Mobile Civic Education: A Novel Public Administration Model for Strengthening Democratic Literacy among Indigenous Communities in the Philippines

Grace Meroflor Lantajo

Correspondence: Grace Meroflor Lantajo, College of Development Management, University of Southeastern Philippines, Davao City, Philippines.

Abstract

Democratic backsliding and disinformation weaken citizen competence in fragile democracies, yet civic education for adults in indigenous communities remains rare. This study tested a Mobile Civic Education (MCE) model that treated civic education as a mobile public administration extension service for Maranao communities in Lanao del Norte and Lanao del Sur, Philippines. A quasi-experimental mixed methods design compared eight intervention barangays that received four MCE sessions with eight comparison barangays that received usual civic exposure and delayed rollout. Respondents (n = 392) completed measures of civic knowledge, internal political efficacy, and civic participatory intent before and after the intervention, complemented by focus groups and informant interviews. At baseline, groups were similar on demographic characteristics and democratic literacy. At post test, intervention barangays showed larger gains in civic knowledge, internal political efficacy, and civic participatory intent. Time by group interactions were significant for all outcomes. Qualitative themes described clearer understanding of government and rights, greater confidence to speak in public, and the MCE educator as a trusted bridge between state and Adat leadership. Findings suggestthat mobile, culturally anchored civic extension can raise democratic literacy in politically peripheral Indigenous communities.

Keywords: mobile civic education, democratic literacy, public administration, indigenous communities

1. Introduction

Democracy now faces a sustained global decline. Recent assessments report regression in key democratic indicators in more than half of countries since 2020, with sharp drops in press freedom, credible elections, and public confidence in institutions (International Institute for Democracy and Electoral Assistance [International IDEA], 2025). Disinformation, polarization, and targeted attacks on independent media weaken citizens' capacity to evaluate public choices and to hold leaders accountable (West, 2025). Democracy support actors now emphasize citizen resilience and civic competence, not only institutional reform, as central strategies for democratic renewal (International IDEA, 2017, 2025).

Within this environment, civic education re-emerges as a core function of the state. Contemporary work defines civic or democratic literacy as a composite of civic knowledge, political efficacy, and participatory intent that enables citizens to understand institutions, to trust their own capacity to influence collective decisions, and to act in both electoral and non-electoral arenas (Mahilum, 2025; Prats & Gonzalez, 2025; Schulz, 2005). Studies in the Philippines and internationally show that higher civic knowledge and political efficacy predict stronger willingness to participate in public affairs (Cadelina, 2024; Levy, 2013; Solhaug, 2006). However, mainstream Public Administration (PA) still tends to frame its mandate in terms of efficient service delivery and compliance rather than the systematic cultivation of democratic literacy among citizens, especially adults outside formal education systems.

The Philippine case illustrates this misalignment. The country retains regular elections and an active civil society, yet research describes a dynastic democracy in which a small number of political families dominate elective positions at national and local levels (Mendoza & Beja, 2020; Tadem, 2016). Political dynasties and clientelistic networks shape access to state resources and blur the line between public office and private interest (Anastacio, 2023; Latiph, 2014; Hutchcroft, 2017). These structures weaken programmatic party competition and encourage voters to rely on patron-provided information rather than independent civic sources. Parallel analyses document the strategic use of social media disinformation to reshape historical narratives and normalize strongman politics, which further distorts

public understanding of governance and rights (Ressa, 2021; West, 2025). In such a context, democratic literacy deficits do not simply reflect apathy; they arise from an information environment under the influence of entrenched elites and organized disinformation campaigns.

The twin provinces of Lanao del Norte and Lanao del Sur lie at the intersection of these national trends and a long history of marginalization. The Maranao people, who form the dominant Muslim Indigenous population in these provinces, live in communities where traditional authority and state structures coexist and sometimes compete. Nolasco (2004) describes a sophisticated traditional Maranaw governance system grounded in Adat and the Qur'an, with strong roles for kin-based leaders and sultanates alongside formal local government. More recent work on Maranao leadership in and around Marawi City underscores the role of traditional and religious leaders in dispute resolution, social support, and local peace-building (Wui et al., 2023). At the same time, decades of underinvestment, conflict, and displacement in Muslim Mindanao have produced high poverty levels and weak infrastructure, which limit regular contact with national state institutions and mainstream civic education providers (Busran-Lao, 2005; Philippine Institute for Development Studies, 2023).

This history creates a pronounced informational and political asymmetry. Many Maranao communities receive civic information mainly through local brokers, clan networks, and partisan campaign operations. Studies on civic and political education in the Philippines indicate uneven access to impartial civic content and limited opportunities for deliberation, especially in conflict-affected and rural areas (Adarlo, 2017; Wui, Claudio, Reyes, & Reyes-Carbaja, 2023). Mistrust of the central government, rooted in experiences of militarization, unfulfilled autonomy arrangements, and land disputes, further reduces the credibility of state-led civic messages (Busran-Lao, 2005; Nolasco, 2004). In this setting, low democratic literacy levels among Indigenous adults do not arise from indifference but from systemic exclusion, distorted information flows, and the absence of sustained, culturally grounded civic education.

Standard civic education approaches in the Philippines have only partial reach in this context. K to 12 social studies and civic education courses focus primarily on school-age learners and concentrate on classroom-based methods (Adarlo, 2017; Wui et al., 2023). Existing evaluations show gaps in civic knowledge, civic responsibility, and leadership efficacy even among basic education students in relatively accessible urban schools (Mahilum, 2025; Baril & Mahilum, 2025). Program reviews also describe fragmented treatment of human rights, weak emphasis on critical media literacy, and limited attention to local power structures and local political histories (Rosa-Luxemburg-Stiftung & Ateneo de Manila University, 2023). Sporadic community seminars, barangay orientations, or voter education drives often use generic materials, do not adapt content to Maranao language and norms, and seldom measure changes in democratic literacy among adult participants.

The present study introduces Mobile Civic Education (MCE) as a Public Administration Mobile Extension Service Model that responds to these deficits. Extension practice in agriculture defines extension as a state-supported function that carries knowledge and capacity-building services to communities that otherwise have limited contact with formal institutions (Cook, Satizábal, & Curnow, 2021). Cook et al. (2021) argue for a humanised extension practice that emphasizes relationships, power, and local knowledge, not only technical message transfer. Health systems literature reports similar patterns: mobile health clinics and outreach teams expand access for marginalized populations by bringing services and counselling into communities that lack fixed facilities or trust formal providers (Yu, Hill, Ricks, Bennet, & Oriol, 2017; Malone et al., 2020). These strands of evidence suggest that physically mobile, relational, and context-sensitive extension services can build trust and change behavior where static, center-based models fail.

This study adapts those insights to democratic literacy. MCE refers here not to a digital platform but to a physically mobile civic education unit staffed by educators who travel into Indigenous communities with a structured but locally adaptable curriculum on rights, institutions, and participation. The MCE educator uses the Maranao language, recognizes Adat-based authority structures, and coordinates with both formal local officials and traditional leaders. The unit returns to the same barangays over a defined intervention period, which creates repeated opportunities for discussion, clarification, and feedback. This approach positions the administrative function as a visible, mobile, and dialogical presence in communities that often experience the state as distant or extractive.

The theoretical framing of MCE as a Mobile Extension Service highlights access and trust as central problems for PA in peripheral and post-conflict settings. In Maranao communities, traditional and religious leaders enjoy high social legitimacy (Nolasco, 2004; Wui et al., 2023). When state-linked educators enter these spaces with respect for local norms, they can act as brokers between national institutions and Indigenous citizens. Humanised extension theory indicates that such brokers can open space for joint problem identification, shared interpretation of information, and co-design of responses (Cook et al., 2021). Health outreach research also shows that repeated face-to-face contact in community spaces increases service uptake and shifts attitudes toward public providers (Yu et al., 2017; Malone et al., 2020). By analogy, an MCE educator who maintains a recurring presence inside Maranao barangays may increase civic

knowledge, strengthen beliefs in one's ability to influence governance, and encourage concrete participation in community meetings and electoral processes.

Despite this conceptual promise, the empirical and theoretical literature still shows clear gaps. First, there is scant rigorous evidence on the causal effects of physically mobile extension models on democratic literacy among politically peripheralized Indigenous adults. Existing evaluations of civic and citizenship education emphasize classroom-based programs, school-community partnerships, or digital media interventions, and rarely examine mobile units that target adult voters in remote Indigenous areas (Martini et al., 2023; Mahilum, 2025; Rosa-Luxemburg-Stiftung & Ateneo de Manila University, 2023). Second, extension theory and practice seldom address abstract civic capacities such as constitutional literacy, rights consciousness, or political efficacy, even though extension now serves as a major vehicle for state-society engagement in rural development and health (Cook et al., 2021). Third, democracy support literature repeatedly calls for mixed-methods evaluations that trace mechanisms of change and capture the perspectives of marginalized groups, yet few such studies focus on Muslim Indigenous populations in the Philippine south (Prats & Gonzalez, 2025; Alscher et al., 2025).

Against this backdrop, the present study pursues a specific objective. It evaluates the efficacy of Mobile Civic Education units, conceptualized as a Public Administration Mobile Extension Service Model, for the strengthening of democratic literacy among Maranao communities in Lanao del Norte and Lanao del Sur. Democratic literacy in this study includes civic knowledge of institutions and rights, internal political efficacy, and intent to participate in electoral and community governance. The study uses a mixed-methods design that compares pre-intervention and post-intervention scores among MCE participants and complements this with qualitative accounts from community members and MCE educators. The analysis examines whether a physically mobile, culturally grounded extension service can raise democratic literacy in politically peripheral Indigenous communities and clarifies how the presence, practice, and relational work of the MCE educator influence trust, understanding, and willingness to engage in democratic governance.

2. Method

2.1 Research Design

The study used a quasi-experimental mixed-methods design with non-equivalent comparison groups. The quantitative strand had priority and followed a pretest–posttest structure that compared Mobile Civic Education (MCE) barangays with comparison barangays. Quantitative data measured changes in democratic literacy after exposure to the MCE intervention. Qualitative data explained how the intervention operated within Maranao Indigenous communities and how participants experienced the MCE educator and the mobile unit.

The qualitative component followed an explanatory sequential approach. Preliminary quantitative results guided the selection of sites and participants for interviews and focus group discussions, so that the qualitative findings clarified mechanisms of change, contextual influences, and reasons for variation in outcomes.

2.2 Study Setting

The study took place in selected Maranao barangays in Lanao del Norte and Lanao del Sur in the southern Philippines. These barangays shared three features. They had predominantly Maranao Indigenous populations. They had limited or no access to sustained civic education efforts beyond sporadic voter information campaigns. They operated under a governance landscape where traditional authority based on Adat and Islamic leadership coexisted with formal barangay and municipal structures.

The researcher identified candidate barangays in consultation with provincial and municipal officials, Indigenous leaders, and civil society partners. The selection process considered security conditions, accessibility for repeated field visits, and openness of community leaders to host an external civic education intervention.

2.3 Population, Inclusion Criteria, and Sampling

The target population consisted of adult Maranao residents who held, or could hold, political rights as local citizens. Participants qualified for inclusion if they self-identified as Maranao, were at least 18 years old, had resided in the barangay for at least two consecutive years, were eligible to vote in local or national elections, and were able to provide informed consent. Individuals with severe cognitive or communication impairment that prevented meaningful participation, and those who worked as part of the MCE implementation staff, were excluded.

Barangays served as the primary sampling units. Within each province, the researcher formed matched pairs of barangays based on population size, poverty profile, distance to municipal centers, and recent exposure to civic or voter education activities. Within each pair, one barangay received the MCE intervention during the study period and the other served as a comparison site that received only usual civic information and a delayed MCE rollout after data

collection.

Within each barangay, the researcher used systematic household sampling. Enumerators started from a central point, followed a pre-defined walking route, and invited one eligible adult per household. When more than one adult met the criteria, the enumerator selected the respondent through a simple random method such as a Kish-style grid.

The study aimed to include about 8 intervention barangays and 8 comparison barangays, with roughly 25 to 30 respondents in each barangay. This plan yielded a baseline sample of approximately 400 to 480 participants, which was sufficient for detecting medium effects in clustered pretest–posttest comparisons under standard assumptions for social intervention research.

2.4 Mobile Civic Education (MCE) Intervention

The MCE intervention functioned as a physically mobile public administration extension service that brought civic education directly into Indigenous communities. Each MCE unit consisted of one lead educator and one local assistant. The lead educator was fluent in Maranao and Filipino, had training in civic education, and had prior exposure to Maranao norms and Adat-based practices. The local assistant came from the barangay and supported mobilization, translation nuances, and liaison with local leaders.

The curriculum focused on three domains of democratic literacy: civic knowledge, internal political efficacy, and civic participatory intent. Civic knowledge covered the structure and functions of local and national government, the nature of elections, basic constitutional rights, and accountability mechanisms. The design drew on the domains set out in the International Civic and Citizenship Education Study (ICCS) framework and adapted these to the Philippine and Maranao context. Internal political efficacy addressed a person's belief in their own capacity to understand politics, discuss public issues, and influence collective decisions. Civic participatory intent addressed planned participation in barangay assemblies, community consultations, voting, and peaceful collective action.

Each intervention barangay received a cycle of four structured group sessions, each lasting about two hours. Sessions took place at intervals of roughly two weeks. The MCE educator used short inputs, question–and–answer segments, small-group discussions, scenario-based exercises, and reflection activities on local political experiences. Examples included practice reading of sample ballots, mock barangay meetings, and guided discussions of recent governance issues.

The curriculum underwent cultural adaptation. The educator delivered content in Maranao and incorporated examples from Maranao history, traditional conflict resolution, and local governance practices. References to Adat and Islamic teachings on justice and leadership framed discussions on rights and responsibilities. Before the first session, the researcher met with barangay officials, traditional leaders, and religious leaders to explain the content, clarify that the intervention did not support any party or candidate, and secure their consent and cooperation.

To promote implementation fidelity, the researcher developed detailed manuals for each session that listed objectives, key messages, and step-by-step activities. MCE educators attended a three-day training workshop that covered the curriculum, participatory pedagogies, ethical conduct, and coordination with data collection. Field supervisors observed a subset of sessions and completed fidelity checklists that documented whether the educator covered the planned topics, observed participatory methods, and created an inclusive environment for women, men, and youth. Analysis of the field supervisors' fidelity checklists indicated high adherence to the protocol, with educators completing 94% of the planned curriculum activities across all intervention sites. Deviations were minor and mostly involved extending discussion times for local anecdotes.

Comparison barangays continued with their usual exposure to information from local government, religious gatherings, and media. They did not receive MCE sessions until after the post-test stage, which helped maintain an ethical commitment to provide the intervention while preserving the comparison during the study period.

2.5 Quantitative Measures

2.5.1 Democratic Literacy

Democratic literacy served as the primary outcome. It consisted of three components: civic knowledge, internal political efficacy, and civic participatory intent. The study used a composite tool called the Democratic Literacy Questionnaire (DLQ) that combined a civic knowledge test and two standardized scales.

Civic knowledge was measured through a 20-item multiple-choice test. The items drew on released ICCS civic knowledge items and related civics assessment items, then underwent adaptation to the Philippine setting and to adult respondents. The test covered institutions and processes of government, rights and duties of citizens, and interpretation of short political materials such as barangay notices and campaign leaflets. Each item presented four options with one correct answer. The researcher asked help from a language expert to translate items into Maranao, backtranslated them

into English, and conducted cognitive interviews with small groups of Maranao adults in a non-study barangay. Items that caused confusion or persistent misinterpretation were revised or removed. The total score ranged from 0 to 20.

Internal political efficacy was measured with the four-item Internal Political Efficacy scale used in the American National Election Study and widely adopted in comparative work (Niemi, Craig, & Mattei, 1991). Items assessed agreement with statements about personal understanding of politics and confidence in one's ability to participate effectively. The study used a five-point Likert response format from strongly disagree to strongly agree. A bilingual panel translated items into Maranao, a separate panel back-translated them, and discrepancies were resolved through discussion. A pilot test in a non-study barangay provided evidence on internal consistency and factor structure. The sum of item scores formed the internal efficacy index, with higher scores indicating stronger internal political efficacy.

Civic participatory intent was measured with items adapted from the Civic Engagement Scale (Doolittle & Faul, 2013). The study selected and reworded items to focus on intended participation rather than past behavior. Items asked respondents how likely they were, in the next 12 months, to attend barangay assemblies, join community consultations, vote in upcoming elections if eligible, and support peaceful campaigns or petitions on community issues. Each item used a five-point response scale from very unlikely to very likely. The researcher adapted wording to local practices and then tested comprehension in cognitive interviews. The sum of item scores formed the participatory intent index.

2.5.2 Qualitative Instruments

Three qualitative instruments supported the explanatory component. First, a semi-structured interview guide for individual MCE participants explored perceived changes in understanding of government and rights, confidence to express views in public, trust in different authorities, and willingness to join community decisions after the intervention. Second, a focus group discussion guide covered community political experiences, perceptions of both traditional and state authorities, reactions to specific MCE activities, and perceived changes in household or community conversations about politics. Separate group discussions with men, women, and youth were organized when feasible. Third, a key informant guide for barangay officials, traditional leaders, and religious leaders gathered their observations of the MCE sessions, perceived changes in citizen engagement or behavior, and views on the compatibility of the MCE approach with Adat and existing local governance arrangements. All guides used open-ended questions, with optional probes that allowed participants to raise issues that they considered important.

2.6 Data Collection Procedures

The data collection process unfolded in several stages. In the preparatory stage, the researcher secured approval from a recognized ethics committee, obtained endorsements from provincial and municipal officials, and held entry meetings with barangay councils and traditional and religious leaders. These meetings explained the purpose of the study, clarified that it did not support any political party or candidate, and outlined the schedule of baseline surveys and MCE sessions.

The researcher then trained MCE educators and enumerators together. The training covered research ethics, informed consent procedures, administration of the DLQ, use of neutral and non-leading language, maintenance of privacy during interviews, and strategies for de-escalating sensitive discussions. The training also included practice sessions for delivering the MCE curriculum and for managing group dynamics. All instruments were pre-tested in a barangay outside the main sample, and the researcher revised wording and flow based on observed difficulties.

Baseline data collection took place about two to three weeks before the first MCE session. Enumerators visited sampled households, presented the information sheet in Maranao or Filipino, obtained written informed consent, and administered the DLQ and socio-demographic questions in face-to-face interviews. Respondents in both intervention and comparison barangays completed the same baseline questionnaire. Each respondent received a unique identification code that allowed linkage between pretest and posttest data without recording names in the analytical files.

After completion of the baseline survey, MCE educators began the sequence of four civic education sessions in the intervention barangays. Field supervisors visited selected sessions to observe implementation, complete fidelity checklists, and record contextual notes on attendance, participation, interruptions, and concurrent political events. Attendance sheets documented which baseline respondents attended each session and how many sessions each respondent completed.

Post-intervention data collection took place about two weeks after the final MCE session. The same DLQ and socio-demographic instruments were administered to the same respondents in both intervention and comparison barangays using the unique identification codes as reference. Reasons for non-response at post-test, such as migration, illness, or refusal, were recorded in a tracking sheet. The study did not recruit replacement respondents for attrition cases, so the main analysis relied on paired pretest and posttest data.

Qualitative data collection followed the initial inspection of quantitative results. The researcher selected a subset of

intervention barangays that showed larger gains and more modest gains in democratic literacy, together with a small number of comparison barangays. Within these sites, the researcher invited DLQ participants who had attended at least two MCE sessions to join focus group discussions and individual interviews. Barangay officials and traditional and religious leaders from the same communities took part in key informant interviews. All sessions took place in private or semi-private settings, with separate groups for women and youth when required by local norms. Discussions were audio-recorded with consent, transcribed verbatim, and translated into English.

2.7 Data Analysis

2.7.1 Quantitative Analysis

The analysis used descriptive statistics to summarize democratic literacy. Means, standard deviations, and score distributions for civic knowledge, internal political efficacy, and participatory intent were computed at baseline and post-test. These values were presented separately for the intervention and comparison groups to show initial levels and observed changes after the MCE intervention.

To estimate the effect of the intervention while accounting for the nested structure of the data (respondents clustered within barangays), the analysis employed Linear Mixed Models (LMM). The models included time (pre versus post), group (intervention versus comparison), and the interaction between time and group as fixed effects, with random intercepts for barangays to correct for intraclass correlation. Effect sizes (Cohen's *d*) were calculated for the between-group differences at post-test to quantify the magnitude of the intervention's impact.

2.7.2 Qualitative Analysis

Qualitative data analysis followed reflexive thematic analysis. Transcripts and field notes were imported into qualitative analysis software. The researcher read all transcripts in full and produced initial codes that captured both anticipated topics from the conceptual framework and unexpected themes raised by participants. The researcher then developed a shared codebook. The researcher coded a subset of transcripts independently and compared coding decisions. Discrepancies led to refinement of code definitions and examples. After agreement on the codebook, the researcher applied it to the entire dataset. Analytic memos documented emerging patterns within and across barangays. Themes focused on perceived changes in civic knowledge and understanding of rights, shifts in confidence to speak in meetings or to question authority, changes in perceptions of state and traditional leaders, and concrete stories of participation after the MCE sessions. For leaders, the analysis examined their accounts of citizen engagement, any changes in community interactions they observed, and their views on how the MCE model fit or clashed with local governance practices.

2.7.3 Integration Of Quantitative and Qualitative Strands

Integration of findings took place after separate analyses of the quantitative and qualitative data. The researcher constructed joint displays that aligned quantitative changes in democratic literacy scores with qualitative themes for each selected barangay. Barangays were grouped according to the size of observed gains in democratic literacy. Within each group, the researcher compared narratives about trust, relevance of content, quality of interaction with the MCE educator, and the stance of traditional and formal leaders. This integrative step allowed the study to link patterns in scores with concrete accounts of how MCE sessions had been received and how they had influenced everyday political talk and action. The final interpretation drew on both strands to answer whether and how a mobile, culturally grounded extension model in public administration strengthened democratic literacy among Maranao Indigenous communities.

2.8 Ethical Considerations

All procedures conformed to the principles of respect for persons, beneficence, and justice. In each barangay, the researcher first sought permission from the barangay council and from traditional and religious leaders. Enumerators then approached households and explained the study in Maranao or Filipino. Information included the purpose of the research, the voluntary nature of participation, the right to decline or withdraw, expected time for the interview, possible discomfort from discussing political matters, and safeguards for confidentiality.

Respondents who agreed signed a written informed consent form. For those with limited literacy, enumerators read the form aloud and recorded consent through a thumbprint with a witness signature. No monetary incentives were provided, although light refreshments were offered during group sessions.

All paper forms and attendance sheets were stored in locked cabinets. Electronic datasets were password protected, contained only identification codes rather than names, and were accessible only to the core research researcher. Audio recordings and transcripts were stored separately from the linkage file that contained the list of names and codes.

The researcher recognized that political topics could trigger tension or concern in conflict-affected areas. Enumerators and educators received training on neutral language, avoidance of partisan statements, and strategies for redirecting discussions that drifted toward candidate endorsement. The curriculum did not promote any specific candidate or party and focused on

rights, institutions, and procedural aspects of democratic governance. In the rare instances where participants showed distress when recalling past political violence or conflict, facilitators paused the discussion, offered time for rest, and, when appropriate, referred participants to local support resources identified during the preparatory phase.

3. Results

3.1 Participant Profile

At baseline, 432 adults from 16 barangays took part in the survey. At post-test, 392 respondents completed the second survey, which corresponded to a follow-up rate of about 90 percent. The analytic sample included 196 respondents in the intervention group and 196 in the comparison group. Attrition occurred mainly because of temporary work migration and absence during the follow-up visit and did not concentrate in a single group. The two groups showed similar socio-demographic profiles. Table 1 summarizes the main characteristics.

Table 1. Socio-demographic profile of participants (analytic sample, n = 392).

Characteristic	Intervention (n = 196)	Comparison (n = 196)	Total (n = 392)
Age in years, mean (SD)	36.9 (11.2)	37.4 (10.9)	37.1 (11.0)
Sex, n (%)			
Male	95 (48.5)	98 (50.0)	193 (49.2)
Female	101 (51.5)	98 (50.0)	199 (50.8)
Highest education, n (%)			
Elementary or less	28 (14.3)	30 (15.3)	58 (14.8)
High school (junior/senior)	122 (62.2)	118 (60.2)	240 (61.2)
Some college or higher	46 (23.5)	48 (24.5)	94 (24.0)
Voted at least once, n (%)			
Yes	164 (83.7)	160 (81.6)	324 (82.7)
No	32 (16.3)	36 (18.4)	68 (17.3)

Baseline values for age, sex, education, and voting history were closely comparable across groups, which supported the planned comparison of change over time.

3.2 Quantitative Results on Democratic Literacy

The analysis focused on three components of democratic literacy: civic knowledge, internal political efficacy, and civic participatory intent. Table 2 presents mean scores and standard deviations at baseline and post-test, by group.

Table 2. Mean scores (standard deviations) for democratic literacy at baseline and post-test.

Outcome	Time	Intervention (n = 196)	Comparison (n = 196)
Civic knowledge (0–20)	Baseline	9.5 (3.1)	9.3 (3.0)
	Post-test	13.4 (3.3)	10.2 (3.2)
Internal political efficacy (4–20)	Baseline	11.6 (2.5)	11.4 (2.4)
	Post-test	14.1 (2.6)	12.0 (2.5)
Civic participatory intent (5–25)	Baseline	15.2 (3.3)	15.1 (3.4)
	Post-test	18.1 (3.4)	16.0 (3.5)

For civic knowledge, both groups started from almost the same average level. The intervention group increased from 9.5 to 13.4, while the comparison group increased from 9.3 to 10.2. The intervention group therefore gained about 3.9 points, while the comparison group gained about 0.9 points. For internal political efficacy, the intervention group improved from 11.6 to 14.1. The comparison group improved from 11.4 to 12.0. The pattern again showed similar starting levels but a clearer rise in the intervention barangays. For civic participatory intent, the intervention group moved from 15.2 to 18.1. The comparison group moved from 15.1 to 16.0. The change in the intervention barangays was about 3 points, while the change in the comparison barangays was about 0.9 points.

Simple models that included time (baseline versus post-test), group (intervention versus comparison), and the time by group interaction confirmed these patterns. For civic knowledge, the time by group interaction was statistically significant ($p < .001$). The intervention group showed a substantial advantage at post-test, with a large effect size (Cohen's d = 0.98). For internal political efficacy, the interaction was also significant ($p < .001$), showing a strong positive effect (Cohen's d = 0.82). Finally, for civic participatory intent, the interaction remained significant ($p = .002$), with a moderate-to-large effect size (Cohen's d = 0.61). These metrics indicate that the MCE intervention produced practical, observable differences beyond statistical significance.

3.3 Qualitative Results

Thematic analysis of interviews, focus group discussions, and key informant interviews produced four main themes that illuminated the numeric gains: clearer maps of government and rights, new confidence to speak, the educator as a trusted bridge, and small but concrete shifts in participation.

3.3.1 Clearer Map of Government and Rights

Participants in intervention barangays often described a shift from vague ideas about "government" to a more concrete picture of specific offices, duties, and channels for complaint.

One woman noted: *"Before the MCE sessions, I only knew 'mayor' and 'barangay captain.' Now I can tell which office handles health, which office handles roads, and that we have a right to ask why a project did not push through."* (P17, intervention barangay, female, 34 years)

Another respondent stated: *"When we hear 'budget' on the radio, it sounds far from us. After the sessions, I understood that part of that money should really reach our barangay and we can ask about it in a proper way."* (P09, intervention barangay, male, 42 years)

These accounts matched the observed increase in civic knowledge scores in Table 2.

3.3.2 New Confidence to Speak and Ask Questions

Many participants linked the sessions to a change in how they viewed their own voice in public settings. Women and younger adults emphasized this shift.

A young woman explained: *"In past meetings, I stayed at the back. I listened only. After the last MCE meeting, I tried to ask one question about the water project. My heart was fast, but I managed to speak. Now I know that I am allowed to ask."* (P32, intervention barangay, female, 22 years)

A male participant shared: "*I used to think politics is only for leaders. The teacher said our questions matter. When we had a barangay assembly, I raised my hand about the streetlights. It was my first time to do that.*" (P44, intervention barangay, male, 38 years)

These narratives helped explain the stronger gains in internal political efficacy among the intervention group.

3.3.3 MCE Educator as Bridge Between State and Adat Leadership

Participants and leaders both emphasized that the educator's language, manner, and respect for Maranao customs affected acceptance of the sessions. The educator was often described as a "bridge" between formal government and Indigenous structures.

One elder commented: "*We listened because the teacher spoke Maranao and quoted our own sayings. He did not insult our adat. He showed how government laws and our ways can both protect the poor.*" (K05, intervention barangay, male elder)

A barangay official noted: "*People usually feel afraid when someone from 'outside' talks about politics. This time, they were relaxed because the teacher greeted them properly, sat with the imam and the elders, and explained that the lessons are for everyone, not for any candidate.*" (K11, intervention barangay, barangay councilor, male)

This theme showed how the mobile extension model gained trust in communities that often viewed state-linked actors with suspicion.

3.3.4 Small but Concrete Steps Toward Participation

Participants did not describe sudden dramatic changes. They spoke instead about small actions that marked a shift in behavior, such as attending meetings, staying until the end, or discussing issues at home.

One participant reflected: "*Before, if there was an assembly, I went only for the relief goods. Now I stay and listen. I tell my husband what they discussed, and we talk if we agree or not.*" (P21, intervention barangay, female, 29 years)

A youth participant shared: "*After the sessions, we started to talk about the barangay projects in our group chat. We asked each other if we should attend the next consultation, not just leave the decision to the older people.*" (P40, intervention barangay, male, 19 years)

By contrast, participants in comparison barangays described interest in politics but gave fewer concrete examples of new actions. Their comments often focused on frustration with national issues rather than on local steps they had taken.

3.4 Integrated Interpretation

The joint reading of quantitative and qualitative strands produced a coherent picture of the effects of the MCE model. Barangays with the largest gains in civic knowledge scores also produced the richest qualitative accounts of clearer understanding of government roles, rights, and procedures. Participants from these barangays could name specific offices, cite examples from the session materials, and describe how they applied this knowledge when they heard about projects or budgets.

Barangays that showed higher gains in internal political efficacy contained more narratives about speaking in meetings,

asking questions, or initiating conversations about public issues at home. These stories illustrated how the numeric rise in efficacy translated into visible, though modest, changes in behavior.

Across intervention sites, the recurring presence of a Maranao MCE educator who respected Adat and coordinated with elders emerged as a consistent mechanism. Residents described the educator as someone who brought "government knowledge" into the community while honoring local authority. This pattern supported the idea that a mobile, culturally grounded public administration extension service could strengthen democratic literacy in historically marginalized Indigenous communities.

However, implementation was not uniform. Variation in outcomes appeared linked to pre-existing local dynamics; fidelity data and field notes revealed that in two barangays with history of intense clan feuding, the MCE educator had to dedicate significantly more time to trust-building, resulting in rushed coverage of the 'participatory intent' module. This suggests that while the curriculum is standardized, its reception is mediated by the specific micropolitical context of the barangay.

4. Discussion

This study examined whether a physically mobile public administration extension model could strengthen democratic literacy among Maranao Indigenous communities in Lanao del Norte and Lanao del Sur. The significant time by group interaction for all three outcomes showed that civic knowledge, internal political efficacy, and civic participatory intent increased more in intervention barangays than in comparison barangays. These results supported the core proposition that Mobile Civic Education (MCE) units can function as an effective administrative instrument for reaching politically peripheral Indigenous citizens in a context marked by democratic erosion and disinformation (Bermeo, 2016; Tucker, Theocharis, Roberts, & Barberá, 2017).

The most pronounced gains appeared in civic knowledge. Participants in intervention barangays moved from low baseline scores to substantially higher post-test levels, while comparison barangays showed only modest improvement. This pattern aligned with international evidence that structured civic instruction, when systematic and sustained, can raise knowledge about institutions, rights, and procedures (Campbell, Levinson, & Hess, 2012; Campbell, 2019). The content of the MCE curriculum closely reflected the domains of civic knowledge embedded in the International Civic and Citizenship Education Study (ICCS) framework, particularly knowledge of institutions, laws, and critical interpretation of civic texts (Schulz, Carstens, Losito, & Fraillon, 2016; Schulz, Ainley, Fraillon, Losito, & Agrusti, 2018). However, unlike most ICCS-based work, which has focused on school students in formal education systems, this study targeted adult Indigenous citizens in conflict-affected rural barangays, where sustained civic education initiatives have been scarce. In that sense, the magnitude and direction of knowledge gains extended the civic education literature to a population that sits at the margins of both the state and the research record.

Internal political efficacy also improved more in intervention barangays than in comparison barangays. The internal political efficacy scale, adapted from the American National Election Study (Niemi, Craig, & Mattei, 1991), captured changes in participants' belief that they could understand politics and contribute meaningfully to public decisions. Prior research has demonstrated that internal efficacy is a key psychological resource that links civic knowledge to both intended and actual participation (Campbell, 2019; Schulz et al., 2018). The present findings suggested that relatively short, repeated MCE sessions were sufficient to shift self-perceptions from passive spectatorship toward a more agentic stance, even in a setting where clientelism, political dynasties, and structural violence have long undermined citizen confidence (Busran-Lao, 2005; Cariño, 2012).

Gains in civic participatory intent were more modest than the gains in knowledge and efficacy but remained clearly larger in intervention barangays than in comparison barangays. Items adapted from the Civic Engagement Scale focused on future willingness to attend barangay assemblies, join consultations, vote, and support peaceful collective action (Doolittle & Faul, 2013). The observed pattern matched broader findings that dispositions to participate tend to change more slowly than knowledge, especially where participation carries social or political risks (Campbell, 2019). Qualitative accounts of first-time attendance at assemblies, new efforts to ask questions during meetings, and more frequent household discussions about public issues indicated that these shifts in intent had already begun to translate into small but concrete acts of engagement, which may not be fully captured by a single post-test measurement point.

The qualitative themes helped explain how the MCE model produced these outcomes. Participants described the sessions as the first space where they could ask detailed questions about government processes without fear of ridicule, partisan labeling, or religious tension. Many emphasized that the use of Maranao language, references to Adat, and examples drawn from everyday concerns made abstract constitutional concepts easier to understand. These narratives were consistent with research on Indigenous and culture-based education in the Philippines, which has shown that curriculum anchored in local language and cultural practice increases engagement and comprehension among Indigenous learners (Cerdeña, 2008; Mercado, 2021). In this study, participants linked their clearer understanding of offices, budgets, and rights directly to the MCE activities that used sample ballots, barangay notices, and locally relevant scenarios, suggesting that the combination of cultural relevance and concrete materials was critical.

The role of trust and relational dynamics was central. Participants repeatedly portrayed the MCE educator as a "bridge" between state institutions and Indigenous authorities. The educator's willingness to sit with elders, to open and close sessions in ways that respected local norms, and to avoid partisan language appeared to counter the deep mistrust produced by decades of marginalization and conflict in Lanao (Busran-Lao, 2005; Philippine Human Development Network, 2005). This finding resonated with critiques of conventional extension models, which argue that outreach fails when it treats communities as passive recipients and ignores the socio-political context in which information is received (Cook, Satizábal, & Curnow, 2021). In contrast, the MCE model in this study followed a more "humanising" approach to extension, where the educator built relationships over multiple visits and positioned citizens as co-interpreters of law and policy rather than mere audiences.

The mobile nature of the service also mattered. The MCE units traveled into remote sitios and community venues where government officials and NGOs seldom held formal civic sessions. This design echoed patterns in the mobile health literature, where mobile clinics have expanded access and built trust among underserved populations by bringing services directly to them and reducing logistical barriers such as transport cost and time (Malone et al., 2020). Evidence from mobile health programs suggests that repeated visits, visible responsiveness, and local staff are key to acceptance and sustained use (Malone et al., 2020; Singh et al., 2022). This study suggested that similar principles can be applied to public administration in the sphere of civic education: when the state "visits" communities through a regular, face-to-face extension unit that is clearly separated from election campaigns, citizens begin to see government as more proximate and responsive.

At the same time, the MCE intervention did not attempt to displace or bypass traditional Maranao authority. Barangay officials, sultans, and religious leaders were informed and consulted before sessions and were sometimes present during discussions. This approach mirrored recommendations from Indigenous rights frameworks that call for state interventions to recognize Indigenous institutions and to align with self-governance structures rather than overwrite them (Cariño, 2012). Evaluations of Indigenous schools and community-based initiatives in Mindanao and other Philippine regions have similarly highlighted the importance of co-designing programs with elders and local organizations to avoid reproducing colonial patterns of imposition (Cerdeña, 2008; Mercado, 2021). In this study, barangays that exhibited larger gains in democratic literacy tended to be those where traditional and formal leaders cooperated with the MCE unit and publicly endorsed the sessions, whereas barangays with more modest gains often carried unresolved factional tensions or ambivalence toward external actors.

The Philippine context of civic education provided an important backdrop to these results. Reviews of civic education programs in the country have noted uneven implementation, outdated materials, and limited capacity to address contemporary challenges such as disinformation and populism (Magno, 2022; Wui, et al., 2023). Much of the practice remains school-based and urban-centered, leaving adults and remote communities with sparse and episodic exposure to critical civic content. The MCE model responded to this gap by treating civic education not only as a curricular task but as a public service delivery function that can be planned, budgeted, and monitored within local governance. In doing so, it aligned with calls to reposition civic education as a core instrument of democratic resilience rather than a peripheral subject in formal schooling (Campbell, 2019; Wui et al., 2023).

More broadly, the findings contributed to ongoing debates about how public administration can respond to democratic backsliding. Scholarship has outlined the ways in which executives and political elites erode checks and balances, manipulate electoral processes, and exploit digital media to weaken accountability (Bermeo, 2016; Tucker et al., 2017). Yet the everyday administrative work of rebuilding democratic literacy in neglected communities has received less attention. By demonstrating that a mobile extension model can measurably increase civic knowledge, internal political efficacy, and participatory intent among Indigenous citizens, this study pointed to a concrete administrative pathway for strengthening democracy from below. Rather than relying exclusively on digital campaigns or mass media, governments can invest in small, mobile units that deliver face-to-face civic education shaped by local language, culture, and power relations.

Finally, the mixed-methods design of this study deepened the policy relevance of the findings. The quantitative analysis established that intervention barangays improved more than comparison barangays across all three democratic literacy indicators, while the qualitative themes explained variation in effect size by highlighting differences in trust, leadership support, and perceptions of neutrality. This integration offered a richer understanding of when and how mobile civic education is likely to succeed, and it generated concrete design lessons for replication, such as the importance of recruiting local assistants, securing visible endorsement from Indigenous leaders, and using materials that invite participants to connect state law with Adat and religious teachings.

A critical question regarding these findings is the sustainability of the observed gains. Educational interventions often exhibit a 'fade-out' effect where knowledge and efficacy decline once the stimulus is removed. While the MCE model successfully activated democratic literacy in the short term, it is unclear if these dispositions will persist without reinforcing administrative contact. Future studies should employ longitudinal designs with follow-ups at 6 and 12 months to determine if the 'mobile' presence needs to be a recurring service rather than a one-off campaign to sustain behavioral changes.

This study had several limitations. The design relied on matched comparison barangays rather than random assignment, follow-up covered only the immediate post-intervention period, and outcomes rested on self-reported knowledge,

attitudes, and intentions rather than long-term behavioral measures. Furthermore, causal inference is limited by the quasi-experimental design. While matching was used to balance the intervention and comparison groups, the lack of random assignment at the individual level means that unobserved confounders such as differences in the charisma of local leaders or pre-existing community cohesiveness could influence the results. Consequently, the findings should be interpreted as strong evidence of the model's potential rather than definitive proof of its isolated impact.

Despite these constraints, the study offered a novel contribution by presenting, to current knowledge, the first empirical test of a mobile civic education extension model in Indigenous communities in the southern Philippines that used standardized democratic literacy instruments, a quasi-experimental pretest–post-test comparison, and integrated thematic analysis. The results showed that public administration can adapt mobile service delivery logics from health and agricultural extension to the domain of democratic literacy, and that this approach can work in ways that center culture, trust, and human relationships rather than technology alone.

4.1 Risks and Scalability

While the MCE model offers a promising tool for democratic renewal, it carries inherent risks and scalability challenges. First, the cost of deploying mobile units (staffing, secure transport, and logistics) is higher than digital or mass-media campaigns, potentially limiting nationwide scale-up. Second, there is a normative risk: while this study utilized a non-partisan curriculum, the same mobile infrastructure could theoretically be co-opted by state actors to disseminate partisan propaganda under the guise of civic education. Institutional safeguards, such as independent oversight of the curriculum and multi-stakeholder monitoring, would be essential prerequisites for adopting this model as a standard public administration service.

Authors contributions

The author confirms sole responsibility for the following: study conception and design, data collection, analysis and interpretation of results, and manuscript preparation. The author has approved the final version of this manuscript.

Competing interests

The author declares that she has no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Obtained.

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The Publication Ethics Committee of the Redfame Publishing.

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No additional data are available.

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