student Interviews

Semi-structured interviews were conducted with selected senior high school students who participated in the Project Citizen activities. The interviews explored students' experiences during the case-based learning process, their understanding of community resistance to the Independent Waste Village Program, the challenges they encountered during fieldwork and group collaboration, and the knowledge, skills, and civic values they developed throughout the project. The interviews also examined how direct interaction with community members influenced students' understanding of environmental issues, democratic participation, and their roles as active citizens in addressing real-world public problems.

2.4.3 Contextual Informant Interviews

These interviews examined the implementation of the Independent Waste Village Program, service arrangements, community-participation patterns, and perceived causes of resistance. The contextual interviews were used to understand the case investigated by the students and to examine the types of evidence available during the learning process. They were not used independently to claim changes in students' civic competencies.

2.4.4 Student Learning Artefacts

Student learning artefacts included field notes, interview summaries, reflective, and class portfolios. These materials were examined to identify how students organized evidence, interpreted stakeholder perspectives, developed arguments, and formulated policy recommendations. The final Project Citizen portfolios and presentation materials were particularly important for examining students' ability to define a public problem, assess policy alternatives, and communicate evidence-based proposals.

2.5 Research Instruments

The researchers served as the primary instruments in data collection and interpretation. Supporting instruments included observation guidelines, semi-structured interview protocols, document-analysis sheets, and portfolio-analysis criteria. The observation guide covered indicators related to student engagement, collaborative inquiry, communication, critical thinking, evidence use, deliberation, and civic participation. The student interview guide focused on learning experiences, interpretations of the community case, perceived competency development, and pedagogical challenges.

The analysis of civic competencies was organized into three domains:

1. Civic knowledge, including understanding of public policy, environmental governance, citizen participation, and the responsibilities of public institutions and community members;
2. Civic skills, including inquiry, critical thinking, evidence interpretation, communication, collaboration, deliberation, problem-solving, and policy advocacy; and

3. Civic dispositions, including responsibility, empathy, openness to different perspectives, environmental awareness, willingness to participate, and commitment to collective problem-solving.

These domains were used as analytical guides rather than as standardized quantitative measures.

2.6 Data Analysis

The data were analyzed using thematic analysis. The analysis was conducted concurrently with and after data collection through several stages.

First, the researchers organized the observation notes, interview transcripts, student reflections, portfolio documents, and presentation records. The data were read repeatedly to obtain an overall understanding of the learning process.

Second, relevant data segments were coded according to the research questions. Initial codes represented learning activities, students' interpretations of resistance, civic knowledge, civic skills, civic dispositions, and pedagogical challenges.

Third, related codes were compared and grouped into broader categories. For example, codes concerning information gathering, source comparison, and interpretation of stakeholder statements were grouped under inquiry and evidence-analysis skills. Codes concerning responsibility, empathy, and willingness to contribute were grouped under civic dispositions.

Fourth, themes were developed by comparing evidence across students, learning activities, and data sources. The main themes included the implementation of Project Citizen, students' interpretation of community resistance, the development of civic competencies, and challenges in implementing authentic case-based learning.

Finally, the researchers reviewed the themes against the original data and selected representative evidence, including interview excerpts, observation records, student reflections, and portfolio content. Data from contextual informants were analyzed separately and then connected to students' interpretations of the community case.

The study did not use statistical significance to evaluate learning outcomes. Claims regarding competency development were based on recurring patterns observed across interviews, classroom and field observations, reflective accounts, and student artefacts.

2.7 Ethical Considerations

Permission to conduct the study was also obtained from the school and relevant village authorities. All participants received information about the purpose of the study, the data-collection procedures, voluntary participation, confidentiality, and their right to withdraw. Written informed consent was obtained from adult participants. Because the primary participants were senior high school students, consent was obtained from the students and, where required, from their parents or legal guardians. Pseudonyms or participant codes were used in transcripts and reports to protect participants' identities. Information that could identify individual residents, students, or local institutions was removed or reported in a generalized form. The researchers also ensured that students' participation or refusal to participate in the research did not affect their academic assessment.

3. FINDINGS AND DISCUSSION

3.1 Implementation of Project Citizen Through Case-Based Learning

The findings show that Project Citizen was implemented through a sequence of learning activities centered on community resistance to the Independent Waste Village Program in Matesih. Students began by identifying waste management as a public issue affecting their local community. They examined information from village documents, classroom discussions, field observations, and interviews with relevant community stakeholders. Through these activities, students were introduced

to the gap between the formal objectives of the program and actual waste-management practices among residents.

During the investigation stage, students visited the community, observed household waste-management practices, and interviewed village officials, Village-Owned Enterprise administrators, waste-management volunteers, and residents. These activities exposed students to different perspectives on the implementation of the program. The interview data indicated that community participation was not uniform. Some residents actively used the official collection service, whereas others were formally registered but did not consistently separate or submit their household waste. One informant explained that some residents continued to dispose of waste by burning it, stating, *"It is burned, but it causes pollution."* This statement helped students recognize that residents were aware of the environmental consequences of their actions but continued using informal disposal methods because of habitual practices or limitations in the official service.

Students also encountered concerns regarding the transparency and management of the program. An informant expressed uncertainty about the use of residents' contributions and the direction of the waste-management system, stating, *"We don't know where the management is going."* This account illustrated the relationship between limited access to information, declining public trust, and inconsistent participation. By comparing such statements with field observations and information provided by program administrators, students learned that resistance could not be interpreted solely as a lack of environmental responsibility. Instead, it was associated with service reliability, communication, economic expectations, and perceptions of institutional accountability.

After collecting the data, students worked collaboratively to organize and interpret the evidence. They classified different forms of resistance, discussed their possible causes, compared the perspectives of residents and program administrators, and considered the implications for local environmental governance. Students identified patterns such as non-participation, token compliance, fee avoidance, alternative waste disposal, public skepticism, and uneven participation across neighborhoods. These categories became the basis for evaluating the strengths and limitations of the existing program.

Students subsequently developed alternative policy solutions and prepared a Project Citizen portfolio containing a description of the public problem, evidence from field investigations, an analysis of existing policies, proposed alternatives, and recommendations for program improvement. Their recommendations emphasized continuous environmental education, clearer communication regarding collection schedules and service contributions, greater transparency in financial and operational management, improved collection reliability, and stronger collaboration among village institutions and community stakeholders. The portfolios were then presented to teachers, peers, and community representatives, allowing students to explain their findings, respond to questions, and defend their policy recommendations.

Overall, the learning process enabled students to connect concepts in Civic Education with a real public problem. Rather than studying citizenship, public policy, and participation only through textbooks, students directly examined how local policies were implemented, how citizens responded to institutional arrangements, and how evidence could be used to formulate more responsive policy alternatives. The interview statements and field evidence helped students understand that civic participation is influenced not only by individual responsibility but also by public trust, institutional performance, communication, and perceived fairness.

3.2 Students' Identification of the Forms of Community Resistance

Based on observations, interviews, and document analysis, students identified several interconnected forms of community resistance to the Independent Waste Village Program. The findings indicated that resistance was not always expressed through open rejection. Instead, it frequently appeared through everyday practices, limited compliance, withdrawal from program obligations, and skepticism toward program management.

The first form was abstention or non-participation. Some residents were administratively registered as program participants but did not regularly submit their household waste through the

official collection system. Other residents did not participate in the program at all. This discrepancy between formal registration and actual involvement reduced the amount of waste managed by the program and limited its overall effectiveness. The findings suggest that administrative membership should not automatically be interpreted as meaningful participation because some registered residents remained inactive in daily waste-management practices.

The second form was passivity or token compliance. Some residents demonstrated formal compliance by registering, occasionally paying service fees, or participating in selected activities, but they did not consistently separate household waste or follow the designated collection schedule. Their participation was therefore largely symbolic and administrative rather than behavioral. Students interpreted this condition as evidence that participation cannot be assessed only through registration records or occasional attendance. It must also be examined through residents' consistency in carrying out the technical responsibilities required by the program.

The third form was fee avoidance or nonpayment. Some residents delayed or avoided paying service contributions, even though regular payments were needed to support waste collection and other operational activities. This behavior weakened the financial capacity of the Village-Owned Enterprise to maintain reliable services. Fee avoidance was also associated with uncertainty regarding the management of residents' contributions and the benefits generated by the program. One informant expressed this concern by stating, *"We don't know where the management is going."* The statement reflected limited public understanding of the program's financial and operational management and indicated that nonpayment was partly related to a lack of transparency and trust.

The fourth form was alternative disposal outside the official system. Some households continued to burn waste or dispose of it in rivers, drains, and other unauthorized locations. These practices were used particularly when residents considered the official collection service irregular or unreliable. One informant acknowledged the continued use and environmental consequences of burning waste, stating, *"It is burned, but it causes pollution."* This statement showed that awareness of environmental harm did not necessarily result in behavioral change. Students interpreted the continued use of informal disposal methods as being influenced by habit, convenience, and dissatisfaction with the reliability of the official service.

The fifth form was public skepticism. Some residents questioned the direct benefits of the program and expressed uncertainty about the use of service contributions and revenue from waste management. The statement, *"We don't know where the management is going,"* also illustrated residents' concern about accountability and the direction of program management. Limited information about financial allocation, operational procedures, and benefit distribution weakened public confidence and reduced residents' willingness to participate consistently. Students, therefore, identified skepticism not merely as a negative attitude but as a response to perceived deficiencies in transparency and communication.

The final form was spatial fragmentation of participation. Active participation was concentrated in particular neighborhoods or hamlets, while residents in other areas participated only minimally. This pattern created what students interpreted as "participation islands," in which certain areas received more consistent services and program benefits than others. Uneven participation weakened cooperation across neighborhoods and created the perception that access to benefits was not distributed equally. Students concluded that spatial fragmentation could undermine collective ownership because the program was not experienced as an inclusive village-wide initiative.

Overall, the findings demonstrate that community resistance appeared through both behavioral and perceptual responses. Non-participation, symbolic compliance, fee avoidance, alternative disposal, public skepticism, and spatial fragmentation were mutually connected. Limited transparency could encourage skepticism and nonpayment, while unreliable services could lead residents to withdraw from the program or return to informal waste-disposal practices. Students, therefore, understood resistance as a multidimensional response shaped by institutional performance, communication, public trust, perceived fairness, and residents' daily practices.

3.3 Students' Interpretation of the Causes of Resistance

Students found that community resistance to the Independent Waste Village Program was shaped by several interrelated factors rather than by a single cause. Their analysis indicated that resistance emerged from the interaction of service reliability, economic considerations, communication problems, and limited public trust. These factors reinforced one another and influenced residents' willingness to participate consistently in the program.

One important factor was the limited reliability of waste collection services. Field observations showed that collection schedules were inconsistent in several service areas. Operational constraints, including limited human resources and problems with waste collection vehicles, further disrupted service regularity. When waste was not collected according to schedule, residents were required to store it for longer periods or find alternative disposal methods. Under these conditions, some households returned to burning waste or disposing of it independently. One informant acknowledged this practice and its environmental consequences by stating, *"It is burned, but it causes pollution."* This statement indicated that residents were not necessarily unaware of the environmental harm caused by burning waste. Instead, continued burning could also reflect practical responses to unreliable collection services and the absence of accessible alternatives.

Students, therefore, interpreted non-participation and alternative disposal not solely as expressions of individual irresponsibility. These behaviors were also understood as responses to weaknesses in program implementation. When residents perceived the collection service as inconsistent, their motivation to sort waste, follow collection schedules, and use the official system declined. The findings demonstrated that efforts to strengthen citizen participation must be accompanied by reliable institutional services.

Economic considerations also influenced community participation. Some residents expected clear and tangible benefits from their involvement, while the distribution of income and other benefits generated by waste management was not sufficiently understood. Changes in contribution arrangements and uncertainty regarding the use of service fees contributed to dissatisfaction and payment avoidance. One informant expressed uncertainty about the direction and management of the program by stating, *"We don't know where the management is going."* This statement reflected residents' limited access to information about how contributions were managed, how waste-related revenue was allocated, and whether participation produced direct benefits for the community.

Students interpreted this uncertainty as an indication that economic resistance was closely related to transparency. Residents were less willing to make regular payments when they did not understand how their contributions supported program operations or how the resulting benefits were distributed. Thus, fee avoidance could not be explained only as an unwillingness to contribute financially. It was also associated with residents' perceptions of accountability, fairness, and the clarity of benefit-sharing mechanisms.

Communication and socialization were additional factors influencing resistance. Students found that technical information about household waste sorting, collection schedules, service fees, and program benefits had not been understood equally by all residents. Some community members lacked clear information about their responsibilities, while others remained uncertain about the operational and financial management of the program. The statement, *"We don't know where the management is going,"* also illustrated the consequences of limited communication between program managers and residents.

The findings suggest that communication was often treated as the one-way delivery of technical information rather than as an ongoing process of dialogue and clarification. Inadequate communication contributed to misunderstanding, negative perceptions, and uncertainty regarding program objectives. Students consequently concluded that socialization should not be limited to instructing residents to separate and submit waste. It should also provide opportunities for residents to ask questions, communicate concerns, and obtain clear explanations about service arrangements and program benefits.

Public trust emerged as a central factor connecting these different forms of resistance. Residents were less likely to participate consistently when they perceived that financial management, benefit distribution, and program decision-making lacked transparency. Unreliable collection services weakened confidence in institutional capacity, while unclear financial information generated doubts about accountability. These conditions encouraged residents to reduce their participation, avoid payments, or return to disposal practices outside the official system.

Overall, students understood community resistance as a multidimensional response shaped by institutional performance, economic expectations, communication quality, perceived fairness, and citizen–government relationships. Their analysis demonstrated that improving participation requires more than encouraging residents to change their behavior. It also requires reliable waste collection, transparent financial reporting, clear benefit-distribution mechanisms, continuous two-way communication, and greater opportunities for residents to participate in program decision-making.

3.4 Development of Civic Knowledge

Participation in the Project Citizen activities helped students develop a more contextual understanding of public policy, environmental governance, and community participation. Through direct investigation, students learned that the effectiveness of a public program depends not only on the existence of formal regulations but also on service quality, institutional capacity, communication, public trust, and citizen involvement.

Students also developed an understanding of the relationship between citizen rights and responsibilities. They recognized that residents have responsibilities to manage waste appropriately and participate in community programs. At the same time, public institutions are responsible for providing reliable services, transparent management, and opportunities for meaningful participation.

The case also enabled students to understand that citizens may respond differently to the same policy. These responses can be influenced by economic interests, daily routines, access to services, previous experiences, and perceptions of fairness. This understanding encouraged students to avoid interpreting resistance solely as disobedience or a lack of environmental awareness.

3.5 Development of Civic Skills

The Project Citizen learning process provided opportunities for students to practice several civic skills. During the investigation stage, students learned to formulate questions, collect information, conduct observations, and communicate with community stakeholders. They also practiced comparing information obtained from different sources.

Collaborative analysis encouraged students to classify evidence, identify relationships between problems and causes, and assess the consequences of different forms of resistance. Students discussed competing interpretations and negotiated group decisions when preparing their policy portfolios.

The preparation of policy recommendations developed students' problem-solving and evidence-based argumentation skills. They were required to connect each proposed solution with the problems identified during field investigation. Through portfolio presentations, students also practiced public communication, responding to questions, and defending their recommendations.

The findings therefore indicate that the learning activities supported the practice of inquiry, communication, collaboration, critical analysis, deliberation, and policy advocacy. However, the original data do not provide quantitative evidence that these skills increased significantly.

3.6 Development of Civic Dispositions

The learning experience also encouraged several civic dispositions. Direct interaction with residents and local program administrators exposed students to diverse perspectives and helped them understand the practical difficulties experienced by both citizens and service providers.

Students demonstrated awareness that environmental problems require shared responsibility. They also recognized the importance of dialogue, cooperation, transparency, and public participation in addressing community problems. Engagement with the case encouraged students to view

themselves as participants who could contribute ideas and policy recommendations rather than as passive observers of local issues.

The process of discussing differences among stakeholders also supported openness to multiple perspectives. Students learned that effective public solutions require consideration of community needs, institutional limitations, and the possible consequences of policy decisions.

3.7 Students' Policy Recommendations

Based on their investigation, students developed several recommendations to strengthen the Independent Waste Village Program. First, they proposed continuous community education concerning waste sorting, collection procedures, environmental impacts, and the responsibilities of program participants.

Second, students recommended improving communication between village institutions and residents. They emphasized the need for clear information about collection schedules, service contributions, waste processing, and the benefits generated by the program.

Third, students proposed greater transparency in financial and operational management. Publicly accessible reports on service fees, waste sales, program expenses, and benefit distribution were considered important for rebuilding community trust.

Fourth, students recommended strengthening cooperation among the village government, Village-Owned Enterprise, educational institutions, community organizations, universities, and private-sector partners. Such collaboration was expected to improve technical capacity, human resources, infrastructure, and environmental innovation.

Finally, students recommended improving the consistency of waste collection services. They argued that community participation would be difficult to sustain unless collection schedules and service routes were reliable.

3.8 Pedagogical Meaning of the Findings

The use of community resistance as an authentic case made the Project Citizen learning process contextual and socially relevant. Students were required to investigate a complex issue for which different stakeholders held different experiences and interpretations.

The case encouraged students to move beyond simplified explanations of public problems. They learned that environmental policy implementation involves interactions among citizen behavior, institutional capacity, economic considerations, communication, service quality, and public trust.

The findings indicate that Project Citizen can provide meaningful opportunities for students to examine public issues, collect and analyze evidence, discuss policy alternatives, and communicate recommendations. Nevertheless, claims regarding the development of students' competencies should remain qualitative unless supported by validated measurement data.

Discussion

The findings demonstrate that Project Citizen can transform a local environmental problem into an authentic context for Civic Education. By investigating community resistance to the Independent Waste Village Program, students moved beyond learning citizenship concepts at an abstract level and engaged directly with a public issue involving government performance, citizen responsibility, trust, participation, and environmental sustainability. This process reflects the central principle of Project Citizen, which positions students as active investigators of public problems who collect evidence, evaluate policy alternatives, and formulate recommendations (Atherton, 2000). The learning activities also support the broader aims of citizenship education, particularly the development of knowledge, participatory skills, critical judgment, and responsible civic engagement (Kerr, 2016; Torney-Purta et al., 2015).

The case-based character of the learning process was particularly important because community resistance could not be explained through a single cause. Students identified non-participation, token compliance, fee avoidance, alternative waste disposal, public skepticism, and spatially uneven

participation. These findings indicate that formal registration in a community program does not necessarily represent meaningful participation. Similar patterns have been discussed in studies of collective action, which show that community-based programs often encounter free-riding, weak compliance, and limited commitment when institutional arrangements are considered ineffective or unfair (Agrawal, 2018; Ostrom, 2015). In the present study, students learned that resistance should not simply be interpreted as citizens' unwillingness to manage waste. Instead, it may emerge from the interaction between individual behavior, economic expectations, institutional weaknesses, and perceived inequalities.

The findings also emphasize the importance of service reliability in shaping citizen participation. Irregular collection schedules, limited human resources, and operational problems encouraged some residents to return to burning waste or disposing of it outside the official system. This suggests that citizen responsibility cannot be separated from the quality of public services. When institutions fail to provide predictable and accessible services, citizens may consider non-compliance a practical response rather than deliberate opposition. Through this case, students developed a more balanced understanding of public policy implementation. They recognized that sustainable waste governance requires both responsible citizen behavior and accountable institutional performance.

Economic considerations and unclear benefit distribution were also identified as major sources of resistance. Some residents expected tangible benefits, while uncertainty surrounding service fees, revenue from waste sales, and the allocation of benefits contributed to skepticism. This finding is consistent with research suggesting that community-based economic institutions require transparent management and clear benefit-sharing mechanisms to maintain participation and legitimacy (Pawitan et al., 2025). From a Civic Education perspective, this issue provided students with an opportunity to examine the relationship between transparency, public trust, and policy compliance. Students learned that participation is more likely to be sustained when citizens perceive procedures and outcomes as fair.

Communication was another important dimension. Limited socialization regarding sorting procedures, payment arrangements, collection schedules, and program benefits contributed to misunderstanding and inconsistent participation. Previous studies have shown that participation involves not only physical involvement but also knowledge, motivation, and behavioral commitment (Kalpikawati & Pinaria, 2023). Therefore, communication should not be treated merely as the delivery of technical information. It must also provide opportunities for dialogue, clarification, and citizen feedback. The students' recommendations for continuous education and participatory forums reflect an understanding that effective governance requires two-way communication between institutions and communities.

The investigation of multiple stakeholder perspectives contributed to the development of civic knowledge and civic skills. Students collected information from residents, village officials, waste-management volunteers, and program administrators. They then compared different accounts, classified evidence, and evaluated alternative explanations. These activities required inquiry, critical thinking, communication, and collaborative decision-making. Such competencies are central to democratic participation because citizens must be able to assess information, recognize conflicting interests, and justify public decisions with evidence (Torney-Purta et al., 2015). The preparation of policy portfolios further strengthened this process by requiring students to transform field findings into structured and defensible recommendations.

The findings also indicate the development of civic dispositions, particularly empathy, environmental responsibility, openness to different perspectives, and willingness to contribute to collective problem-solving. Direct interaction with community members enabled students to understand that residents and program administrators faced different constraints. This experience discouraged simplistic judgments and supported a more reflective form of citizenship. Instead of viewing resistant residents solely as irresponsible, students considered how service quality, domestic workload, economic interests, communication failures, and distrust influenced behavior. This

disposition is important because democratic citizenship requires the ability to understand different social positions while still evaluating their consequences for the public good.

The study contributes to the literature by showing that community resistance can function as a productive pedagogical case. Resistance is commonly examined as a barrier to policy implementation, but in Project Citizen it can also become a resource for civic inquiry. A complex and contested issue encourages students to investigate causes, examine power relations, compare perspectives, and propose more responsive policies. However, the educational value of such cases depends on careful teacher facilitation. Teachers must prepare students for ethical fieldwork, guide the evaluation of conflicting evidence, ensure equitable participation in group activities, and connect empirical findings with civic concepts.

Overall, the findings suggest that integrating Project Citizen with case-based learning can make Civic Education more contextual, participatory, and socially relevant. Nevertheless, the present qualitative evidence supports claims about observed learning processes and demonstrated competencies rather than statistically significant improvement. Future studies should combine qualitative evidence with systematic assessment instruments, longitudinal observation, or comparative designs to examine how students' civic competencies change over time.

4. CONCLUSION

This study demonstrates that integrating Project Citizen with case-based learning enabled senior high school students to examine community resistance to the Independent Waste Village Program as an authentic civic issue and to connect Civic Education concepts with real environmental governance problems. Through classroom discussions, field observations, stakeholder interviews, collaborative analysis, portfolio development, and policy presentations, students identified several forms of resistance, including non-participation, token compliance, fee avoidance, alternative waste disposal, public skepticism, and uneven participation across neighborhoods. They also interpreted these responses as being influenced by service reliability, economic considerations, limited communication, perceived unfairness, and public distrust. The learning process provided opportunities for students to demonstrate civic knowledge, inquiry and communication skills, collaborative problem-solving, evidence-based reasoning, environmental responsibility, empathy, and willingness to participate in collective action. However, this study was limited by its qualitative single-case design, its focus on one learning context, the absence of standardized measures of civic competency development, and incomplete methodological information regarding the number of participants, duration of implementation, and interview procedures. Future research should involve more diverse student groups, compare Project Citizen with other instructional approaches, employ longitudinal or mixed-method designs, and use validated assessment instruments to examine the development of students' civic competencies more systematically over time.

REFERENCES

- Agrawal, A. (2018). *Environmentality: Technologies of government and the making of subjects*. Duke University Press.
- Ansell, C., & Gash, A. (2008). Collaborative governance in theory and practice. *Journal of Public Administration Research and Theory*, 18(4), 543–571. <https://doi.org/10.1093/jopart/mum032>
- Atherton, H. (2000). We are the people: Project Citizen. In S. Mann & J. J. Patrick (Eds.), *Education for civic engagement in democracy: Service learning and other promising practices*. ERIC.
- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Learning Policy Institute.
- Fullan, M. (2016). *The new meaning of educational change* (5th ed.). Teachers College Press.
- Kalpikawati, I. A., & Pinaria, N. W. C. (2023). Partisipasi masyarakat lokal dalam pengelolaan sampah berbasis sumber mendukung desa wisata berkelanjutan (Studi kasus Desa Wisata Taro, Bali). *Jurnal Ilmiah Pariwisata*, 28(1), 50–68. <https://doi.org/10.30647/jip.v28i1.1676>

- Kamore, Y., Lobo, F. A., & Kleden, M. A. (2024). Community participation in waste management and its inhibiting factors in Fatululi Village, Kupang City. *Journal of Environmental Management and Policy*, 12(2), 85–98.
- Kerr, D. (2016). *Citizenship education and learning democracy*. Cambridge University Press.
- Nabila, R., Suryani, L., & Prakoso, A. (2024). Socio-cultural and political determinants of community resistance to village-based waste management programs. *Journal of Rural and Environmental Studies*, 9(2), 101–115.
- Nurhidayat, N., Nurmandi, A., & Congge, U. (2024). Bridging the digital divide: Analyzing public participation in Indonesia's e-government through the e-participation index. *Otoritas: Jurnal Ilmu Pemerintahan*, 14(3), 201–218.
- Ostrom, E. (2015). *Governing the commons: The evolution of institutions for collective action*. Cambridge University Press.
- Pawitan, G., Lesmono, D., Aritonang, K., & Diyanah, M. C. (2025). Empowering rural communities through strengthening village-owned enterprises (BUMDes) for sustainable socioeconomic development: A case study of Mekarsari Village, Garut Regency. *Society*, 13(1), 256–274.
- Pretty, J., & Smith, D. (2019). Social capital in biodiversity conservation and management. *Conservation Biology*, 33(1), 3–14.
- Sugara, R., & Rahayu, F. (2023). Penguatan ecological citizenship untuk mewujudkan ketahanan lingkungan melalui gerakan bank sampah (Studi kasus Kampung Sukamulya, Subang). *JETISH: Journal of Education Technology Information Social Sciences and Health*, 2(1), 642–651.
- Sunaryo, S., Pratama, A., & Wijaya, R. (2025). Community participation and sense of ownership in sustainable waste management programs in rural Indonesia. *Journal of Environmental Education and Sustainability*, 7(1), 45–58.
- Sunaryo, S., Pratama, A., & Wijaya, R. (2025). Economic, informational, and social dimensions of community resistance in sustainable waste management initiatives. *Journal of Environmental Education and Sustainability*, 7(1), 45–58.
- Tarigan, H., Santoso, S., & Setiyono, S. (2020). Solid waste management in rural Indonesia: A review of community-based strategies. *Waste Management & Research*, 38(11), 1195–1210.
- Torney-Purta, J., Cabrera, J. C., Roohr, K. C., Liu, O. L., & Rios, J. A. (2015). Assessing civic competency and engagement. *Journal of Educational Psychology*, 107(3), 709–726.
- Trushna, A. (2024). Socio-cultural dynamics of rural waste practices. *Environmental Management Review*.
- Woolcock, M., & Narayan, D. (2017). Social capital: Implications for development theory. *World Bank Research Observer*, 32(2), 227–245.
- Yanto, P., Jumana, & Sutoto (2024). Analysis of e-participation in public policy implementation in Indonesia. *Journal of Public Administration and Governance*, 9(1), 34–49.