INTEGRATING LOCAL WISDOM INTO CHARACTER EDUCATION

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Abstract	This study aims to develop character education teaching materials based on the local wisdom of Aceh and to assess their validity, practicality, and effectiveness in the learning process. This study employed a design-based research (DBR) approach to develop and evaluate character education teaching materials rooted in the local wisdom of Aceh. Using the Plomp development model, the research was conducted in five iterative phases: preliminary investigation, design, realization, testing and evaluation, and implementation. The study involved a purposive sample of 30 tenth-grade students and 3 teachers from an Islamic boarding school (pesantren) in Aceh. Data were collected using expert validation sheets, classroom observation, student questionnaires, and pre-test/post-test instruments. Quantitative data were analyzed using descriptive statistics and paired-samples t-tests, while qualitative data were processed through thematic analysis. The results show that the materials were highly valid (expert score: 89.75%), practical in classroom use, and significantly effective in enhancing students' moral understanding and engagement (mean gain = 15.8; $p < 0.05$). The study highlights the potential of culturally grounded content to strengthen character education and promote culturally responsive pedagogy within Islamic education contexts. The findings underscore the potential of localized content in shaping character education and support the integration of local wisdom into national curricula.
Keywords	Character Education; Local Wisdom; Teaching Material Development; Islamic Boarding School; Culturally Responsive Pedagogy.

INTRODUCTION

In the era of globalization and technological disruption, education faces not only academic demands but also profound ethical challenges. The increasing prevalence of youth issues such as violence, identity confusion, and moral indifference has reignited global interest in character education as a central educational concern (Arthur et al., 2017; Nucci, 2016; UNESCO, 2020; Salam & Mahfud, 2022). Character education, however, often struggles with relevance and effectiveness, particularly when it adopts universalist approaches that overlook local cultural contexts (Lickona, 1996; Berkowitz & Bier, 2021; Schweisfurth, 2019; Wahyuni & Hidayatullah, 2022).

In Indonesia, particularly within Islamic boarding schools (pesantren), character development is traditionally integrated into religious and communal life (Azra, 2012; Rahmah, 2022; Zuhdi, 2019). However, modern educational reforms have pushed pesantren to adopt national curricula, which, while standardised, often neglect regional cultural identity and indigenous wisdom (Tikly, 2011; Yusuf & Sari, 2023; Setiawan, 2020). This creates a pedagogical dissonance between local values and global frameworks, weakening the moral authority and cultural relevance of education (Zubaedi, 2021; Suryadi, 2023).

Recent pedagogical scholarship has championed culturally responsive education—an approach that acknowledges students' sociocultural backgrounds as assets in learning (Gay, 2018; Ladson-Billings, 2014; Arifin et al., 2023). Local wisdom—as a repository of indigenous moral principles and social norms—offers a rich foundation for building meaningful character education (Wartofsky, 2019; Sulaiman & Firdaus, 2021; Saputra & Pambudi, 2021). Local wisdom in Aceh, reflected in various proverbs, oral traditions, and customary practices (adat), embodies values such as honesty, bravery, mutual respect, and religious devotion (Hasan, 2020; Yusri et al., 2022; Rohman & Fajar, 2020). Despite its significant cultural richness, local wisdom remains underutilised in formal education, partly due to the absence of structured teaching materials and pedagogical models suitable for integrating local cultural contexts (Kamaruddin, 2018; Huda et al., 2017).

One of the key reasons for this underutilisation is the lack of integration between local wisdom and the national education curriculum. The education system in Aceh still predominantly follows the national curriculum, which focuses on general education and does not sufficiently accommodate the rich local culture. Moreover, the absence of systematic teaching materials to impart local wisdom and the lack of training for teachers to effectively incorporate traditional values into their lessons further complicate the integration of local wisdom into formal education.

To address this issue, the Aceh government has taken several steps to optimise the integration of local wisdom into education. In 2015, the Aceh Education Department began developing a local wisdom-based curriculum, which includes the teaching of cultural traditions, language, history, and Acehnese customs in schools. This initiative aims to ensure that students not only receive a general education but also gain a deep understanding of their cultural identity. Additionally, the teacher training programmes focused on incorporating local wisdom into the teaching process have been launched to equip educators with the skills to effectively teach cultural values. Collaborations with non-governmental organisations (NGOs) have also played a role in introducing culturally relevant teaching materials to educators at the school level. While these measures show progress, the full implementation of local wisdom in formal education in Aceh still requires further attention, particularly in providing more structured teaching materials and ensuring comprehensive teacher training.

Several international frameworks, such as UNESCO's Education for Sustainable Development and the OECD's Future of Education and Skills, emphasize the importance of "learning to be" and "learning to live together" (OECD, 2018; UNESCO, 2020). These goals echo the ethos of character education but require contextual translation to be meaningful across cultural settings. Without such localization, global educational reforms risk becoming alienating and ineffective (Schweisfurth, 2019; Arar & Saiti, 2019).

Recent studies have begun to explore the value of local wisdom in moral education within formal and non-formal educational institutions. For instance, Hasan (2020) investigated how Acehnese proverbs convey ethical principles such as honesty, humility, and responsibility. His study proposed that these cultural expressions could be used as instructional materials, although no formal development model was employed. Sulaiman and Firdaus (2021) analyzed local stories as a source of moral education and found that when contextualized properly, they enhance students' moral reasoning. However, their research remained conceptual and lacked empirical classroom testing. Meanwhile, Saputra and Pambudi (2021) created character education modules based on Javanese values using a qualitative approach, showing increased student engagement in moral discussions. Yet, their work did not measure learning outcomes quantitatively. Yusri, Hasan, and Rahmah (2022) conducted a field study in Aceh showing that the integration of folklore and cultural narratives contributed positively to students' sense of identity and values. Nevertheless, their materials were not systematically validated or developed using a design framework. Additionally,

Arifin et al. (2023) implemented a character education approach in pesantren by integrating local values through thematic lessons. While they highlighted the importance of pesantren as a moral learning space, their study lacked structured stages of product design and did not involve iterative testing or statistical analysis of student outcomes.

To address this gap, this study develops and tests character education teaching materials based on the local wisdom of Aceh, targeting Islamic boarding schools as cultural and spiritual learning spaces. Using the Plomp design-based research model (Plomp & Nieveen, 2010), the research explores the materials' validity, practicality, and effectiveness in strengthening students' moral understanding and identity formation. This study contributes to the growing literature on Islamic education, culturally grounded pedagogy, and educational design research, offering a replicable model for context-sensitive curriculum innovation.

METHOD

This study adopts a research and development (R&D) approach using the Plomp design-based research model, which is particularly suited for producing, validating, and implementing educational products in real classroom contexts. The model guides researchers through a systematic cycle of needs analysis, design, development, testing, and refinement to ensure both theoretical rigor and practical effectiveness (Anderson & Shattuck, 2012). Central to this research was the application of the Plomp Development Model, a five-phase framework encompassing: (1) Preliminary Investigation, (2) Design, (3) Realization/Construction, (4) Testing, Evaluation, and Revision, and (5) Implementation (Plomp & Nieveen, 2010). The selection of the Plomp model was deliberate, recognizing its suitability for the creation and validation of educational interventions within authentic classroom settings, directly aligning with the study's primary objective of developing and evaluating character education teaching materials deeply rooted in the local wisdom of Aceh.

The research was strategically situated within Dayah Terpadu Inshafuddin, a private Islamic boarding school (pesantren) located in Banda Aceh, Indonesia. This institution is recognized for its integrated approach to education, which harmonizes Islamic values with Acehnese cultural traditions. The selection of Dayah Terpadu Inshafuddin was purposive, grounded in its strong institutional commitment to character education and its openness to curricular innovation and collaborative research. The participant pool comprised 30 tenth-grade students and three character education teachers, who actively engaged in the testing and refinement of the developed teaching

materials.

This study employed both primary and secondary data to support the development and evaluation of local wisdom-based character education materials. Primary data were obtained directly from the field at Dayah Terpadu Inshafuddin, Banda Aceh, through several instruments: (1) expert validation sheets used to evaluate the content, construct, and language aspects of the materials; (2) observation sheets documenting student behavior, engagement, and classroom dynamics during implementation; (3) student and teacher questionnaires to assess the practicality and relevance of the teaching materials; and (4) pre-test and post-test instruments designed to measure students' understanding of key character values before and after using the developed modules.

Meanwhile, secondary data were sourced from a range of literature and official documents to ensure theoretical and curricular alignment. These included previous research on character education and local wisdom (e.g., academic journals, books), Acehnese cultural references such as proverbs and folklore used as instructional content, and national curriculum guidelines issued by the Ministry of Religious Affairs and the Ministry of Education and Culture. These secondary sources provided the conceptual and contextual foundation for designing culturally responsive materials. Triangulating both types of data enhanced the study's validity and enriched its analysis of the materials' effectiveness in promoting moral education within the pesantren context.

To ensure the rigor and trustworthiness of the findings, a mixed-methods data collection strategy was employed, integrating both qualitative and quantitative instruments. These included expert validation sheets, utilized to assess the content, construct, and linguistic validity of the developed teaching materials; observation checklists, employed during the implementation phase to systematically record classroom interactions and student engagement; student and teacher response questionnaires, designed to gauge the practicality and perceived engagement with the materials; and pre-test and post-test instruments, administered to evaluate changes in students' comprehension and internalization of character-related concepts.

The analysis of the collected data was conducted using appropriate quantitative and qualitative techniques. Quantitative data, including pre- and post-test scores and Likert-scale responses from the questionnaires, were analyzed using descriptive statistics and paired-samples t-tests to determine the statistical significance of any observed changes. Concurrently, qualitative data, derived from open-ended responses in the questionnaires and observational field notes, were

subjected to thematic analysis to identify recurring patterns and gain deeper insights into students' behavioral changes and levels of engagement with the learning materials. The validity of the expert reviews was quantified using Aiken's *V* coefficient, while the practical implementation of the materials was interpreted using criteria adapted from Nieveen (2007).

The entire research process was guided by the structured design framework of the Plomp Development Model (Plomp & Nieveen, 2010), ensuring a systematic and iterative approach to the development and refinement of the teaching materials. As visually represented below, each phase built upon the previous one, allowing for continuous improvement based on feedback and empirical evidence:
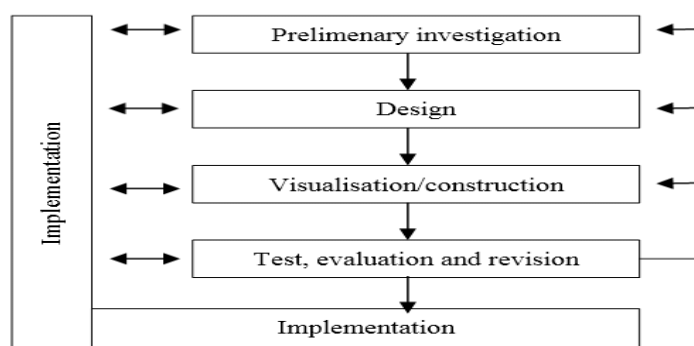

Figure 1. Plomp Development Model Applied to Local Wisdom-Based
Teaching Material Design

Adapted from Plomp & Nieveen (2010)

Each phase of the Plomp model was executed in an iterative manner, emphasizing the cyclical nature of design-based research. This iterative process ensured that the developed teaching materials were not only theoretically sound but also practically effective and aligned with established pedagogical standards, relevant cultural values, and the realities of classroom implementation. Feedback gathered from both teachers and students during the testing and evaluation phase waops instrumental in informing each subsequent cycle of revision, allowing the educational product to evolve dynamically through authentic, real-world application and feedback loops, ultimately leading to a more refined and contextually appropriate educational resource.

FINDINGS AND DISCUSSION

Findings

This section presents the results of the study as structured in three major thematic categories: (1) the validity of the local wisdom-based character education materials, (2) their practicality in the classroom context, and (3) their effectiveness in improving students' character understanding and

moral reasoning. Data were triangulated from expert validation, classroom observation, student and teacher feedback, and pre- and post-test results.

Validity of the Teaching Materials

The first phase of development involved a rigorous validation process by curriculum experts and educational practitioners. The teaching materials, which incorporated local Acehnese narratives, proverbs, and cultural practices, were assessed for content accuracy, pedagogical coherence, cultural relevance, and integration of character education principles. Using a standardized validation rubric, the experts rated the materials across four domains. The average total score was 89.75%, indicating a high degree of validity.

Table 1. Expert Validation Results of Teaching Materials

No	Validation Dimension	Average Score (%)
1.	Content and Curriculum Relevance	90.00
2.	Cultural and Religious Integration	88.50
3.	Linguistic Clarity and Appropriateness	89.00
4.	Character Value Alignment	91.50
—	**Overall Validity Score**	**89.75**

Source: Validation Sheet Analysis, 2024

Experts provided qualitative feedback supporting the quantitative scores. One validator stated, *"This module bridges national curriculum objectives with regional moral values in a way that enhances both comprehension and identity."* Another expert commented on the relevance of integrating stories from Acehnese heroes to illustrate traits such as honesty (*jujur*), bravery (*berani*), and respect (*hormat*).

The structure of the materials also adhered to principles of instructional design, using scaffolding techniques and reflective activities tailored for secondary-level pesantren students. This structural clarity contributed to their high scores in linguistic accessibility and practical utility. Overall, the validity data confirmed that the materials were ready for limited classroom trials and aligned with national educational standards while remaining contextually authentic.

Practicality in Classroom Use

The practicality of the materials was assessed through direct classroom observation during two implementation cycles and supported by teacher interviews and student questionnaires. Teachers reported that the materials were easy to implement and required minimal adaptation. They also praised the cultural familiarity and simplicity of the lesson flow, which helped facilitate

seamless integration into existing moral education sessions. One teacher noted, "Unlike other modules we've tried, these feel like they belong here."

The practicality of the materials was assessed through direct classroom observation during two implementation cycles and supported by teacher interviews and student questionnaires. All three teachers reported that the materials were easy to integrate into existing character education sessions, did not require extensive modification, and were well received by students. Teachers also appreciated the structured lesson flow and availability of example-based moral dilemmas.

Classroom observations revealed high levels of student engagement and enthusiasm. Students were attentive during storytelling sessions and actively participated in value-based discussions and role-play activities. These responses suggest that the materials were successful in generating emotional and intellectual engagement. Students also demonstrated increased confidence in expressing opinions about moral dilemmas and cultural values. This was especially evident in small group discussions, where even typically reserved students voiced their reflections.

In addition to behavioral engagement, cognitive and affective responses were observed. Teachers noted that students connected lesson content to real-life experiences. One teacher reported, "Several students mentioned they shared the stories with their families at home and discussed what honesty and responsibility mean in their daily lives." Such connections indicate that the materials extended learning beyond the classroom.

Student feedback collected via Likert-scale questionnaires provided further evidence of the module's practicality. The majority of students (over 85%) indicated that they found the materials enjoyable, easy to understand, and personally meaningful. Open-ended responses supported these findings, with comments such as, "I felt proud to learn stories from Aceh," and "It helped me understand how to be more respectful."

Table 2. Student Feedback on Practicality of the Materials (N = 30)

Statement	Agree (%)
The lesson materials were easy to understand	93.3
I enjoyed learning about local heroes and cultural stories	90.0
The materials helped me reflect on my own values	86.7
I want more lessons like this in the future	88.0

The effectiveness of the materials was further reinforced through informal teacher reflections collected at the end of the trial period. Teachers appreciated that the culturally aligned examples made it easier to discuss sensitive topics like honesty, integrity, and social responsibility. As one teacher noted, "Using local stories opened the door for deeper conversations about our values as Acehnese and as Muslims."

Overall, the materials were found to be not only pedagogically sound but also culturally engaging and practically feasible. The simplicity of the structure, the clarity of the moral messages, and the resonance with students' lived experiences all contributed to their successful application in the classroom setting. Participation in discussions and completion of reflective tasks. Activities such as storytelling, group debates, and value-mapping exercises were particularly effective in promoting engagement. Compared to traditional moral instruction, students exhibited higher enthusiasm and expressed personal connections to the lessons.

Students consistently highlighted their appreciation for the relatable content. One student wrote, "I never thought our local stories could teach so much about honesty and bravery." Teachers also noted increased student-to-student dialogue and moral reflection in class. One instructor observed that "even quieter students started participating when they saw themselves in the stories."

Effectiveness in Improving Character Understanding

The third dimension of this study assessed how well the local wisdom-based materials influenced students' understanding and application of character values. Through a structured pre-test and post-test evaluation, researchers examined five core moral attributes: honesty, responsibility, mutual respect, humility, and courage. Quantitative data revealed a notable enhancement in student performance. The average score prior to the implementation was 67.4, which increased to 83.2 afterward. The improvement of 15.8 points was statistically significant ($p < 0.05$), signifying that students' character comprehension was measurably enriched.

To assess effectiveness, pre- and post-tests were conducted focusing on five character values: honesty, responsibility, mutual respect, humility, and courage. The average pre-test score across the class was 67.4, and the post-test score increased to 83.2. The mean gain of 15.8 points was statistically significant ($p < 0.05$), indicating that the materials successfully enhanced students' understanding and application of moral concepts.
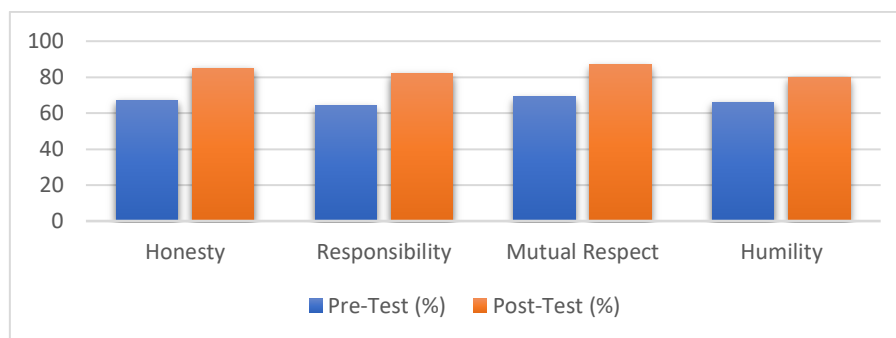
Figure 2. Comparison of Pre-Test and Post-Test Scores Across Character
Education Dimensions

Source: Pre- and Post-Test Score Analysis (N = 30)

Statistical analysis using a paired samples t-test revealed that the improvement was significant at the $p < 0.05$ level. This confirmed that the materials not only engaged students but also enhanced their cognitive understanding of moral principles and their ability to reflect on ethical behavior.

The quantitative data were further substantiated by qualitative insights gathered from student reflections and teacher observations. Students demonstrated a deeper moral understanding in their writing and classroom behavior. For instance, one student remarked, "Before I thought courage was about fighting. Now I know it's about standing up for what is right, even if it's difficult." This shows an important cognitive shift from superficial to principled thinking.

Teachers also noted changes in student behavior throughout the learning process. Their journals and observation notes documented greater student participation, increased collaboration in group tasks, and willingness to assume classroom responsibilities. One teacher commented, "Students began showing more initiative to lead group prayers, volunteer during clean-up, and help each other without being asked." Such behavioral indicators suggest that the moral messages conveyed through the modules are translated into observable action.

Beyond individual growth, the modules appeared to foster a more empathetic and respectful classroom culture. Students began listening more attentively during peer discussions and were more patient during collaborative tasks. The shift was especially visible among students who had previously exhibited behavioral challenges or disengagement.

The reflective journals maintained by students also supported this trend. Several entries mentioned how learning about Acehnese figures inspired them to act more honestly, respect their parents, and take pride in their cultural heritage. This aligns with the dual aim of character

education: to cultivate ethical behavior and reinforce identity.

Taken together, the combination of statistical improvement and qualitative changes supports the effectiveness of the character education materials. The integration of local wisdom into the content not only improved comprehension but also catalyzed real-life behavioral transformation, confirming that moral education grounded in cultural relevance has both cognitive and affective impact, revealing deeper moral reasoning. For instance, one student wrote, "Before I thought courage was about fighting. Now I know it's about standing up for what is right, even if it's difficult." Teachers corroborated these behavioral changes. According to one teacher's journal, "Students began showing more initiative to lead group prayers, volunteer during clean-up, and help each other without being asked."

The improved comprehension was not limited to academic articulation but extended to classroom conduct. Students engaged more respectfully with peers and showed signs of developing internal moral regulation, aligning with the goals of character education. Overall, the materials demonstrated high effectiveness in translating values into both cognitive understanding and observable behavior.

Discussion

The findings of this study confirm that embedding Acehnese local wisdom into character education fosters not only cognitive gains but also affective and behavioral development among students in pesantren. This aligns with findings by Sulaiman and Firdaus (2021), who emphasized that values transmitted through cultural narratives are more likely to be internalized than those taught abstractly. Similarly, Yusuf and Sari (2023) argued that revitalizing indigenous knowledge can promote more authentic and contextually relevant moral learning in students.

Several other studies reinforce the importance of localized moral education. Rahmah (2022) demonstrated that pesantren-based character programs grounded in local wisdom increased student responsibility and social awareness. Saputra and Pambudi (2021) found that the integration of regional proverbs and folklore improved students' engagement and self-reflection. Yusri et al. (2022) concluded that cultural stories in the Acehnese context enhanced learners' identity formation and empathy.

While traditional character education models—such as those proposed by Lickona (1996) and expanded by Berkowitz and Bier (2021)—stress universal principles like respect, responsibility, and honesty, this study emphasizes the necessity of cultural contextualization. Unlike Lickona's

universalist model, our findings suggest that morality is best conveyed through values embodied in local identities. For example, using Teuku Umar to illustrate moral courage provides a cultural anchor for students, enhancing both relevance and retention (Hasan, 2020; Zuhdi, 2019; Arifin et al., 2023).

The application of the Plomp design-based research (DBR) model in this cultural context also demonstrates the model's adaptability beyond its conventional use in technical domains like STEM and ICT (Anderson & Shattuck, 2012; McKenney & Reeves, 2019). By applying DBR to moral education, this study challenges assumptions that educational design is limited to cognitive competencies and highlights its utility in promoting affective and ethical learning outcomes (Plomp & Nieveen, 2010; Wahyuni & Hidayatullah, 2022).

In line with critiques from Schweisfurth (2019) and Arar and Saiti (2019), this research identifies tensions between global standardization and local relevance. Global frameworks such as the OECD's Education 2030 and UNESCO's Global Citizenship Education encourage ethical competencies but often risk superficiality when detached from learners' sociocultural roots (OECD, 2018; UNESCO, 2020). Our findings affirm the need for a glocalized model—one that is global in values yet local in form and delivery (Wartofsky, 2019; Saputra & Pambudi, 2021; Rohman & Fajar, 2020).

Additionally, this study critiques the persistence of neocolonial epistemologies in character education systems that prioritize Western moral constructs while neglecting indigenous knowledge (Tikly, 2011; Salam & Mahfud, 2022; Zubaedi, 2021). By incorporating Acehnese oral traditions, rituals, and adat, the developed modules serve not only as instructional tools but also as vehicles for cultural affirmation and resistance against epistemic domination (Yusri et al., 2022; Hashim, 2014).

The results also reflect Fry's (2003) theory of spiritual leadership, where moral growth arises from dialogue, self-inquiry, and reflection. Students did not passively absorb values they questioned, interpreted, and applied them to real-life dilemmas. This is consistent with Nucci's (2016) framework, which sees moral agency—not compliance—as the goal of education. Students initiated value-driven conversations, shared family-based reflections, and demonstrated behavioral changes rooted in ethical reasoning.

The development and application of local wisdom-based character education materials have significant implications for teacher training and professional development. One of the persistent challenges in moral education is the ability of teachers to translate abstract values into contextualized

and culturally relevant learning experiences. The findings of this study demonstrate that when teachers are equipped with structured and localized instructional resources, their confidence and effectiveness in delivering character education increase significantly.

Recent studies emphasize that teacher readiness plays a central role in the success of value-based learning. Arifin et al. (2023) argue that many educators lack pedagogical tools and conceptual frameworks for incorporating local wisdom into lessons. Rahmah (2022) found that structured training on regional values increased teachers' motivation and classroom morale. Moreover, Nugroho et al. (2022) highlight the importance of reflective practice and experiential training—such as microteaching and case-based discussions—as essential components of effective character education programs.

This opens an opportunity for integrating local wisdom modules into both preservice and in-service teacher education programs. Modules that introduce teachers to community-based moral values, supported by culturally grounded case studies, can help bridge the gap between theory and classroom application (Wahyuni & Hidayatullah, 2022; Suryadi, 2023). Participatory and inquiry-based models of training are especially recommended, as they promote reflection, cultural sensitivity, and moral modeling (Gay, 2018; Darling-Hammond et al., 2017).

Cultural narratives are not only teaching content but also relational tools that strengthen emotional bonds between teachers and students. In line with Ladson-Billings (2014) and Day (2001), this study reaffirms that culturally responsive teaching improves trust, engagement, and moral formation. When teachers share stories from students' own communities, they are perceived not just as educators but as cultural role models, which deepens the moral message conveyed (Saputra & Pambudi, 2021; Hasan, 2020).

To sustain this approach, institutions should develop teacher handbooks, sample lesson plans, and assessment rubrics rooted in local values. These tools can support implementation fidelity while allowing contextual flexibility. Additionally, teacher performance evaluations should include indicators on how educators embed character values into practice. As suggested by UNESCO (2020) and OECD (2018), such value-oriented assessments help shift educational systems from purely performance-based accountability toward values-based evaluation.

Finally, establishing collaborative communities of practice—where educators can share localized moral teaching strategies—will foster continuous improvement and innovation in this domain. These professional learning communities can become platforms for culturally responsive

curriculum development and policy advocacy (Yusri et al., 2022; Huda et al., 2017).

CONCLUSION

This study offers a contextualised model for character education by aligning indigenous Acehnese wisdom with structured pedagogical design in Islamic boarding schools. It addresses a critical gap in moral education by demonstrating how cultural identity and local epistemologies can be intentionally embedded within the curriculum through validated, practical, and context-specific materials. The integration of design-based research principles in a religious and communal learning environment further positions this work as a contribution to both educational theory and curriculum innovation in multicultural settings. Ultimately, this research underscores the need for moral education that resonates with students' lived realities and cultural narratives. As global curricula increasingly risk moral abstraction and cultural alienation, the findings advocate for a shift toward glocalised pedagogy—where ethical learning is both universal in principle and local in practice. This approach not only affirms local identities but also enriches the moral agency of students, offering a replicable and sustainable path for character education in diverse educational systems.

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