Development of Local Wisdom-Based Learning Modules and Teacher Training for Character Strengthening

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ABSTRACT

Character education remains a pivotal concern in contemporary Indonesian educational contexts, particularly in preserving cultural values amid globalization while fostering moral development in students. This research addresses the urgent need for contextually relevant pedagogical approaches by developing and implementing learning modules based on local wisdom (kearifan lokal) integrated with comprehensive teacher training programs. Employing qualitative methodology through thematic analysis of interview data, observational records, and documentary evidence collected from eight teachers across diverse school settings in Indonesia, this study examines the effectiveness of locally-contextualized learning modules in strengthening character education. The findings reveal that 93.75% of teachers perceived the modules as highly useful, with student character development indicators demonstrating improvements ranging from 29% to 33% across six key character values within a four-month implementation period. Community stakeholder engagement, particularly involving local elders (90% participation) and religious leaders (88% participation), emerged as a crucial supporting factor in implementation success. This research demonstrates that integrating indigenous knowledge with pedagogical training creates sustainable frameworks for character education that honor cultural identity while achieving educational objectives. The results have significant implications for educational policy, teacher professional development, and the preservation of cultural heritage through formal education systems..

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INTRODUCTION

The contemporary landscape of Indonesian education faces multifaceted challenges in an era characterized by rapid technological advancement, cultural pluralism, and unprecedented global interconnectedness. While these developments present opportunities for educational innovation and expanded learning horizons, they simultaneously pose significant threats to the preservation of indigenous knowledge systems and traditional values that have historically anchored the Indonesian society. The erosion of cultural identity among the younger generations, coupled with rising concerns regarding moral and ethical development in educational settings, necessitates urgent pedagogical interventions that meaningfully integrate indigenous wisdom with modern educational frameworks Character education, as a comprehensive educational approach, seeks to cultivate virtues and moral values in students through systematic, coordinated efforts across multiple educational domains. Recognizing this imperative, the Indonesian government established the Character Education Strengthening Program (Penguatan Pendidikan Karakter—PPK) through Presidential Regulation Number 87 of 2017, thereby establishing an institutional framework for character development. However, despite policy-level commitments and programmatic initiatives, implementation challenges persist at school level. Educators frequently encounter difficulties in translating abstract character values into concrete classroom practices, particularly when attempting to integrate culturally specific values into standardized curricula. The disconnect between national curriculum standards and local cultural contexts creates pedagogical tensions that remain inadequately addressed in the current educational literature (Saa, 2024).

Local wisdom, or Kearifan lokal, represents the accumulated knowledge, values, practices, and traditions developed by communities over generations in response to their specific environmental, social, and cultural circumstances. This indigenous knowledge encompasses diverse domains: agricultural practices reflecting ecological understanding, social structures embodying principles of cooperation and hierarchy, spiritual traditions encoding ethical frameworks, artistic expressions communicating cultural identity, and linguistic systems encoding cultural meanings. In the Indonesian context, local wisdom manifests itself through diverse expressions across the archipelago's numerous ethnic groups and regions. Examples include the Javanese concept of budi pekerti (character and inner strength), the Balinese principle of Tri Hita Karana (three causes of well-being), the Sundanese ethic of Silih Asah Silih Asuh (mutual assistance and care) and the Minahasan value of Torang Samua Basudara (we are all siblings). These indigenous frameworks have historically served as primary vehicles for moral education and character formation, transmitting essential values through storytelling, ritual participation, apprenticeship, and community engagement.

However, the modernization of Indonesian education, characterized by the adoption of Western pedagogical models, standardization of curricula, and professionalization of teaching, has progressively marginalized indigenous knowledge systems from formal educational spaces. Teachers trained primarily in theoretical pedagogical frameworks disconnected from local contexts often lack adequate preparation to meaningfully incorporate cultural values into classroom

instruction. This educational trajectory has contributed to several negative consequences: the diminishment of students' cultural consciousness and identity, the perception of indigenous knowledge as irrelevant to formal education, the loss of transmission mechanisms for traditional wisdom, and ultimately, the diminished effectiveness of character education efforts themselves (Vidhiputra, 2025).

Conversely, emerging research evidence increasingly demonstrates that pedagogical approaches incorporating culturally relevant content and perspectives enhance multiple dimensions of student learning outcomes. Studies examining indigenous knowledge-based instruction have revealed positive associations with student engagement, cultural identity development, improved academic achievement, and demonstrated behavioral changes reflecting internalized character values. Furthermore, educators utilizing culturally contextualized teaching materials reported increased professional satisfaction, enhanced classroom dynamics, and stronger connections with students. These findings suggest that integration of local wisdom into formal curricula represents not merely a cultural preservation strategy, but rather a pedagogically sound approach that simultaneously advances character development objectives while preserving indigenous heritage.

The absence of systematically developed and empirically tested learning modules based on local wisdom represents a significant gap in the Indonesian educational landscape. While isolated initiatives and individual teacher efforts exist, the remain fragmented, context-specific, and difficult to replicate or scale. Additionally, teacher preparation for implementing culturally grounded pedagogy remains inadequate across most teacher training institutions and professional development programs. Teachers frequently lack both substantive knowledge of local wisdom in their specific regional contexts and the pedagogical skills necessary to effectively translate such knowledge into classroom learning experiences (Manuel et al., 2025).

This study addresses these interconnected gaps through a comprehensive, systematic approach involving three primary components. First, we developed comprehensive learning modules that were explicitly designed to integrate local wisdom into character education across multiple subject areas and grade levels. These modules, created through participatory processes involving teachers, community leaders, cultural experts, and educational specialists, incorporate authentic local content while maintaining alignment with the national curriculum standards and character education frameworks. Second, we designed and implemented intensive teacher training programs that focused on three interconnected dimensions: deepening teachers' substantive understanding of local wisdom in their specific communities, developing pedagogical competencies to effectively translate cultural knowledge into classroom instruction, and creating support structures for sustained implementation beyond the initial training period. Third, we conducted a systematic qualitative analysis of the implementation processes and outcomes to understand the mechanisms through which local wisdom-based instruction affects teacher practice and student character development, identify facilitating factors and implementation barriers, and generate knowledge regarding scalability and adaptation possibilities.

The theoretical foundation for this study was drawn from multiple intellectual traditions. Constructivist learning theory posits that learners actively construct knowledge through engagement with meaningful content situated in authentic

contexts, suggesting that instruction incorporating familiar cultural content and locally relevant problems creates powerful learning opportunities. Culturally responsive pedagogy emphasizes the need to acknowledge, respect, and incorporate students' cultural backgrounds and perspectives into educational processes, arguing that such integration affirms students identities and enhances learning outcomes. The concept of place-based education highlights the pedagogical value of grounding learning in local communities and environments, enabling students to understand abstract concepts through concrete, proximate examples and to recognize connections between formal learning and lived experience. Indigenous knowledge system frameworks recognize non-Western knowledge traditions as valid, sophisticated, and valuable sources of insight, rejecting hierarchies that position Western scientific and educational approaches as universally superior.

This study contributes to multiple scholarly conversations. Within the field of comparative and international education, it provides empirical evidence regarding the feasibility and effectiveness of integrating indigenous knowledge into formal educational systems in non-Western contexts, contributing to broader debates regarding curriculum decolonization and culturally sustaining pedagogy. Indonesian educational research specifically addresses significant gaps in understanding the mechanisms through which character education produces (or fails to produce) meaningful behavioral change, and it provides practical models for teachers and educational leaders seeking to implement character education more effectively. The literature on teacher professional development demonstrates the importance of substantive content knowledge alongside pedagogical training, and illustrates approaches for bridging the knowing-doing gap that frequently undermines professional development initiatives. Finally, at the educational policy and practice level, it offers actionable recommendations for enhancing character education, supporting teacher development, and creating institutional structures that sustain culturally grounded education.

The research proceeded using a deliberate, phased methodology. During the initial analysis phase, we conducted extensive community consultations and a literature review to identify key character values that require emphasis and local wisdom traditions encoding such values. The subsequent design and development phases involved collaborative module creation with practitioners and cultural experts to ensure both pedagogical rigor and cultural authenticity. Following small-scale pilot testing and refinement, we implemented the modules and training program across eight teachers in multiple school settings, systematically documenting the implementation processes and outcomes through qualitative data collection. Throughout all phases, we maintained acommitment to participatory, culturally respectful research practices that positioned community members and educators as active knowledge producers rather than passive research subjects.

The remainder of this paper is organized as follows. The literature review section synthesizes existing scholarship regarding character education, local wisdom integration, teacher professional development, and qualitative research methodologies, establishing a theoretical and empirical foundation for this work. The research methods section provides comprehensive documentation of the methodology, data collection procedures, sampling, and analytical approaches,

enabling research transparency and replicability. The results section presents thematically organized findings, integrating direct evidence (qualitative data, observational records, numerical syntheses) with participant voices and contextual details. The Discussion section interprets findings within existing scholarship, explores theoretical and practical implications, acknowledges research limitations, and identifies directions for future inquiry. Finally, the conclusion synthesizes the primary findings, articulates the significance of the study, and offers specific recommendations for educational practice and policy.

METHOD

This study employs a qualitative methodology within an interpretive research paradigm. The interpretive paradigm posits that social reality is constructed through human meaning-making processes and that understanding social phenomena requires accessing participants' perspectives, interpretations, and lived experiences. This paradigm proved appropriate for research seeking to understand how teachers and community members experienced, interpreted, and adapted local wisdom-based learning modules and training programs. Rather than testing predetermined hypotheses or measuring variables against standardized metrics, this study aimed to develop a nuanced understanding of implementation processes, facilitating factors, and mechanisms through which the intervention potentially produced observed changes.

Sampling and Participant Selection
This research involved eight teachers across multiple school settings in different Indonesian regions representing diverse ethnic and cultural contexts. Teachers were purposively selected based on several criteria: commitment to character education, willingness to engage in innovation and professional development, teaching experience ranging from five to fifteen years, and representation across different subject areas and grade levels. This sampling approach prioritizes depth of understanding rather than statistical representativeness, consistent with qualitative research conventions. The inclusion of multiple geographic contexts enabled an examination of how local wisdom-based approaches adapted across different regional traditions and community settings. School sites were selected through collaboration with educational authorities and teacher associations, ensuring accessibility while maintaining independence from direct government oversight.

Community participants included local elders, religious leaders, parents, and community leaders in the vicinity of the participating schools. These individuals were identified through consultations with school administrators and community coordinators as recognized holders of cultural knowledge and community representatives. The research involved extensive engagement with these stakeholders, both during the module development phases and throughout implementation, recognizing their expertise and authority regarding authentic local knowledge.

Data Collection Procedures

Data collection occurred over a twelve-month period encompassing three phases: initial community consultation and module development (months 1-3), teacher training and initial implementation (months 4-5), and extended implementation with monitoring and data collection (months 6-12). Multiple data collection methods enable triangulation, research validity and understanding from multiple perspectives.

In-depth interviews: Semi-structured interviews were conducted individually with each of the eight teachers at multiple time points: prior to training (establishing baseline understanding and concerns), immediately following initial training (capturing immediate reactions and perceived learning), at three months post-implementation (examining adaptation processes and emerging challenges), and at completion of the implementation cycle (comprehensive reflection on the overall experience). Each interview lasted approximately 60-90 minutes, employed audio recording with participant consent, and utilized open-ended questioning enabling teachers to fully develop responses. The interview protocols included questions addressing teachers' understanding of local wisdom and character education experiences during training perceived applicability of module content and teaching methodologies to their specific contexts observed student responses and engagement perceived barriers and facilitating factors and recommendations for improvement.

Focus group discussions were conducted with teachers collectively on three occasions, enabling the exploration of shared experiences, collective problem solving, and peer learning. These discussions lasted approximately two hours and were audio-recorded and thematically guided. Community stakeholder interviews of shorter duration (30-45 minutes each) explored their perspectives on the importance of local wisdom in education, perceived authenticity and appropriateness of module content, observed changes in student engagement and behavior, and recommendations for strengthening community involvement.

Classroom observations: Researchers conducted classroom observations of lessons utilizing local wisdom-based modules on eight occasions (one observation per teacher per implementation cycle). Observations employed structured protocols capturing information regarding the learning environment setup, teaching methods employed, student engagement and participation patterns, use of local wisdom content, nature of interactions between teacher and students, and observable student responses. Observational data included both descriptive field notes capturing detailed depictions of classroom events and analytical notes recording observer interpretations and emergent insights. These observations provided direct evidence of implementation in practice, complementing teacher reports and enabling the examination of fidelity and adaptation.

Documentary analysis: Researchers reviewed diverse documentary materials including module content and design documentation, teacher lesson plans created during implementation, student work samples, school administrative records documenting program implementation, and participant reflections and journals. This documentary provided evidence of implementation processes and contextual details enriching interviews and observational data.

Participant reflections: Teachers were invited to maintain reflective journals that documented their experiences, challenges, adaptations, and observations of student

responses throughout the implementation period. While not all teachers maintained sustained journaling, several provided valuable written reflections that captured insights that were not fully articulated in the interviews.

Data Analysis Procedures

Data analysis employed thematic analysis methodology following the procedures established by Braun and Clarke and adapted for educational research contexts. The analytical process proceeds through six primary phases

Phase 1: Data familiarization. Researchers repeatedly engaged with raw data by listening to interviews and focus group audio recordings multiple times, reading transcripts thoroughly annotating emerging observations, and reviewing observational field notes and documentary materials. This immersive engagement enables researchers to develop familiarity with data nuances, variations, and complexities prior to formal coding.

Phase 2: Initial coding. Using deductive codes derived from research questions theoretical literature and inductive codes emerging from data examination, researchers systematically worked by assigning meaningful labels to segments. Coding prioritized comprehensiveness and inclusivity, initially erring to generate more codes, with subsequent refinement. NVivo qualitative analysis software facilitates systematic code organization and management.

Phase 3: Theme development. The codes were aggregated into broader thematic categories to capture overarching patterns and concepts. This process involved examining the relationships among codes, identifying hierarchical structures (parent codes encompassing related child codes), and considering how coded segments are related to central research questions. The researchers maintained thematic coding documentation describing each theme, its constituent codes, and illustrative exemplars.

Phase 4: Theme review and refinement. Identified themes were critically reviewed to ensure internal coherence (constituent codes sufficiently related to justify grouping) and external distinctiveness (clear differentiation among themes with minimal overlap). Some themes were revised, combined, or separated based on this review. Researchers repeatedlymreturned raw data to verify that thematic structures accurately reflected data content and that insufficient data did not exist for certain themes.

Phase 5: Theme definition and naming. Each finalized theme received a clear, descriptive name succinctly capturing its essence. Detailed definitions were developed to explain each theme and how they contributed to addressing the research questions. These operational definitions ensured consistent application when integrating themes into the research narratives.

Phase 6: Thematic reporting and interpretation. The findings were synthesized into coherent narratives integrating thematic structures, supporting evidence (direct quotations and observational examples), contextual information, and researcher interpretation. This phase involved positioning the identified themes in relation to existing literature, considering theoretical implications, and articulating practical significance.

Multiple strategies have been used to establish research credibility and trustworthiness. Data triangulation involved multiple data sources (interviews, observations, documents, and participant reflections) enabling the comparison and verification of findings across methods. Methodological triangulation employs diverse data collection approaches (interviews, focus groups, and observations) reducing the likelihood that the findings reflect artifacts of particular methods. Investigator triangulation was achieved through regular collaborative analysis sessions where multiple researchers reviewed the findings independently, discussed interpretations, and negotiated consensus regarding thematic structures, reducing individual researcher bias.

Member checking involved preliminary findings reviewed by teacher and community participant groups, enabling them to verify that researcher interpretations accurately reflected their experiences and meanings. Participants suggested refinements and occasionally disagreed with the interpretations, leading to research modifications that ensured greater accuracy. Peer debriefing sessions with colleagues uninvolved in data collection provided external perspectives on the analytic processes and findings. An audit trail documenting methodological decisions, analytical choices, and reasoning was maintained throughout the research process, enabling the external evaluation of research transparency and rigor. Research reflexivity was prioritized, with researchers regularly examining their own assumptions, potential biases, and how their perspectives might influence their interpretation.

RESULTS AND DISCUSSION

Teacher Perceptions and Experiences of Module Implementation

Analysis of the interview and focus group data revealed consistent patterns of positive teacher perception regarding the local wisdom-based learning modules, though with important nuances regarding implementation ease and contextual adaptation challenges.

Table 1: Teacher Perception on Module Implementation

Teacher Code	Teaching Experience	Perception of Module Usefulness	Ease of Implementation	Student Engagement Response	Content Relevance
T-01	8 years	Very High	Easy	Excellent	Very Relevant
T-02	12 years	Very High	Very Easy	Excellent	Very Relevant
T-03	5 years	High	Moderate	Good	Relevant
T-04	15 years	Very High	Very Easy	Excellent	Very

Teacher Code	Teaching Experience	Perception of Module Usefulness	Ease of Implementation	Student Engagement Response	Content Relevance
					Relevant
T-05	6 years	High	Easy	Good	Relevant
T-06	10 years	Very High	Very Easy	Excellent	Very Relevant
T-07	7 years	High	Easy	Good	Very Relevant
T-08	14 years	Very High	Very Easy	Excellent	Very Relevant

Examination of Table 1 reveals that 62.5% of teachers (five of eight) reported very high perceived usefulness of the modules, with the remaining 37.5% (three of eight) rating usefulness as high. No teachers reported moderate or low perceived usefulness, suggesting asubstantial consensus regarding the value of the modules. Direct quotations from the teachers illustrate the characteristics of this positive reception. One teacher with 12 years of experience noted: These modules are different from other materials I have used. They speak directly about students' lives. When I teach gotong royong [mutual cooperation] using examples from our local community practices rather than abstract definitions, students immediately understand not just the concept but also its relevance. They recognize these are the values their own families embody." Another teacher commented I realize now that I was teaching character education in isolation from reality. The modules were changed accordingly. By grounding lessons in local practices and community examples, character education has become real and tangible for students."

Regarding the ease of implementation, the teachers reported varied experiences. Five teachers (62.5%) rated implementation as "very easy" or "easy," indicating relatively straightforward integration into existing classroom practices. However, three teachers (37.5%) reported moderate implementation challenges, noting particular difficulties in adapting content to their specific contexts or managing additional preparation requirements. As one teacher explained The modules are well-designed, but I needed time to figure out how to modify them for my students' specific situation. Initially it felt like extra work. Once I understood the logic and adapted some activities, it became easier. However the initial learning curve was real."

Student engagement data revealed particularly positive responses. Teachers reported that 75% of their students (six out of eight teachers) demonstrated "excellent" engagement with lessons utilizing the modules, characterized by increased participation, thoughtful questioning, and apparent enthusiasm. The three teachers who noted "good" rather than "excellent" engagement suggested this reflected neither

module inadequacy but rather broader classroom dynamics and individual student characteristics. One teacher reflected: "Some of my students never participated much regardless of the content. However, they seemed to be more interested in these lessons. Do you normally speak up during class? They were particularly engaged—asking questions, making connections to their home communities, and requesting that we do more activities of this type."

Student Character Development Outcomes

Assessment of student character development proceeded through multiple methods: teacher observation and reporting, classroom behavior documentation, and student reflective responses. Teachers were asked to observe students across six character values that the modules explicitly addressed: mutual cooperation, honesty, responsibility, respect for others, environmental care and discipline. Teachers provided narrative descriptions of the observed changes, and these observations were synthesized to assess the magnitude of character development.

Table 2: Student Character Development Indicators

Character Value	Pre-Implementation	Post-Implementation	Improvement Rate	Implementation Duration
Mutual Cooperation	58%	87%	29%	4 months
Honesty	52%	85%	33%	4 months
Responsibility	55%	88%	33%	4 months
Respect for Others	51%	84%	33%	4 months
Environmental Care	49%	82%	33%	4 months
Discipline	53%	86%	33%	4 months

The data presented in Table 2 reflect the synthesized teacher assessments of the percentage of students demonstrating consistent manifestation of each character value before and after the four-month implementation period. Pre-implementation percentages represent teacher baseline estimates of how many students regularly demonstrated each characters value during normal classroom functioning prior to the intervention. Post-implementation percentages reflect reassessment for four months in module-based instruction. It is important to emphasize that these percentages represent teachers' qualitative assessments rather than scores on standardized instruments; they synthesize the overall patterns of student behavior change that teachers observed.

The data demonstrate that substantial improvements occurred across all six character values, with all improvement rates ranging from 29% to 33%. This consistency is notable. The smallest improvement (29% for mutual cooperation) suggests that teachers perceived that more students already embodied this value before implementation, perhaps reflecting the existing community emphasis on cooperation. The most substantial improvements (33% across honesty, responsibility, respect for others, and environmental care) suggest that these values required more intentional cultivation through instructional intervention.

The teachers narratives illuminated the mechanisms through which character development occurred. Regarding mutual cooperation, teachers reported that classroom projects explicitly designed around cooperative learning structures and incorporating examples of local community cooperation practices led to increased student instances of helping peers, sharing materials and ideas, and expressing concern for collective success rather than individual achievement. One teacher described changes in student behavior: "Before these modules, students worked individually or competed with each other. Now I am seeing them naturally organizing themselves to work together, checking on whether everyone understands material before moving forward, and talking about how their own families cooperate in daily life. They are making connections between what we learn in class and their lived experience."

Regarding honesty and responsibility, teachers noted that student character development occurred through structured activities involving ethical dilemmas and responsibility for community projects. By examining scenarios presenting genuine tensions (e.g., pressures to cheat or take credit for others' work versus maintaining integrity) through the lens of local wisdom traditions emphasizing honest dealing and individual accountability, students appeared to internalize reasoning about why these values matter and how they can be maintained even when inconvenient. Teachers reported increased instances of students admitting mistakes, accepting responsibility for errors, and declining to engage in academic dishonesty even when confident they would not be caught.

Environmental care emerged as a value in which students demonstrated rapid growth through engagement with learning activities connecting local environmental knowledge, current environmental challenges, and student action possibilities. Several schools incorporating environmental restoration projects (tree planting, water source protection, and waste reduction) reported that students articulated explicit connections between these activities and local wisdom traditions emphasizing harmony with nature and community responsibility for environmental stewardship.

Module Component Evaluation and Pedagogical Quality
Teachers provided detailed feedback regarding the different dimensions of the modules, enabling the assessment of which components proved most effective and which required refinement.

Table 3: Module Component Evaluation Results

Module Component	Effectiveness Rating	Teacher Satisfaction	Sustainability Potential
Learning Objectives Clarity	4.7/5	93%	High
Local Wisdom Content Integration	4.9/5	96%	Very High
Pedagogical Methods	4.6/5	92%	High
Assessment Tools	4.5/5	89%	Moderate-High
Resource Adequacy	4.4/5	87%	Moderate-High
Assessment Tools	4.5/5	89%	Moderate-High

Table 3 synthesizes teacher evaluations of specific module components on a 5-point effectiveness scale, along with teacher satisfaction percentages and sustainability potential assessment. The data indicated that local wisdom content integration received the highest effectiveness rating (4.9/5) and satisfaction percentage (96%), suggesting that this core component of the intervention was successful. Teachers particularly appreciated that the module content authentically represented actual local practices and values rather than presenting stereotyped or romanticized versions. One teacher explained Often educational materials that supposedly incorporate local culture get it wrong—they're made up or misrepresented. These modules? They are real things. Community elders reviewed the content and confirmed that it accurately represented our traditions. Authenticity matters. Our students recognize this and respect the materials more because they are genuine."

Learning objective clarity also received strong ratings (4.7/5, 93% satisfaction), indicating that teachers understood what students expected to learn and could identify clear purposes for instructional activities. The pedagogical methods component (4.6/5, 92% satisfaction) was also well received, with teachers reporting that the suggested teaching approaches proved to be practical and engaging. Teachers valued the incorporation of storytelling, community project-based learning, and direct engagement with local cultural practitioners as instructional methods.

The assessment tools (4.5/5, 89% satisfaction) received slightly lower ratings. Teachers noted that while the suggested assessment approaches (observational tools, student reflections, and behavior documentation) were reasonable, they required substantial teacher time and judgment for implementation. Some teachers have suggested that additional guidance regarding the interpretation of assessment evidence would strengthen this component. As one teacher commented I know what I

am supposed to be observing, but sometimes I am uncertain about whether a particular behavior really demonstrates the character value or if it might reflect other factors. More examples and clearer rubrics would help me feel confident in my assessments."

Resource adequacy (4.4/5, 87% satisfaction) received the lowest rating, although it still indicated substantial satisfaction. Teachers noted that module implementation sometimes required materials or community resource access that was not universally available. For example, some modules require specific local materials or knowledge held by community members who are sometimes difficult to access. Schools in remote locations and those with limited budgets have reported greater challenges in resource access. Nonetheless, teachers found ways to adapt and work within resource constraints, suggesting that inadequate resources did not substantially impede implementation, although additional resources may have enhanced instruction quality.

Community Stakeholder Engagement and Partnership Dynamics

This research revealed that community engagement significantly supported implementation success, with diverse stakeholder groups contributing distinct resources and forms of participation.

Table 4: Community Stakeholder Engagement Level

Stakeholder Group	Participation Rate	Role in Implementation	Perceived Importance
Parents	72%	Supporting Learning	Very High
Community Leaders	85%	Validation & Guidance	Very High
Local Elders	90%	Cultural Knowledge Provision	Very High
Local Government	78%	Policy Support	High
Religious Leaders	88%	Value Reinforcement	Very High
Business Community	65%	Resource Contribution	Moderate

The community engagement data presented in Table 4 reflect participation rates (percentages of identified potential participants from each stakeholder group engaged in implementation activities), primary roles that each group assumed, and the

perceived importance of their involvement. The data revealed that local elders achieved the highest participation rate (90%), reflecting their recognized authority as knowledge holders and cultural experts. Religious leaders achieved 88% participation, indicating their important role in validating and reinforcing the values emphasized in the modules. Community leaders who often held administrative or influential positions achieved 85% of their participation. Local government representatives achieved 78% participation. Parents achieved 72% participation, a respectable rate given the demands on parent time and attention. The business community achieved the lowest participation rate (65%), although still representing substantial engagement, with participation concentrated on resource contributions rather than direct involvement in character education activities.

The qualitative data illuminated how these different stakeholder groups contributed meaningfully to the implementation. Local elders participated in multiple capacities: validating module content for authenticity, sharing personal knowledge and experiences with students, advising teachers regarding appropriate cultural practices and respectful engagement, and serving as role models embodying the character values emphasized in instruction. One elder described his participation: "The school asked if I could help review the materials to ensure that they properly represented our traditions. I did this, suggesting some corrections and additions. Then they invited me to share stories with the students—stories my grandfather taught me embodying values of honesty and respect. The children listened to carefully. I could see these values to become real for them through these stories."

Religious leaders contributed through various channels: validating that module values aligned with religious teachings reinforcing character education messages within their religious instruction and sermons and encouraging families to support character development at home. One religious leader noted that character education and religious teaching reinforced each other. When the school emphasizes responsibility and honesty through these modules, it perfectly aligns with what we teach religiously. I make sure in my classes to note those connections, so students see consistency between school learning and religious principles."

Community leaders often facilitated connections between schools and resources (community spaces for learning activities, local practitioners who could contribute expertise), provided legitimacy and encouragement for the initiative within community contexts, and participated in discussions and decision making regarding implementation approaches. Parents engaged in multiple ways: learning about the modules to support their children's learning at home, participating in school events featuring character education, and in some cases, sharing family practices and traditions that exemplif character values.

Discussion

The findings of this research align with and extend existing knowledge regarding character education, local wisdom integration, and teacher professional development while also generating new insights regarding mechanisms and implementation processes.

The substantial improvements in student character development demonstrated across all six assessed values (ranging from 29% to 33% improvement rates within

four months) provides empirical support for claims in the educational literature that explicit attention to character education produces behavioral change. However, the magnitude of the improvement warrants further consideration. The pre-implementation percentages (ranging from 49% to 58% of students demonstrating each value) suggest that baseline character development was not negligible Teachers were already observing many students manifesting these values prior to the intervention. The post-implementation percentages (82% to 88%) indicate that the intervention moved substantially more students toward a consistent manifestation of character values, but complete universal adoption did not occur. This pattern aligns with realistic expectations for educational interventions: rather than producing dramatic transformation across all participants, well-designed interventions move meaningful proportions of participants toward the desired outcomes (Maulana et al., 2025).

The particularly strong outcomes of honesty, responsibility, respect, and environmental care may reflect several factors. First, these values may have required more intentional cultivation than mutual cooperation (which showed the smallest gain), perhaps because community cultures already emphasize cooperation while less explicitly attending to other values. Second, the specific teaching methodologies employed—particularly the use of local examples and ethical dilemma discussions for honesty and responsibility and community project engagement for environmental care—may have been particularly effective for these specific values. This pattern suggests that effective character education requires pedagogical methods tailored to specific values and contexts, rather than uniform approaches.

The very high teacher satisfaction with local wisdom content integration (4.9/5 effectiveness, 96% satisfaction) provides empirical confirmation of claims in the culturally responsive pedagogy literature regarding the importance of meaningful content integration. Teachers' recognition that local wisdom-based content is authentically connected to students' lived experiences, maintains cultural integrity, and engages learner motivation aligns with theoretical arguments regarding culturally sustaining pedagogy. However, the research extends this understanding by demonstrating that teachers value not only cultural relevance but also pedagogical quality and curricular rigor. The strong ratings for clarity of learning objectives and pedagogical methods indicate that effective local wisdom integration requires not only cultural authenticity but also systematic instructional design and clear learning structures (Gimpaya & Ligsanan, 2025).

The generally positive teacher perceptions and reported ease of implementation (62.5% reporting easy or very easy implementation) contrast with frequent findings in professional development literature regarding implementation challenges and teacher resistance to innovation. Several factors could explain this finding. First, teachers participated in substantial professional development addressing not merely what to teach but how to teach it—a comprehensive approach addressing the knowing-doing gap. Second, the intervention directly addressed teachers' existing professional challenges (how to teach character education effectively) rather than imposing external priorities. Third, teachers and community members collaborated in module development to enhance ownership and relevance. The three teachers reporting moderate implementation challenges provided an important counterpoint, suggesting

that even well-designed interventions require adaptation time and that not all teachers find implementation equally easy, factors that should be acknowledged in scaling and implementation discussions.

The critical importance of community engagement documented in this research extends and elaborates on findings regarding school-community partnerships. The high participation rates (65-90% across stakeholder groups) and the specific contributions made by each group demonstrate that community engagement requires intentional invitation to participate in meaningful roles rather than peripheral involvement. The finding that local elders achieved the highest participation rate reflects the recognition of their authority as cultural knowledge holders, aligning with anthropological and indigenous education scholarship emphasizing the importance of respecting local expertise and authority structures. The substantial participation of religious leaders highlights the significance of aligning character education with spiritual and religious traditions, a finding that resonates with research on character development in religiously oriented communities (Ahmad Zein et al., 2025).

The research provides evidence suggesting several mechanisms through which the integration of local wisdom produces character development effects. First, authenticity and relevance: By grounding character values in actual community practices and traditions that students encounter in their lived experiences, instruction creates meaningful connections between abstract values and concrete examples. Students recognize that honesty, responsibility, and cooperation are not arbitrary impositions but rather principles that guide their communities, suggesting their genuine importance and value.

Cultural affirmation and identity development: Engagement with local wisdom within formal educational contexts validates students' cultural backgrounds and family traditions, affirming them as worthy of serious educational attention. This validation appears to enhance student engagement and openness to learning, as students perceive that teachers and schools respect their culture. This cultural affirmation may produce indirect character development effects through enhanced school engagement and improved self-concept (Rahmawati, 2025).

Third, practical exemplification and moral reasoning: local wisdom traditions encode not merely abstract values but also narratives, practices, and examples demonstrating how these values operate in real situations and why they matter. Through engagement with community stories, observation of elders modeling character values, and participation in community practices embodying these values, students develop not only intellectual understanding but also internalized reasoning about why character values matter.

Fourth, community reinforcement and modeling: When multiple community members (elders, religious leaders, and parents) consistently reinforce and model character values, students receive coherent messages across multiple contexts (school, religious community, and family), increasing the probability of internalization. Additionally, observing respected community members actively embodying and advocating for these values enhances their perceived importance and feasibility (Sawita et al., 2024).

These proposed mechanisms are not unique to local wisdom-based instruction but rather represent general principles of effective character education. However, local

wisdom may activate these mechanisms Local wisdom-based instruction provides more opportunities for authenticity, cultural relevance, and community engagement than generic character education approaches that utilize abstract definitions or universal examples.

This research generates several specific implications for improving character education practices and supporting teacher development. First, character education effectiveness increases substantially when teachers receive not merely awareness-level training but rather comprehensive professional development addressing substantive knowledge (understanding of character values and local wisdom traditions), pedagogical knowledge (methods for effectively teaching character education), and contextual adaptation skills (how to modify approaches for specific situations). This comprehensive approach requires more substantial time and resources than conventional one-shot training workshops, but its apparent effectiveness justifies this investment.

Second, the integration of community expertise and partnerships is critical for both module development and implementation. Educational materials developed solely by external experts or professional educators, however well-intentioned, risk cultural inaccuracy, misrepresentation, or insufficient depth. Collaborative development involving community members, educators, and cultural experts produces authentic, relevant, and effective materials while simultaneously building community ownership and support for implementation (Suparji et al., 2025).

Third, character education operates most effectively when integrated throughout school systems and community contexts rather than confined to specific classes or extracurricular programs. Although subject-specific integration is valuable, character education requires consistent reinforcement across multiple contexts. Schools implementing character education most effectively ensure that messages are reinforced through school policies and practices, extracurricular activities, family engagement, and community partnerships (Bayuo et al., 2025).

Fourth, the assessment and evaluation of character development require attention to meaningful behavioral indicators observed over time rather than reliance on single-point measurements. The improvements documented in this research became apparent over a four-month period through teacher observation of student behavior patterns. Quick-fix assessments measuring immediate outcomes would have missed these developments, suggesting that character education evaluation requires patience and the use of appropriate measurement timeframes and methodologies.

CONCLUSION

This study documented the systematic development of learning modules integrating local wisdom with character education, accompanying teacher professional development, and subsequent implementation with an analysis of processes and outcomes. This study has several important findings. First, the learning modules explicitly designed to integrate authentic local wisdom with character education received very high teacher satisfaction (96% for content integration) and were perceived as having high pedagogical effectiveness. Second, the implementation

of these modules produced substantial improvements in student character development, with 29-33% proportions of additional students demonstrating consistent manifestation of character values within a four-month period. Third, comprehensive teacher professional development addressing substantive knowledge, pedagogical methods, and contextual adaptation significantly enhanced implementation success, with 62.5% of teachers reporting easy or very easy integration into the existing practice. Fourth, extensive community engagement, particularly involvement of local elders (90% participation), religious leaders (88%), and community leaders (85%) as partners in implementation proved critical for success. These findings support the following conclusions Effective character education requires the integration of multiple elements: authentic culturally grounded content systematic pedagogical approaches comprehensive teacher development and engaged community partnerships. No single component suffices; rather, the synergistic integration of multiple elements creates an educational environment that supports character development. Local wisdom traditions contain sophisticated resources for character education that align with contemporary educational best practices; the integration of indigenous knowledge into formal curricula represents evidence-based pedagogical innovation rather than historical regression. Teachers, when provided with appropriate support and resources, have successfully implemented significant educational innovations. The "knowing-doing gap" that frequently undermines educational reform reflects insufficient rather than inherent teacher limitations; comprehensive, context-specific professional development addressing multiple dimensions of implementation produces meaningful change. This study suggests several specific recommendations for educational policy and practice. First, character education policy should explicitly require and support the integration of local wisdom into curricula, recognizing this as essential rather than optional enhancement. Second, teacher professional development programs should be substantially expanded and redesigned to provide comprehensive, ongoing support for character education implementation rather than relying on brief training sessions. Third, school systems should be structured to facilitate and reward community partnership and recognize community members as essential contributors to educational quality. Fourth, educational material development should employ participatory processes involving teachers, communities, and cultural experts in collaboration with educational specialists, ensuring both cultural authenticity and pedagogical quality..

Funding Statement

Ethical Compliance

All procedures performed in this study involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Data Access Statement

A Data Access Statement is a section in a scientific publication or research report that explains how the data used or generated in a study can be accessed by readers or other researchers. This statement aims to promote transparency, support research reproducibility, and comply with open access policies, where applicable.

Common Elements in a Data Access Statement:

1. Data Location: Specifies where the data are stored, such as in online repositories (e.g., Zenodo, Dryad, or institutional repositories).
2. Access Instructions: Provides information on how to access the data, such as direct links, digital object identifiers DOI), or contact details.
3. Data Availability: Indicates whether the data are publicly accessible, available upon request, or restricted due to ethical, legal, or privacy considerations.
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Examples of Data Access Statements:

1. Open Data:
    o "The data supporting this study are openly available in Zenodo at [DOI:10. xxxx/zenodo.xxxx]."
2. Restricted Data:
    o "The data that support the findings of this study are available upon request from the corresponding author. Due to privacy concerns, the data are not publicly available."
3. No Data Available:
    o "No datasets were generated or analyzed during the current study."
4. Conditional Access:
    o "The data supporting this study are available under restricted access and can be obtained upon reasonable request to the corresponding author and with the permission of the ethics committee."

Purpose of a Data Access Statement:

- Reproducibility: Enables other researchers to replicate or verify the findings.
- Collaboration: Encourages further collaboration by sharing data.
- Compliance: Adheres to the policies of funding agencies or journals that require open access to data.

Conflict of Interest declaration

There are no conflict of interest.

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