



The Moral Ecology of Islamic Education: A Theory Informed Framework for Integrating *Akhlaq*, Diversity, and Ecology

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ABSTRACT

Islamic education is expected to form character, to sustain harmony across difference, and to cultivate responsibility toward a threatened natural world. Although its tradition binds these within a single relational order, schooling pursues them apart. This study examines how *akhlaq* (character), multiculturalism, and ecological ethics are conceptualized and integrated in Islamic education, and whether *akhlaq* can connect them. A framework systematic review using best fit framework synthesis searched Scopus, OpenAlex, and Crossref (the latter two to reach under indexed Indonesian Islamic education journals) for peer reviewed articles published 2010–2026; 69 studies were synthesized against four relations of Islamic moral ecology grounded in tawhid. The review identifies two comparatively developed bridges: *akhlaq* with ecology, via eco pesantren and the Adiwiyata programme, and *akhlaq* with multiculturalism, via the religious moderation agenda. The bridge between coexistence with different others and care for creation, by contrast, appears in one study, and only one integrates all three dimensions. Interpreting this pattern, the two bridged relations are precisely those carried out by a national programme, and much of the integration appears co-locational (two agendas sharing an institution) rather than dispositional, a single *akhlaq* expressed across relations. Synthesizing these findings, we advance a theoretical proposition rather than a direct review finding: *akhlaq* is best understood not as one domain of Islamic education but as its connective disposition, with *rahmatan lil'alam* warranting the joining of care across human difference to care for creation. Its central contribution is mechanistic: how *akhlaq* connects relations as one disposition, not merely co locating educational programs.

Keywords: *Akhlaq*; Environmental Ethics; Islamic Education; Moral Ecology; Multicultural Education;

INTRODUCTION

Indonesia is an unusually demanding setting for moral education. It is at once the world's largest Muslim majority society, among its most religiously and culturally plural, and among its most ecologically stressed, facing deforestation, biodiversity loss, and climate exposure across a vast archipelago. Its schools, madrasah, and pesantren are asked to answer on three fronts at once: to form students of sound character, to sustain harmony across difference, and to cultivate responsibility toward a damaged natural world. Each front has become a national priority in its own right: character education (*pendidikan karakter*) across successive curricula, religious moderation (*moderasi beragama*) as a state agenda against intolerance, and environmental education through the Adiwiyata "green school" movement and its pesantren analogues. And each, as in education systems elsewhere, is largely pursued as a separate programme, with its own vocabulary, funding stream, and measures of success.

Within Islamic education these fronts share, in principle, a single root. The tradition frames the moral life as a web of relations, with God, with oneself, with other people, and with the created world, governed throughout by *akhlaq*, the dispositions of character that Islamic pedagogy has always placed at its centre (Bensaid & Machouche, 2019; Syafe'i, 2017). The Qur'anic vocabulary of khalifah (stewardship), amanah (trust), mizan (balance), and rahmatan lil-'alamin (mercy to all beings) ties ecological responsibility to moral duty, while wasatiyyah (moderation) and ukhuwah (fellowship) tie social harmony to it (Basri et al., 2024; Hamdan, 2026). In theory, Islamic education already possesses what secular multicultural education is still assembling: a moral order in which character, coexistence, and care for creation are one.

This study reads that order through the lens of a relational moral ecology. Drawing on the relational turn in environmental ethics, which locates value in the relationships binding people to one another and to the world (Saxena et al., 2018), and on virtue ethical accounts that tie moral formation to sustainability through a cultivated "harmony with nature" (Jordan & Kristjánsson, 2017), it treats character, pluralism, and sustainability not as separate goods but as internally related dimensions of one moral order. In Islamic terms, that order comprises four relations: to God (tawhid, hablun min Allah) as the vertical principle that makes the others cohere; to the self (tazkiyat al nafs and *akhlaq*) as the formation of character; to other diverse individuals (wasatiyyah, ukhuwah, 'adl, and rahmah) to bridge differences; and to the more-than-human world (khalifah, amanah, and mizan).

Each has deep classical roots: the disciplining of the self through *akhlaq* was systematized in *Miskawayh's Tahdhīb al Akhlāq* and *al Ghazālī's Ih'yā' Ulūm al Dīn* as the cultivation of the soul's settled dispositions (Şahin, 2018); the relation to diverse others has been articulated as an account of Muslim morality issuing in social harmony, with wasatiyyah and ukhuwah as the dispositions that govern conduct toward those who differ (Bensaid & Machouche, 2019); while the duty of stewardship toward creation runs from Seyyed Hossein Nasr's critique of the desacralisation of nature (Quadir, 2013) to the applied Islamic environmental ethics now entering schooling (Saniotis, 2011). The framework's central claim turns on *akhlaq* itself. In its classical definition (a settled state of the soul from which conduct issues, a disposition rather than a body of content), *akhlaq* is not one dimension of this moral ecology but the connective principle running through all four. It is therefore the means by which a classroom might form character, coexistence, and ecological responsibility together rather than in sequence. These elements play distinct roles in the framework's architecture (Figure 1): tawhid is the ontological foundation that makes the four relations cohere; *akhlaq* is the formative, connective disposition through which they are enacted with students; rahmatan lil'alamin is the normative warrant that licenses joining care across human difference to care for creation; and wasatiyyah, ukhuwah, 'adl, khalifah, amanah, and mizan are the relational expressions specific to each relation. Separating foundation, mechanism, warrant, and expression keep the framework from collapsing into a single undifferentiated appeal to Islamic

values, and clarifies that only one element, *akhlaq*, is claimed to do connective work.

In practice, however, the strands stay apart, and the scholarship reflects the separation. One body of work integrates Islamic environmental ethics with schooling: the thriving literature on eco pesantren, eco madrasah, and Qur'anic ecological pedagogy grounded in khalifah and mizan (Herdiansyah et al., 2019; Karman et al., 2023; Hamdan, 2026; Widodo, 2026). A second integrates Islamic character formation with multicultural harmony, showing how *akhlaq*, *wasatiyyah*, and *rahmatan lil'alamin* cultivate tolerance and cohesion in diverse schools (Firdaus & Suwendi, 2025; Kholil et al., 2026; Noe et al., 2026). A third connects religious moderation to ecological awareness (Suryo Alam et al., 2026). Yet these are pairwise integrations: the environmental ethics literature seldom foregrounds pluralism. The multicultural character literature seldom reaches the ecological; and where moderation and ecology meet, character formation is not the connecting principle.

Two observations sharpen the gap. First, the organizing idea appears available but, across the retrieved corpus, largely undeveloped: scholars describe the pesantren as a "normative ethical ecology" (Ridho et al., 2026) and use ecological systems theory to model *akhlaq* formation (Fahrudi, 2022), yet none of the retrieved studies develops the term or the working construct of a moral ecology of the classroom for Islamic multicultural education. Second, the one place the wider field has attempted precisely this integration lies outside Islam: Eyng and Villas Boas (2025) bridge intercultural education and integral ecological ethics through the Catholic vision of *Laudato Si'*, leaving an Islamic counterpart conspicuously open. No retrieved study frames the integration of *akhlaq*, multiculturalism, and ecological ethics as a classroom level moral ecology bridged by *akhlaq*; the nearest attempt, examined below, brings the three together at the level of educational philosophy rather than classroom pedagogy.

This study therefore pursues three questions: (RQ1) how Islamic educational scholarship conceptualises *akhlaq*, multicultural and *wasatiyyah* values, and ecological ethics, and how far these are integrated; (RQ2) how the three dimensions relate, and what accounts for the pattern; and (RQ3) how *akhlaq* might function as the connective principle of a classroom moral ecology, and what pedagogical principles follow. In answering them the study contributes "the moral ecology of the classroom" as an organising construct for Islamic multicultural education, reconceives *akhlaq* as the connective disposition of the whole rather than one value domain, distinguishes dispositional integration (a single *akhlaq* expressed across relations) from the mere co location of educational programmes as the study's central theoretical mechanism, and offers an Islamic, classroom level complement to the Catholic intercultural ecological synthesis of Eyng and Villas Boas (2025) and to emerging secular work on the moral ecology of education (Lee, 2024), advancing the epistemic plurality this journal seeks to cultivate while addressing a practical need of Indonesian schools. The paper's high-level contribution is therefore not the relatively intuitive claim that character, coexistence, and ecological responsibility should be integrated, but the more specific mechanism it isolates: how *akhlaq* can function as a dispositional connector, and how such dispositional integration differs from the mere co location of separately funded educational programmes. Read this way, the study is better characterised as a theory informed framework synthesis than as a conventional systematic review.

METHODS

Design and Analytical Framework

This study is a framework systematic review reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta Analyses (PRISMA 2020) statement and analyzed through best fit framework synthesis (Carroll et al., 2013) layered on thematic synthesis (Thomas & Harden, 2008). The framework is the four-relation Islamic moral ecology

outlined above, against which the corpus was read with sustained attention to whether *akhlaq* operates as a connective principle across the relations. To guard against the circularity that a purely framework driven coding would invite (reading the corpus only through the lens the framework supplies, then reporting the framework confirmed), the synthesis proceeded in two stages. First, an inductive thematic synthesis (Thomas & Harden, 2008) coded the studies bottom up, letting the themes and relations that the corpus itself foregrounds without reference to the four-relation scheme. Second, these inductively derived themes were mapped onto priori framework, and the two were compared for convergence. The connective role attributed to *akhlaq* is treated as credible only to the extent that the inductive stage independently surfaces character formation as the recurring hinge between the other relations; where the stages diverge, the divergence is reported rather than smoothed away. Framework synthesis was chosen deliberately: the organizing construct is nearly absent from the field as an explicit term while its constituent literatures are large, so a conventional aggregative review would return either too little or too much of a single strand. The review was not preregistered, which is acknowledged as a limitation; to support transparency and partial reproducibility, the search strategy, eligibility criteria, and study selection decisions are reported in full below and, together with the extraction matrix, in the supplementary materials.

Search Strategy and Eligibility Criteria

A distinctive feature of the literature shaped the search. Most Indonesian Islamic education journals are not indexed in Scopus or Web of Science but are discoverable through open bibliographic infrastructure; a Scopus search was therefore run first but treated as partial and supplemented with OpenAlex and Crossref, which index the DOI registered Indonesian journals hosted on national platforms such as Garuda and Moraref, together with the Directory of Open Access Journals and backward and forward citation chasing. Searches combined three concept blocks (*akhlaq* and character; multicultural, wasatiyyah, and moderation; and environmental, ecological, and khalifah) in both English and Indonesian (for example, *akhlaq*, *karakter*, *moderasi beragama*, *multikultural*, *lingkungan*, *ekologi*, *pesantren*, *madrasah*, and *Adiwiyata*). The three databases served deliberately different functions. The Scopus query conjoined all three concept blocks and so operated as a high precision core search that isolates the rare studies addressing every dimension at once; because it requires the ecological block, it cannot by design retrieve two-dimension studies and returned only eight records. Pairwise studies (for instance *akhlaq* with multiculturalism but without ecological terms) were therefore reached not through Scopus but through the deliberately looser, block pairwise OpenAlex and Crossref discovery queries (Supplementary Material A), with backward and forward citation chasing added for sensitivity. Making these complementary roles explicit preempts the concern that a single conjunctive query might have systematically excluded relevant pairwise evidence. The window was 2010–2026; peer reviewed articles in English or Indonesian were eligible, consistent with the journal's Global South orientation; and searches were executed in July 2026, with full strings provided in the supplementary materials. Studies were included if they were set in Islamic education (pesantren, madrasah, Islamic religious education, or Islamic higher education) or in Muslim majority multicultural education, addressed at least one of the three dimensions as an educational matter, and carried extractable content on how that dimension is taught or related to the others. This threshold is deliberately inclusive. Studies addressing two or three dimensions are the analytic focus of the review, but single dimension studies were retained because the distribution reported in Table 2 is meaningful only against the denominator they provide: the claim that the pairwise and three-way cells are sparse requires knowing how much single dimension work the same searches returned. Studies were excluded if they fell outside Islamic education, were purely theological without educational application, addressed adjacent but off topic domains such as *pesantren* sanitation or institutional history, offered no

extractable educational content, or were not retrievable.

Study Selection, Data Extraction, and Synthesis

The Scopus search returned only eight records, seven of which met the inclusion criteria; this is itself informative, since all eight addressed *akhlaq* and moderation or multiculturalism while none included the ecological dimension, confirming both that Scopus undercovers this literature and that three-way integration is rare. Supplementary searching in OpenAlex and Crossref yielded a large set, reduced to 65 unique education relevant records after an education-relevance filter and de-duplication; combined with the Scopus records and citation chasing, and after removing off-topic and duplicate items, 69 studies were retained for synthesis (Figure 2). All 69 included studies are catalogued with full bibliographic identifiers, DOIs, and study IDs in Supplementary Table S1; the in-text reference list cites the studies discussed illustratively together with the theoretical background and methodological sources the review draws on, so that included primary studies, background references, and methodological references remain distinguishable. For each study we extracted authorship, year, setting and educational level, language, aims, method, the dimensions addressed, the Islamic concepts invoked (*akhlaq*, *khalifah*, *mizan*, *wasatiyyah*, and *rahmatan lil'alam*), the integrative mechanism reported, and whether a moral ecology framing was explicit, implicit, or absent. Because the corpus combined empirical and conceptual studies and full texts were not obtained for every item, a formal risk of bias instrument such as the Mixed Methods Appraisal Tool was not applied as an inclusion threshold. Instead, every one of the 69 studies was appraised on five structured dimensions recorded in Supplementary Table S1: methodological transparency, design appropriateness, sampling or context clarity, analytic transparency, and evidential contribution. Each dimension was rated strong, moderate, or limited from the study's reported methods, and the ratings were used to weight interpretive claims rather than to exclude studies, so that assertions resting mainly on studies rated limited on several dimensions are hedged accordingly and the single study frontier cells are treated as the weakest evidence in the corpus. This design level appraisal is honestly lighter than a validated instrument applied to full texts and is reported as such. Coding proceeded from descriptive to analytical themes, which were mapped onto the four relations and examined for the connective role of *akhlaq*; given a heterogeneous and largely qualitative corpus, synthesis was narrative rather than statistical.

Trustworthiness and Limitations

Because the review synthesizes previously published literature and did not involve human participants, personal data, or animal subjects, institutional review board approval and informed consent were not applicable. Trustworthiness was pursued through a documented and reproducible search across multiple databases and two languages, a transparent audit trail of screening decisions, and structured extraction and design level appraisal, supporting the dependability and confirmability of the synthesis. Two limitations of the procedure should be stated plainly. Screening was independently duplicated by a second reviewer, a co-author with specialist expertise in Islamic studies, who assessed all 72 database records against the eligibility criteria without sight of the first reviewer's decisions. The exercise ran in two rounds. Pilot or calibration screening of this kind, in which the criteria are tested against independent application before reliability is assessed, is standard practice in systematic reviewing; here it was conducted after the initial screening rather than before it, because the second reviewer joined the project during revision. The first round served as calibration and proved unexpectedly productive. Agreement was low (51.4 per cent; Cohen's $\kappa = 0.204$), but the disagreement was systematic rather than random: there was no instance in which the second reviewer would have included a record the first had excluded, and the differences traced to a defect in our own written

criteria, which required a study to address at least two of the three dimensions while the corpus deliberately retained single dimension studies as the denominator for Table 2.

The second reviewer had applied the stated criterion correctly; the statement was at fault. The criterion was corrected as reported above, and screening was then repeated in full. In the second-round raw agreement was 80.6 per cent across all 72 records. Because the first reviewer had also applied a purposive trimming step that the second reviewer was not asked to replicate, reliability for the criteria-based decisions is reported separately: across those 60 records, the agreement was 96.7 per cent and Cohen's $\kappa = 0.651$, conventionally read as substantial. Kappa computed across all 72 records (0.149) is depressed by the prevalence problem familiar in reliability studies, since the second reviewer included 68 of 72 records; prevalence adjusted agreement for the same set is 0.611. Two substantive disagreements remained and were resolved by discussion against the written criteria. Gade (2012) was removed as religious studies scholarship without educational application, which reduced the corpus from seventy studies to 69; Mănoiu et al. (2016) was retained because it concerns environmental education explicitly. Two features of the procedure should be stated plainly: the second round was not blind, since the same records had been seen in the first, and extraction, unlike screening, remained the work of a single reviewer. The searches followed documented strings, reported in the supplementary materials; in keeping with a framework synthesis, database results were supplemented by citation searching, and a surplus of single dimension studies was purposively trimmed to keep the corpus tractable; both are disclosed here for transparency. Coverage of grey literature and of journals absent from the searched platforms also remains incomplete, and the corpus is heavily Indonesian, which suits the target readership but limits transferability to other Muslim majority contexts.

RESULTS

The 69 studies met the inclusion criteria (Table 1). The corpus is overwhelmingly Indonesian and recent: publications concentrate after 2019 and rise steeply toward 2025–2026, settings are dominated by pesantren and madrasah, and three studies appear in the journal of Pendidikan Multikultural (Futaqi, 2020; Yenuri, 2021; Sitoresmi et al., 2026), alongside a thin international tier (Şahin, 2018; Mariyono & Wiyono, 2026). Methodologically, the corpus is dominated by single site qualitative studies, descriptive qualitative accounts and case studies, alongside document and content analyses, with few comparative or longitudinal designs and a recent turn to systematic and scoping reviews (Adiyono & Sholeh, 2025; Fauyan et al., 2026; Hamdan, 2026); the design, setting, and participants of each study are detailed in Supplementary Table S1.

Table 1. Corpus Characteristics

Characteristic	Categories (n)
Publication period	2010–2018 (11); 2019–2022 (20); 2023–2026 (38)
Discovery source	OpenAlex (25); Crossref (24); citation chasing / snowball (13); Scopus (7)
Setting	Predominantly pesantren and madrasah in Indonesia; small international tier
Design	Predominantly qualitative (descriptive and case studies) with document/content analyses; several systematic/scoping reviews and conceptual papers; few comparative or longitudinal designs
Language	Indonesian and English

Classifying each study by how many of the three moral ecological relations it addresses produced the distribution in Table 2. Two edges are comparatively well populated: *akhlaq* with ecology (17 studies) and *akhlaq* with multiculturalism (16). A further fifteen studies address *akhlaq* alone, ten multiculturalism alone, and ten ecological ethics alone. Two cells contain a single study each: the bridge between multiculturalism and ecology contains a single study, and full three-way integration contains one. The two-stage synthesis lends this distribution some independence from the framework. Read inductively first, before any mapping onto the four-relation scheme, the corpus foregrounds six recurring themes: character formation as habituation and exemplarity; character as reasoned ethical competence; eco theological grounding of environmental duty in khalifah, amanah, and mizan; institutional greening through Adiwiyata and eco-*pesantren*; religious moderation as a route to social cohesion; and multicultural education treated as itself a means of forming character. Mapped onto the framework, the two poles of character formation correspond to the relation to self, moderation and multiculturalism to the relation to diverse others, and eco theology and institutional greening to the relation to the more than human world. The two stages converge on one point in particular: in the studies that bridge two relations, character formation recurs as the hinge that carries the connection, which is what the framework attributes to *akhlaq*. The convergence is not total, and the exceptions are retained rather than re-coded; part of the moderation literature frames cohesion in civic or policy terms without invoking character at all.

Each dimension is richly represented, but along its own line. *Akhlaq* is treated across a spectrum: at one pole as transmissive virtue, formed through habituation, exemplarity, and worship and evaluated by conduct (Syafe'i, 2017; Baharun & Ummah, 2018; Fahrudi, 2022; Mahmud et al., 2023); at the other as an ethical competence, a capacity for reasoned moral judgement reaching beyond rule following, most explicitly in the seven stage "Akhlak Dilemma Competence" model of Ali Ridho et al. (2026). Multiculturalism enters chiefly through the state agenda of religious moderation, articulated as wasatiyyah, tasamuh, and rahmatan lil'alam and cultivated as a support for cohesion and a counter to radicalism (Suprpto, 2020; Zakariyah et al., 2022; Maskuri et al., 2020; Sutarja et al., 2024; Wisnarni, 2023; Kholil et al., 2026; Noe et al., 2026). Ecological ethics is grounded theologically in khalifah, amanah, and mizan and Qur'anic eco-theology (Karman et al., 2023; Mănoiu et al., 2016; Nur et al., 2025; Hamdan, 2026; Basri et al., 2024) and operationalized institutionally through the Adiwiyata programme and eco *pesantren* (Herdiansyah et al., 2019; Widodo, 2026; Hermawansyah, 2025).

Table 2. Coverage of the Three Moral Ecological Dimensions

Dimensions Addressed	n	Illustrative Studies
<i>Akhlaq</i> / character only	15	Syafe'i (2017); Baharun & Ummah (2018)
Multiculturalism / moderation only	10	Suprpto (2020); Zakariyah et al. (2022)
Ecological ethics only	9	Karman et al. (2023); Nur et al. (2025)
<i>Akhlaq</i> × ecology	17	Herdiansyah et al. (2019); Hidayat & Sundari (2014); Bahtiar et al. (2025)
<i>Akhlaq</i> × multiculturalism	16	Sifa & Nurhadi (2019); Firdaus & Suwendi (2025); Kholil et al. (2026)
Multiculturalism × ecology	1	Suryo Alam et al. (2026)
All three dimensions	1	Mariyono & Wiyono (2026)

Table 3. The Relations of Islamic Moral Ecology, Core Concepts and Illustrative Studies

Relation	Core Islamic concepts	Illustrative studies
To God (connective)	tawhid; hablun min Allah	Hamdan (2026); Şahin (2018)
To self (character)	<i>akhlaq</i> ; tazkiyat al nafs; adab	Syafe'i (2017); Baharun & Ummah (2018); Ali Ridho et al. (2026)
To diverse others (pluralism)	wasatiyyah; ukhuwah; 'adl; rahmah	Firdaus & Suwendi (2025); Kholil et al. (2026); Noe et al. (2026)
To the more than human world (ecology)	khalifah; amanah; mizan; hifz al bi'ah	Herdiansyah et al. (2019); Karman et al. (2023); Widodo (2026)
Connective disposition (across all four)	<i>akhlaq</i> as khuluq (settled disposition); rahmatan lil'alamin	Suryo Alam et al. (2026); Mariyono & Wiyono (2026)

The two populated bridges present integration in concrete classroom and institutional terms. In the *akhlaq* ecology cluster, studies report the formation of an "environmentally caring character" (karakter peduli lingkungan) by embedding ecological content directly in the Aqidah *Akhlaq* subject and by grounding conservation in eco theology and eco Sufism (Hafida & Wahid, 2018; Hidayat & Sundari, 2014; Anggraini et al., 2022; Bahtiar et al., 2025; Khumairo et al., 2025; Syukri et al., 2024; Zulfhadli, 2024). In the *akhlaq* multiculturalism cluster, pesantren and madrasah cultivate tolerant, moderate character through curriculum integration, dialogic pedagogy, and institutional culture, and several treat multicultural education as itself a means of forming *akhlaq* (Sifa & Nurhadi, 2019; Rajab, 2020; Firdaus & Suwendi, 2025; Futaqi, 2020; Yenuri, 2021; Fadlilah et al., 2026).

Across the two cross cutting cells, retrieved evidence is sparse. Only one retrieved study connects multiculturalism to ecology directly: Suryo Alam et al. (2026) read religious moderation and ecological education together through a "social ecology" lens, uniting wasatiyyah with khalifah; although it reports the formation of an environmentally conscious character, it frames the connection through religious moderation and stewardship rather than through *akhlaq* as the connective disposition. Likewise, only one study integrates all three dimensions: Mariyono and Wiyono (2026) propose a "transformative Islamic education" as an eco-social synthesis for religious education in the Anthropocene, drawing character, social justice, and ecology into one frame at the level of educational philosophy, without positioning *akhlaq* as the connective principle. Table 3 sets out how the core Islamic concepts populate the four relations across the corpus, together with illustrative studies.

DISCUSSION

Patterns and Mechanisms of Uneven Integration

Read against the framework, the corpus falls into a coherent and telling pattern. Each dimension is well developed on its own, and two of the three possible bridges are mature (*akhlaq* is routinely joined to ecological care and to plural coexistence), but the bridge between

coexistence and creation is carried by a single study, and only one study integrates all three dimensions. Interpreting this topology, rather than merely recording it, is where the analysis moves beyond description, and two mechanisms account for the pattern. The first mechanism is institutional. The two relations that bridged to *akhlaq* are precisely the two carried by a national programme: the Adiwiyata "green school" scheme scaffolds the *akhlaq* ecology bridge, and the *moderasi beragama* agenda scaffolds the *akhlaq* multiculturalism bridge. Each programme supplies a shared vocabulary, dedicated funding, and an institutional occasion that pull character formation and a second agenda into the same space. The one relation with no such programme, diversity and ecology together, is also the one that has not been institutionalised. This alignment is striking, but it rests on only three relations and two programmes; it is therefore offered as a hypothesis to be tested rather than a demonstrated cause. Other readings are possible (the empty edge may simply be the field's newest frontier, or intrinsically harder to operationalise than either mature bridge), and the programme account is advanced as the most parsimonious explanation, not the only one. Read cautiously, the gap may be an artefact of the field's scaffolding rather than of its theology: nothing in the tradition forbids joining care across human difference to care for creation, and *rahmatan lil'alam* positively invites it, yet because no programme has named the two together, neither the classroom practice nor the scholarship that studies it appears to have formed. The reading also predicts where the edge might be built: not by exhortation but by a discourse, plausibly *rahmatan lil'alam* itself, capable of doing for diversity and ecology what Adiwiyata did for character and ecology.

Co-locational versus Dispositional Integration

The second mechanism qualifies the apparent maturity of the two populated bridges. Much of what the corpus presents as integration is co-locational: two agendas occupy one institution or one curriculum slot, an Adiwiyata madrasah that is also a moderate one, without either being reorganised by the other. A narrower strand is dispositional: a single *akhlaq* is expressed across relations, so that environmental care and tolerance are the same disposition meeting different objects, as in the studies that teach stewardship as an expression of character rather than as conservation technique (Herdiansyah et al., 2019; Hidayat & Sundari, 2014; Sifa & Nurhadi, 2019). The distinction matters because dispositional integration should better survive the withdrawal of the programme that scaffolds it, whereas co-locational integration is more likely to dissolve once its funding lapses. Read this way (and the reading is analytical rather than a systematic recount), the mature bridges may be mature mostly in the shallower, co-locational sense, and genuine dispositional integration rarer than the cluster counts alone would suggest.

Akhlaq as a Proposed Connective Mechanism

These two mechanisms together support the framework's central claim. Where integration succeeds (character with ecology, character with diversity), it succeeds because *akhlaq* connects, care and tolerance being presented as dispositions of character rather than as discrete competencies; where integration fails, *akhlaq* as an organizing principle is precisely what is absent, the connection being attempted instead through policy or theology. This is direct, if correlational, evidence that *akhlaq* is not one dimension of an Islamic moral ecology but its connective tissue. The claim should be held at the strength the evidence permits: an inference from the distribution of success and failure across a mostly qualitative corpus, not a demonstrated causal effect. At that strength, however, it is well supported, and it is the study's principal theoretical contribution: *akhlaq*, in its classical sense as a settled disposition, is the mechanism by which a classroom can form character, coexistence, and ecological responsibility as facets of one moral life, warranted for its hardest edge by *rahmatan lil'alam*.

Boundary Conditions and Counter Evidence

Set against prior research, the framework extends each adjacent literature rather than repeating

it. The eco pesantren and Islamic environmental ethics scholarship offers a strong account of the human nature relation and its Qur'anic grounding but works mainly at the institutional level of green management and rarely reaches cultural pluralism (Widodo, 2026; Hamdan, 2026; Basri et al., 2024); the present framework relocates that relation in the classroom and links it to coexistence. The moderation and multicultural character scholarship supplies the self-others relation but seldom reaches the ecological (Kholil et al., 2026; Noe et al., 2026; Fauyan et al., 2026); the framework adds ecology through the same *akhlaq* logic those studies already use. Alam et al. (2026) reached the diversity ecology edge but routed it through moderation rather than character; Mariyono and Wiyono (2026) reach all three dimensions but at the altitude of educational philosophy rather than pedagogy; and where Eyng and Villas Boas (2025) achieve an intercultural ecological ethical synthesis from within Catholic social teaching, the present framework supplies the Islamic counterpart they leave open. Three objections deserve direct answer. That the gap might be an artefact of the search is unlikely, since the pattern survives a bilingual, multi database search designed to reach under indexed Indonesian journals; still, single study cells describe scarcity in the retrieved corpus rather than proven absence and are reported as such. That the true connector might be tawhid rather than *akhlaq* mistakes their division of labour: tawhid supplies the vertical reason the relations are one, but it is not itself a teachable classroom act, whereas *akhlaq* is the formable disposition through which that coherence is enacted with students. *Rahmatan lil 'alamin* might be doing the work instead of misreading its role: it is the warrant that licenses joining the two mercies, while *akhlaq* is the mechanism that forms them, so the framework requires both.

A fourth objection cuts deeper. The single study that does bridge diversity and ecology, Alam et al. (2026), reaches that edge without *akhlaq* at all, routing the connection through religious moderation, so integration plainly does not require *akhlaq*. The framework's claim is therefore narrower, and in that form testable: not that integration cannot occur otherwise, but that the durable, dispositional integration that outlasts the withdrawal of its scaffolding programme is what *akhlaq* distinctively affords, whereas policy routed integration of the kind Suryo Alam et al. describe is precisely the co-locational form the framework expects to be more fragile. It would be weakened if policy routed integration proved as durable as *akhlaq* centred integration, or if dispositional integration were shown to form routinely without *akhlaq*. These are questions that the present corpus cannot settle but classroom research can.

Implications for Islamic Multicultural Education

One implication may reach beyond Islamic education. The separation observed here, between an education that teaches living well with different others and one that teaches living well with the natural world, is unlikely to be peculiar to Muslim settings, since the two agendas are institutionally distinct enterprises, differently staffed and funded, in most education systems; secular scholarship on the moral ecology of schooling has similarly observed that institutions could do considerably more to integrate their social and ecological formation than they presently do (Lee, 2024). Whether the same topology holds elsewhere is an empirical question this study cannot settle, but the possibility strengthens the case that the framework addresses a need that is not merely local. For scholarship beyond Indonesia, the synthesis offers transferable contributions rather than a local case report. It supplies a construct, the co-locational versus dispositional distinction, that other traditions can use to ask whether their own social and ecological curricula have genuinely fused or merely co habit; it shows, from a Global South corpus, that the diversity ecology edge stays thin even where a religious tradition positively warrants joining the two, which reframes that gap as structural rather than culturally specific; and it demonstrates how an indigenous ethical vocabulary such as *akhlaq* and *rahmatan lil'alamin* can carry theoretical work that secular integrative frameworks approximate in other terms, contributing to the epistemic justice conversation the journal foregrounds by letting a

non-Western category name the mechanism rather than merely illustrate a Western one.

For practice and policy, three implications follow. The widespread *Adiwiyata plus Aqidah Akhlaq* model should be extended from a two relation to a three relation form, so that the "green madrasah" is deliberately also a plural and moderate one, with the connection formed as character rather than added as a further programme. *Rahmatan lil'alam* should be taught as an integrating principle rather than a slogan, giving teachers a familiar theological anchor for the edge the field currently leaves empty. And cultivation should be lodged in classroom relationships and the daily *akhlaq* they form (teacher exemplarity, dialogic *halaqah*, and habituation ripening into judgement) rather than delegated to institutional green management alone; aligning the *moderasi beragama* agenda, the *Adiwiyata* programme, and character education under a single moral ecology rubric would let three separately funded initiatives reinforce rather than compete with one another.

Several limitations qualify these claims. Coverage of grey literature and of journals absent from the searched platforms remains incomplete, and the corpus is heavily Indonesian, which suits the target readership but limits transferability. Many included studies are single site case studies of variable methodological strength, and the two frontier cells rest on one study each, so claims about the missing edges describe scarcity rather than proven absence. Screening and extraction were conducted by a single reviewer, without independent duplication. There is, finally, a reflexive limitation worth naming: a review arguing that the field is fragmented is itself constrained by that fragmentation, since it must infer an integrative principle from studies that mostly did not set out to test one. Relatedly, the framework guided a single reviewer's coding, so the connective role it assigns to *akhlaq* is a reading internal to that framework rather than an independent test of it, a caution inherent to interpretive framework syntheses. Accordingly, the framework is offered as a synthesis derived proposal awaiting empirical test. Future work should prioritise the diversity ecology edge, asking whether *rahmatan lil'alam* anchored pedagogy can form a single disposition toward difference and creation and whether it survives the removal of programme scaffolding; validate the framework by operationalising the four relations and the co-locational dispositional distinction into observable classroom features; extend the analysis comparatively beyond Indonesia; and develop measures adequate to dispositional rather than merely co-locational integration.

CONCLUSION

Indonesian Islamic education is asked, like schooling everywhere, to form upright character, to sustain harmony across deep difference, and to protect a threatened creation, and it pursues these largely apart even though its own tradition binds them. This review shows that the scholarship reflects that separation with unusual clarity: *akhlaq* is joined to ecology and *akhlaq* is joined to coexistence, each in a substantial literature, but the two are almost never joined to each other, and all three almost never at once. The pattern is not accidental; it follows the scaffolding of national programmes, and much of it is co-locational rather than the deeper, dispositional integration the tradition makes possible. Taken together, these findings answer the study's three questions: the dimensions are conceptualised richly but separately, each shaped by its institutional sponsor; they relate in a predictable topology whose gaps track the absence of a common programme; and *akhlaq*, understood in its classical sense as a settled disposition rather than a content area, is the principle capable of connecting them. The remedy the tradition itself suggests is therefore not a new programme but a recovered principle: under *tawhid*, and through *akhlaq*, character, pluralism, and ecological responsibility become facets of one moral life, so that a classroom forming a single integrated *akhlaq* (warranted for its hardest edge by *rahmatan lil'alam*) can cultivate them together. Framing the moral ecology of the classroom in these terms gives Islamic multicultural education a way to teach mercy to all beings as one lesson rather than three, and, alongside its secular and Catholic counterparts, an Islamic voice

in a shared and urgent task. The framework is, in the end, a synthesis derived proposal whose reach is bounded by a largely Indonesian and qualitative corpus and which now awaits classroom test; that the same gap appears outside Islam nonetheless suggests the lesson is not Islamic education's alone to learn.

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DATA AVAILABILITY STATEMENT

The core review materials are provided with the article: the full search strings appear in Supplementary Material A, and the data extraction matrix for all 69 included studies appears in Supplementary Table S1. The remaining review records (the complete list of records identified and the screening decisions) are available from the corresponding author upon reasonable request.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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ETHICAL APPROVAL STATEMENT

This study is a systematic review of previously published literature and did not involve human participants, personal data, or animal subjects. Institutional review board approval and informed consent were therefore not applicable.

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APPENDIX

Supplementary Table S1. Characteristics and structured design level appraisal of the 69 included studies

Compiled from the review's extraction records. All 69 included studies are listed with bibliographic identifiers (DOI). Study design, setting, and participants were extracted from each study's abstract or full text. Part B reports a structured design level appraisal added in revision; it is not a validated critical appraisal instrument applied to full texts, and was used to weight interpretive claims rather than to exclude studies.

Part A. Characteristics

#	Author (year)	Setting	Study design	Participants/data	Dimensions	Via	DOI
S01	Dwi Mariyono & Dwi Fitri Wiyono (2026)	Not applicable (conceptual/review)	Systematic/scoping review	—	All three	OpenAlex	10.1080/01416200.2026.2691221
S02	Makrufah & Abror (2026)	Pesantren / boarding school	Qualitative case study	—	Akhlaq + Ecology	Crossref	10.21070/ijins.v27i1.1889
S03	Widiawaty et al. (2026)	Madrasah (general)	Qualitative case study	—	Akhlaq + Ecology	Crossref	10.37812/fikroh.v19i2.2358
S04	Nini Maulani & Balqis (2026)	Primary (MI/SD)	Qualitative (descriptive)	28 informants	Akhlaq + Ecology	Crossref	10.20885/ijcer.vol10.iss1.art4
S05	Siti Khumairo et al. (2025)	School (general)	Qualitative (descriptive)	—	Akhlaq + Ecology	OpenAlex	10.58223/al-abshar.v4i1.463
S06	Saikhu et al. (2025)	Pesantren / boarding school	Qualitative case study	—	Akhlaq + Ecology	Crossref	10.61650/ajis.v3i2.135
S07	Rahmadani Akbar et al. (2025)	Junior secondary (MTs/SMP)	Qualitative case study	—	Akhlaq + Ecology	Crossref	10.61132/jmpai.v3i5.1451
S08	Bahtiar et al. (2025)	Junior secondary (MTs/SMP)	Qualitative (descriptive)	—	Akhlaq + Ecology	Crossref	10.35719/jier.v6i3.486
S09	Molina Ibrahim et al. (2024)	Not applicable (conceptual/review)	Conceptual/theoretical (no empirical design)	—	Akhlaq + Ecology	OpenAlex	10.35335/kbbzar83
S10	Hidayat, N. & Sundari, E. (2014)	Primary (MI/SD)	Phenomenological field study (qualitative)	Informants (purposive & snowball)	Akhlaq + Ecology	Crossref	10.14421/al-bidayah.v6i1.9037
S11	Zulfhadli (2024)	Primary (MI/SD)	Qualitative case study	100 students	Akhlaq + Ecology	Crossref	10.18860/jie.v11i1.13238
S12	Syukri, S. et al. (2024)	Pesantren / boarding school	Document/content analysis	—	Akhlaq + Ecology	Snowball	10.14421/jpi.2024.131.1-12
S13	Lubis (2022)	Senior secondary (MA/SMA)	Quantitative (survey/statistical)	100 siswa	Akhlaq + Ecology	Crossref	10.25299/al-thariqah.2022.vol7(1).8847
S14	Anggraini et al. (2022)	Junior secondary (MTs/SMP)	Qualitative (descriptive)	—	Akhlaq + Ecology	Crossref	10.46799/jss.v3i2.299
S15	Anie Rohaeni et al. (2021)	Senior secondary (MA/SMA)	Qualitative case study	—	Akhlaq + Ecology	OpenAlex	10.7777/jiemr.v2i4.174
S16	Herdis Herdiansyah et al. (2019)	Higher education	Library/literature study	—	Akhlaq + Ecology	OpenAlex	10.24042/klm.v12i2.2834
S17	Nur Hafida & Abdul Wahid (2018)	Junior secondary (MTs/SMP)	Qualitative case study	—	Akhlaq + Ecology	OpenAlex	10.32806/jf.v8i2.3295
S18	Yasin (2019)	School (general)	Qualitative case study	—	Akhlaq + Ecology	Crossref	10.28918/isjoust.v3i2.2265
S19	Hamdan, H. (2026)	Senior secondary (MA/SMA)	Systematic/scoping review	—	Ecology	Snowball	10.38073/jpi.4545

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S20	Widodo, C.D. (2026)	Junior secondary (MTs/SMP)	Quantitative (survey/statistical)	—	Ecology	Snowball	10.21697/seb.5894
S21	Hermawansyah (2025)	Pesantren / boarding school	Qualitative (descriptive)	—	Ecology	Crossref	10.47625/fitrah.v16i1.982
S22	Nur, A. et al. (2025)	Not applicable (conceptual/review)	Conceptual/theoretical (no empirical design)	—	Ecology	Snowball	10.14421/qh.v26i2.6312
S23	Basri, S. et al. (2024)	Not applicable (conceptual/review)	Systematic/scoping review	—	Ecology	Snowball	10.24252/diversity.v5i2.52342
S24	Karman Karman et al. (2023)	Pesantren / boarding school	Ethnographic (qualitative)	—	Ecology	OpenAlex	10.15575/jpi.v9i2.24933
S25	Rofiqi & Usman (2020)	Primary (MI/SD)	Qualitative (descriptive)	—	Ecology	Crossref	10.19105/re-jiem.v3i2.4249
S26	Nurhadi & Irfaida (2019)	Junior secondary (MTs/SMP)	Qualitative case study	—	Ecology	Crossref	10.19105/re-jiem.v1i2.2087
S27	Valentina-Mariana Mănoiu et al. (2016)	Not applicable (conceptual/review)	Qualitative (descriptive)	—	Ecology	OpenAlex	10.15551/lsgdc.v42i1.1113
S29	Sitoresmi et al. (2026)	Pesantren / boarding school	Library/literature study	—	Multiculturalism	Crossref	10.31537/pandalungan.v4i1.2811
S30	Ushansyah et al. (2026)	Early childhood (PAUD/RA)	Library/literature study	—	Multiculturalism	Crossref	10.47467/reslaj.v8i7.12288
S31	Fauyan, M. et al. (2026)	Primary (MI/SD)	Systematic/scoping review	—	Akhlaq + Multiculturalism	Scopus	10.26811/peuradeun.v14i1.1213
S32	Fadlilah et al. (2026)	Pesantren / boarding school	Qualitative (descriptive)	—	Akhlaq + Multiculturalism	Scopus	10.31538/munaddhomah.v7i2.2589
S33	Kholil, K. et al. (2026)	Higher education	Qualitative case study	97 students	Akhlaq + Multiculturalism	Snowball	10.38035/ijam.v4i4.1770
S34	Noe, W. et al. (2026)	Junior secondary (MTs/SMP)	Document/content analysis	—	Akhlaq + Multiculturalism	Snowball	10.3389/feduc.2026.1760579
S35	Arianti, D. et al. (2026)	Family/community	Library/literature study	—	Akhlaq + Multiculturalism	Snowball	10.51574/ijrer.v5i2.4768
S36	Mawardi, A. et al. (2025)	Junior secondary (MTs/SMP)	Quantitative (survey/statistical)	—	Akhlaq + Multiculturalism	Scopus	—
S37	Adiyono, A. & Sholeh, M. (2025)	Senior secondary (MA/SMA)	Systematic/scoping review	—	Akhlaq + Multiculturalism	Scopus	10.55831/ajis.v10i3.805
S38	Firdaus, S. et al. (2025)	Not applicable (conceptual/review)	Library/literature study	—	Akhlaq + Multiculturalism	Snowball	10.35445/alishlah.v17i1.6579
S39	Sutarja et al. (2024)	Junior secondary (MTs/SMP)	Design/development (R&D)	—	Akhlaq + Multiculturalism	Scopus	10.24857/RGSA.V18N2-076
S40	Devi Indah Sari et al. (2023)	Not applicable (conceptual/review)	Conceptual/theoretical (no empirical design)	—	Multiculturalism	OpenAlex	10.31004/joe.v5i2.873
S41	Wisnarni (2023)	School (general)	Qualitative case study	—	Akhlaq + Multiculturalism	Scopus	10.24101/logos.2023.40
S42	Zakariyah Zakariyah et al. (2022)	Pesantren / boarding school	Qualitative (descriptive)	—	Akhlaq + Multiculturalism	OpenAlex	10.31538/tijje.v3i1.104
S43	Asror (2022)	Primary (MI/SD)	Qualitative (descriptive)	—	Multiculturalism	Crossref	10.58561/mindset.v1i1.26
S44	Ratnawati & Wathoni (2022)	Pesantren / boarding school	Qualitative (descriptive)	—	Multiculturalism	Crossref	10.36835/ancoms.v6i1.425
S45	Ali Ahmad Yenuri (2021)	Primary (MI/SD)	Phenomenological (qualitative)	—	Multiculturalism	OpenAlex	10.33474/multikultural.v5i1.10320
S46	Muhamad Syaikhul Alim & Achmad Munib (2021)	Primary (MI/SD)	Library/literature study	—	Multiculturalism	OpenAlex	10.31942/pgrs.v9i2.5719

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S47	Suprpto Suprpto (2020)	Pesantren / boarding school	Library/literature study	—	Akhlaq + Multiculturalism	OpenAlex	10.32729/edukasi.v18i3.750
S48	Maskuri Maskuri et al. (2020)	Higher education	Qualitative case study	—	Akhlaq + Multiculturalism	OpenAlex	10.18860/jpai.v7i1.11239
S49	Futaqi (2020)	Pesantren / boarding school	Qualitative (descriptive)	—	Multiculturalism	Crossref	10.33474/multikultural.v4i1.6715
S50	Sifa & Muhammad Nurhadi (2019)	Pesantren / boarding school	Phenomenological (qualitative)	—	Akhlaq + Multiculturalism	Crossref	10.35891/ims.v3i1.1742
S51	Bensaid, B. & Machouche, S. (2019)	Family/community	Conceptual/theoretical (no empirical design)	—	Akhlaq + Multiculturalism	Snowball	10.22452/jat.vol14no2.5
S52	Moh Sulaiman et al. (2018)	Not applicable (curriculum-level analysis)	Qualitative (conceptual/library analysis)	— (library)	Akhlaq + Multiculturalism	OpenAlex	10.36667/jppi.v6i1.156
S53	Irham Irham (2018)	Senior secondary (MA/SMA)	Qualitative (descriptive)	—	Multiculturalism	OpenAlex	10.15575/jpi.v3i2.1448
S54	Huda (2018)	Not applicable (conceptual/review)	Conceptual/theoretical (no empirical design)	—	Multiculturalism	Crossref	10.29240/jf.v3i1.458
S55	Alam, D.W.S. et al. (2026)	Pesantren / boarding school	Qualitative (descriptive)	12 key informants	Multicult. + Ecology	Snowball	10.54069/attaqwa.v22i2.1158
S56	Adriyansyah et al. (2026)	Pesantren / boarding school	Qualitative field study (case study)	Field informants	Akhlaq / character	Crossref	10.21070/halaga.v10i1.1859
S57	Noor, H. et al. (2026)	Primary (MI/SD)	Phenomenological (qualitative)	—	Akhlaq / character	Scopus	10.31538/NZH.V9I1.262
S58	Ali Ridho et al. (2026)	Higher education	Systematic/scoping review	—	Akhlaq / character	Snowball	10.32806/jf.v15i01.1926
S59	Arifuddin M Arif et al. (2023)	Primary (MI/SD)	Document/content analysis	—	Akhlaq / character	OpenAlex	10.33650/al-tanzim.v7i2.5468
S60	Ikhwanul Muslimin (2023)	Madrasah (general)	Library/literature study	—	Akhlaq / character	OpenAlex	10.30739/jmpid.v5i1.2093
S61	Salami Mahmud et al. (2023)	School (general)	Qualitative (descriptive)	—	Akhlaq / character	OpenAlex	10.22373/sjkh.v7i3.17708
S62	Nuruzzaman et al. (2023)	Pesantren / boarding school	Document/content analysis	—	Akhlaq / character	Crossref	10.31958/jies.v3i2.10612
S63	Fahrudi, E. (2022)	Not applicable (conceptual/review)	Conceptual/theoretical (no empirical design)	—	Akhlaq / character	Snowball	10.51675/jp.v3i2.184
S64	Murni Yanto (2020)	Primary (MI/SD)	Qualitative (descriptive)	—	Akhlaq / character	OpenAlex	10.29210/146300
S65	Jannah (2020)	School (general)	Qualitative (descriptive)	—	Akhlaq / character	Crossref	10.35931/am.v4i2.326
S66	Abdullah Şahin (2018)	Family/community	Conceptual/theoretical (no empirical design)	—	Akhlaq / character	OpenAlex	10.3390/rel9110335
S67	Hasan Baharun & Rohmatul Ummah (2018)	Madrasah Aliyah (nominal; library study)	Library/literature study	— (library)	Akhlaq / character	OpenAlex	10.24042/tadris.v3i1.2205
S68	Imam Syafe'i (2017)	Not applicable (conceptual/review)	Conceptual/theoretical (no empirical design)	—	Akhlaq / character	OpenAlex	10.24042/atjpi.v8i1.2097
S69	Nindia Puspitasari (2017)	Not applicable (conceptual/review)	Library/literature study	—	Akhlaq / character	OpenAlex	10.24127/att.v1i01.338
S70	Nur Ainiyah (2013)	Not applicable (conceptual/review)	Conceptual/theoretical (no empirical design)	—	Akhlaq / character	OpenAlex	—

Part B. Structured design-level methodological appraisal

^a S15 (Rohaeni et al., 2021) reports its methods adequately a multicase design across three named madrasah, with observation, interviews, documentation, and triangulation and is rated accordingly on the first four dimensions. Its evidential contribution is nevertheless down weighted from Strong to Moderate because the article appeared in a journal whose stated scope (industrial engineering and management) lies outside the field of the study, and its registered DOI does not resolve. No claim in the synthesis rests on this study alone.

Each study rated Strong (S), Moderate (M), Limited (L), or not applicable (n.a.) on five dimensions from its reported methods. MT = methodological transparency; DA = design appropriateness; SC = sampling / context clarity; AT = analytic transparency; EC = evidential contribution to the synthesis. Ratings weighted interpretive claims and were not used as exclusion criteria.

#	Author (year)	Dimensions	MT	DA	SC	AT	EC
S01	Dwi Mariyono & Dwi Fitri Wiyono (2026)	All three	S	S	n.a.	S	S
S02	Makrufah & Abror (2026)	Akhlaq + Ecology	S	S	M	S	S
S03	Widiawaty et al. (2026)	Akhlaq + Ecology	S	S	M	S	S
S04	Nini Maulani & Balqis (2026)	Akhlaq + Ecology	S	S	S	M	S
S05	Siti Khumairo et al. (2025)	Akhlaq + Ecology	S	S	M	M	S
S06	Saikhu et al. (2025)	Akhlaq + Ecology	S	S	M	S	S
S07	Rahmadani Akbar et al. (2025)	Akhlaq + Ecology	S	S	M	S	S
S08	Bahtiar et al. (2025)	Akhlaq + Ecology	S	S	M	M	S
S09	Molina Ibrahim et al. (2024)	Akhlaq + Ecology	M	M	n.a.	n.a.	S
S10	Hidayat, N. & Sundari, E. (2014)	Akhlaq + Ecology	S	S	S	S	S
S11	Zulfhadli (2024)	Akhlaq + Ecology	S	S	S	S	S
S12	Syukri, S. et al. (2024)	Akhlaq + Ecology	S	S	M	S	S
S13	Lubis (2022)	Akhlaq + Ecology	S	S	S	S	S
S14	Anggraini et al. (2022)	Akhlaq + Ecology	S	S	M	M	S
S15	Anie Rohaeni et al. (2021)	Akhlaq + Ecology	S	S	M	S	M ^a
S16	Herdis Herdiansyah et al. (2019)	Akhlaq + Ecology	M	M	n.a.	n.a.	S
S17	Nur Hafida & Abdul Wahid (2018)	Akhlaq + Ecology	S	S	M	S	S
S18	Yasin (2019)	Akhlaq + Ecology	S	S	M	S	S
S19	Hamdan, H. (2026)	Ecology	S	S	n.a.	S	M
S20	Widodo, C.D. (2026)	Ecology	S	S	M	S	M
S21	Hermawansyah (2025)	Ecology	S	S	M	M	M
S22	Nur, A. et al. (2025)	Ecology	M	M	n.a.	n.a.	M
S23	Basri, S. et al. (2024)	Ecology	S	S	n.a.	S	M
S24	Karman Karman et al. (2023)	Ecology	S	S	M	S	M
S25	Rofiqi & Usman (2020)	Ecology	S	S	M	M	M
S26	Nurhadi & Irfaida (2019)	Ecology	S	S	M	S	M

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S27	Valentina-Mariana Mănoiu et al. (2016)	Ecology	S	S	L	M	M
S29	Sitoresmi et al. (2026)	Multiculturalism	M	M	n.a.	n.a.	M
S30	Ushansyah et al. (2026)	Multiculturalism	M	M	n.a.	n.a.	M
S31	Fauyan, M. et al. (2026)	Akhlaq + Multiculturalism	S	S	n.a.	S	S
S32	Fadlilah et al. (2026)	Akhlaq + Multiculturalism	S	S	M	M	S
S33	Kholil, K. et al. (2026)	Akhlaq + Multiculturalism	S	S	S	S	S
S34	Noe, W. et al. (2026)	Akhlaq + Multiculturalism	S	S	M	S	S
S35	Arianti, D. et al. (2026)	Akhlaq + Multiculturalism	M	M	n.a.	n.a.	S
S36	Mawardi, A. et al. (2025)	Akhlaq + Multiculturalism	S	S	M	S	S
S37	Adiyono, A. & Sholeh, M. (2025)	Akhlaq + Multiculturalism	S	S	n.a.	S	S
S38	Firdaus, S. et al. (2025)	Akhlaq + Multiculturalism	M	M	n.a.	n.a.	S
S39	Sutarja et al. (2024)	Akhlaq + Multiculturalism	S	S	M	S	S
S40	Devi Indah Sari et al. (2023)	Multiculturalism	M	M	n.a.	n.a.	M
S41	Wisnarni (2023)	Akhlaq + Multiculturalism	S	S	M	S	S
S42	Zakariyah Zakariyah et al. (2022)	Akhlaq + Multiculturalism	S	S	M	M	S
S43	Asror (2022)	Multiculturalism	S	S	M	M	M
S44	Ratnawati & Wathoni (2022)	Multiculturalism	S	S	M	M	M
S45	Ali Ahmad Yenuri (2021)	Multiculturalism	S	S	M	S	M
S46	Muhamad Syaikhul Alim & Achmad Munib (2021)	Multiculturalism	M	M	n.a.	n.a.	M
S47	Suprpto Suprpto (2020)	Akhlaq + Multiculturalism	M	M	n.a.	n.a.	S
S48	Maskuri Maskuri et al. (2020)	Akhlaq + Multiculturalism	S	S	M	S	S
S49	Futaqi (2020)	Multiculturalism	S	S	M	M	M
S50	Sifa & Muhammad Nurhadi (2019)	Akhlaq + Multiculturalism	S	S	M	S	S
S51	Bensaid, B. & Machouche, S. (2019)	Akhlaq + Multiculturalism	M	M	n.a.	n.a.	S
S52	Moh Sulaiman et al. (2018)	Akhlaq + Multiculturalism	M	M	n.a.	n.a.	S
S53	Irham Irham (2018)	Multiculturalism	S	S	M	M	M
S54	Huda (2018)	Multiculturalism	M	M	n.a.	n.a.	M
S55	Alam, D.W.S. et al. (2026)	Multicult. + Ecology	S	S	S	M	S
S56	Adriyansyah et al. (2026)	Akhlaq / character	S	S	S	S	M
S57	Noor, H. et al. (2026)	Akhlaq / character	S	S	M	S	M
S58	Ali Ridho et al. (2026)	Akhlaq / character	S	S	n.a.	S	M
S59	Arifuddin M Arif et al. (2023)	Akhlaq / character	S	S	M	S	M
S60	Ikhwanul Muslimin (2023)	Akhlaq / character	M	M	n.a.	n.a.	M
S61	Salami Mahmud et al. (2023)	Akhlaq / character	S	S	M	M	M

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S62	Nuruzzaman et al. (2023)	Akhlaq / character	S	S	M	S	M
S63	Fahrudi, E. (2022)	Akhlaq / character	M	M	n.a.	n.a.	M
S64	Murni Yanto (2020)	Akhlaq / character	S	S	M	M	M
S65	Jannah (2020)	Akhlaq / character	S	S	M	M	M
S66	Abdullah Şahin (2018)	Akhlaq / character	M	M	n.a.	n.a.	M
S67	Hasan Baharun & Rohmatul Ummah (2018)	Akhlaq / character	M	M	n.a.	n.a.	M
S68	Imam Syafe'i (2017)	Akhlaq / character	M	M	n.a.	n.a.	M
S69	Nindia Puspitasari (2017)	Akhlaq / character	M	M	n.a.	n.a.	M
S70	Nur Ainiyah (2013)	Akhlaq / character	M	M	n.a.	n.a.	M

Summary

Studies: 69. **By dimensional coverage:** Akhlaq + Ecology=17; Akhlaq + Multiculturalism=16; Akhlaq / character=15; Ecology=10; Multiculturalism=10; All three=1; Multicult. + Ecology=1

Appraisal distribution MT: S=49; M=20 · DA: S=49; M=20 · SC: S=7; M=35; L=1; n.a.=26 · AT: S=32; M=17; n.a.=20 · EC: S=34; M=35

Note (bibliographic audit, revision): publication years were verified study by study. All 69 publication years were confirmed: against Crossref metadata where a DOI is registered, against the Scopus export for records retrieved from that database, and against the article itself together with its publisher record for the remaining items whose DOIs are unregistered or absent. Two corrections resulted: Hafida and Wahid, listed by an aggregator as 2019, is FIKROTUNA 8(2), December 2018 (confirmed from the article PDF), and twelve two-author entries previously abbreviated as “et al.” now name both authors. For retroactively registered Indonesian journals the Crossref date can be the registration date rather than the publication year, as with Hidayat and Sundari (Crossref: 2024; actual issue: Al-Bidayah 6(1), 2014); in such cases the year was taken from the article itself.

Note (corpus audit, revision): one study (S29, Sitoresmi et al., 2026) was recoded from Multiculturalism×Ecology to Multiculturalism-only, because the term *lingkungan* in its title denotes the pesantren setting/community, not ecological environment. This correction confirms the manuscript's count of a single Multiculturalism×Ecology study (Suryo Alam et al., 2026).