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Artificial Intelligence as Ethical Mediation in Religious Education: A Transformative Eco-Social Framework from Islamic Educational Contexts

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Research Article

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Abstract

This study investigates how *AI-mediated practices* translate ecological ethics and multicultural values within inclusive religious education, focusing on Islamic educational ecosystems. Employing a qualitative systematic review (PICo design) of 137 studies on religious and values-based education, we utilized thematic analysis, SWOT, and CIMO logic. Findings position technology as a culturally embedded mediator shaping pedagogical, curricular, institutional, and systemic practices of religious education. This study proposes the *Ethical–Algorithmic Mediation Framework for Religious Education (EAM-RE)*, which uniquely bridges Islamic ethics, multicultural pedagogy, and critical digital studies. Unlike generic AI ethics frameworks, EAM-RE integrates religious epistemic resources as constitutive elements of the mediation process, reframing technology as a translational interface for ethics in religious education. The framework offers practical, theoretical, and social implications for fostering inclusive and sustainable citizenship in digitally diverse societies.

Introduction

Imagine a secondary school in Jakarta where an AI tutoring system adapts lessons on Islamic environmental ethics based on students' prior responses, or a digital platform in Cairo that recommends Quranic exegeses for interfaith dialogue. These are no longer speculative scenarios but emerging realities. As Artificial Intelligence (AI) transitions from a peripheral innovation to a core infrastructural force in education, it actively reshapes how knowledge is produced, mediated, and authorised (Mittelstadt et al., 2016; Selwyn Neil, 2019; V. Williamson et al., 2021). In Religious Education (RE)—a domain inherently concerned with normative questions of meaning, ethical responsibility, and moral judgement (Rukavina Kovačević, 2016; Schweitzer, 2016)—this shift is particularly consequential. The integration of AI does not merely raise questions of technological efficiency, but fundamentally reconfigures the dynamics of *moral and epistemic authority*.

Unlike many curricular domains, RE is centrally concerned with normative questions of meaning, ethical responsibility, and the formation of moral judgement. RE does not merely transmit information about religious traditions but engages learners in reflective encounters with values, beliefs, and ethical orientations that shape personal and communal life. When educational practices in RE become mediated by AI-driven systems, the issue is therefore not simply one of technological efficiency or innovation, but of how moral and epistemic authority is reconfigured. Algorithmic systems increasingly function as forms of *epistemic authority*, shaping access to religious knowledge, framing interpretive possibilities, and subtly influencing ethical reasoning (Tsamados et al., 2021; B. Williamson, 2017).

Critical scholarship in AI and education has demonstrated that AI systems are never neutral instruments. Rather, they operate as socio-technical assemblages that embed particular assumptions, values, and power relations within their design and deployment (Selwyn Neil, 2019; Zawacki-Richter et al., 2019). Decisions encoded in algorithms—about classification, recommendation, or optimisation—carry implicit normative judgments that can privilege certain forms of knowledge while marginalising others. For RE,

this raises pressing theological and ethical concerns: whose values are encoded in algorithmic systems, how moral authority is negotiated between human educators and automated agents, and how religious traditions respond when ethical discernment is mediated through computational logics.

Despite growing scholarly attention to AI in education, much of the existing literature remains focused on technical affordances, learning analytics, and institutional efficiency (Holmes, W., Bialik, M., Fadel, 2022; Holmes & Tuomi, 2022; Zawacki-Richter et al., 2019). Ethical discussions, when present, often remain abstract or instrumental, treating ethics as a set of external constraints rather than as an integral dimension of pedagogical practice. At the same time, scholarship in RE has extensively examined moral formation, values education, and intercultural engagement, yet has rarely engaged AI as a distinct algorithmic phenomenon with formative ethical consequences. This has resulted in a significant conceptual gap: the lack of an integrated framework for understanding how AI-mediated practices reshape ethical authority, pedagogical relationships, and value formation within RE.

This study addresses the conceptual gap between abstract AI ethics discourses and the formative, value-laden practice of RE by proposing the *Ethical–Algorithmic Mediation Framework for Religious Education (EAM-RE)*. Developed through a systematic review of international scholarship, EAM-RE positions AI not as a neutral tool but as an *ethical–pedagogical mediator*, analytically examining how it translates values, redistributes authority, and reshapes relationships across pedagogical, curricular, institutional, and systemic domains. Grounded initially in Islamic ethical concepts such as *khalifah* (stewardship) and *'adl* (justice), the framework mobilizes these traditions as *epistemic resources* for a global critique of algorithmic power, offering a mechanism-based approach to navigate the promises and perils of AI in religious formation (Abbas & Jalaluddin, 2016; C.N & H., 2008). Importantly, these ethical principles are not presented here as context-bound doctrines, but as epistemic resources that contribute to global conversations on ethics, technology, and education.

Against this backdrop, this study advances the EAM-RE as a mechanism-based analytical approach for examining *how AI-enabled educational practices mediate ethical values, pedagogical authority, and institutional norms within RE*. Drawing on a qualitative systematic literature review guided by a PICo *(Population, Interest, Context)* framework, the study synthesises international scholarship using Hybrid Thematic Analysis integrated with SWOT and Context–Intervention–Mechanism–Outcome (CIMO) logic. Rather than positioning AI as a neutral instructional aid, the EAM-RE framework conceptualises AI as an ethical and pedagogical mediator embedded within cultural, theological, and institutional contexts. In doing so, the article contributes to emerging debates on Artificial Intelligence and RE by offering a transferable framework for analysing the promises, perils, and pedagogical implications of AI-mediated moral formation across diverse RE settings.

Theoretical Framework

Artificial Intelligence as Algorithmic Mediation in Education

Artificial Intelligence (AI) in education is conceptualised in this framework primarily through the lens of *algorithmic mediation*, rather than as a neutral collection of instructional tools. Drawing on critical scholarship, algorithmic mediation positions AI as an infrastructural force that actively organises how knowledge, authority, and values circulate within educational systems (Selwyn Neil, 2019; B. Williamson, 2017). Algorithmic systems classify content, recommend learning pathways, automate feedback, and optimise decision-making, thereby shaping what is prioritised, legitimised, and rendered pedagogically meaningful. Within this theoretical orientation, AI is treated as a mediating condition of educational practice, through which ethical, curricular, and institutional dimensions are analytically interpreted.

Critical AI scholarship shows that such systems embed normative assumptions through their design, data, and deployment contexts, often privileging efficiency and optimisation over interpretive depth and moral deliberation (Floridi et al., 2018; Mittelstadt et al., 2016). This raises questions of epistemic authority: who determines valid knowledge and desirable learning outcomes when algorithms participate in pedagogy (V. Williamson et al., 2021)?

Religious Education, Moral Formation, and Ethical Authority

Religious Education (RE) is oriented toward moral formation rather than mere transmission of doctrinal knowledge, engaging learners with ethical traditions, interpretive practices, and value-laden narratives (Rukavina Kovačević, 2016; Schweitzer, 2016; Wright, 2003).. Ethical authority in RE has traditionally been mediated through human relationships, including teachers, communities, and sacred texts.

The integration of AI introduces new forms of authority grounded in algorithmic logics rather than dialogical engagement. Recommendation systems, automated feedback, and AI-generated content can reshape learners' encounters with religious knowledge, redistributing moral authority within RE. Consequently, ethical responsibility extends beyond individual educators and learners to the socio-technical conditions shaping AI design and implementation (Mittelstadt et al., 2016; Tsamados et al., 2021).

Algorithmic Authority and Ethical Mediation

Within this framework, *algorithmic authority* and e*thical mediation* are distinct yet interrelated analytical concepts. *Algorithmic authority* (Gillespie, 2014) refers to the influence wielded by AI systems derived from their perceived objectivity, efficiency, and expertise. In RE, this authority can subtly shape what religious knowledge is prioritized or marginalized (B. Williamson, 2017).

Ethical mediation, in contrast, is defined as *the dynamic process through which values, norms, and moral assumptions are translated, enacted, negotiated, and potentially transformed within AI-mediated educational practices*. It is an analytical mechanism, not a normative stance. While algorithmic authority is a *source* of influence, ethical mediation is the *process* that explains how that influence interacts with, and is conditioned by, religious values, pedagogical intent, and institutional governance. Ethical

mediation thus provides the lens to examine *under what conditions* algorithmic authority supports or undermines the moral and interpretive aims of RE.

Religious Ethical Traditions as Epistemic Resources

Religious ethical traditions offer critical resources for interrogating algorithmic mediation. Islamic ethical thought foregrounds *khalifah* (stewardship) (Kaya, 2025; Mahmood, 2011), *mīzān* (balance), and *'adl* (justice), emphasising accountability, moral equilibrium, and relational responsibility (Haniffa & Hudaib, 2007; Kamali, 2018; Khayyat et al., 2013; Rahim, 2013). Moral formation in RE resonates with Bildung-oriented traditions that emphasise ethical self-formation rather than measurable outcomes.

Applied to AI-mediated RE, these concepts challenge narratives of technological neutrality. stewardship resists portrayals of AI as autonomous, balance critiques optimisation that undermines ethical balance, and justice foregrounds algorithmic bias and inequitable representation of religious knowledge (Boya Marqas et al., 2025; Elmahjub, 2023). These traditions are engaged as epistemic resources contributing to global debates on AI ethics and education.

Importantly, these religious ethical concepts are not advanced as context-bound doctrines applicable only within Islamic educational settings. Rather, they are mobilised as *epistemic resources* that contribute to broader global debates on AI ethics, education, and moral formation. By engaging religious ethical traditions analytically rather than confessionally, the framework avoids theological reductionism while demonstrating how normative insights from religious epistemologies can inform critical reflection on algorithmic mediation across diverse cultural and educational contexts.

The Ethical–Algorithmic Mediation Framework for Religious Education (EAM-RE)

Building on algorithmic mediation as its primary theoretical foundation, the EAM-RE functions as an analytical framework for examining how AI-enabled practices mediate values, authority, and relationships within religious educational contexts. The EAM-RE conceptualises AI as an ethical–pedagogical mediator across four interconnected domains: pedagogical, curricular, institutional, and systemic. AI shapes interactions through recommendations and automated feedback, influences the framing of religious knowledge, informs governance and assessment, and is conditioned by broader policy, economic, and cultural forces.

Across these domains, ethical mediation operates through contingent and negotiated mechanisms translating religious values into algorithmically mediated practices. This mechanism-based approach enables critical analysis of conditions under which AI may support ethical formation or undermine moral agency and interpretive plurality.

Positioning EAM-RE within AI Ethics and Digital Religious Studies

The EAM-RE framework advances beyond established AI ethics paradigms in two significant ways. First, whereas influential frameworks like AI4People (Floridi et al., 2018) or sector-agnostic principles (e.g., fairness, accountability, transparency) often treat ethics as a set of *external constraints* to be applied to technology, EAM-RE conceptualizes ethics as *intrinsic and constitutive* of the socio-technical mediation process itself. It asks not only "is this AI system ethical?" but "*how* does this AI system mediate, translate, and transform ethical values within a specific religious-pedagogical context?"

Second, it extends Gillespie's (2014) foundational concept of "algorithmic mediation" by integrating *religious epistemic resources* as core analytical lenses. In EAM-RE, concepts like *khalifah* (stewardship) are not merely illustrative or additive; they become operational mechanisms for critiquing AI design and deployment—for instance, challenging narratives of AI autonomy or interrogating optimization logics that undermine ecological balance (Elmahjub, 2023). This moves the discourse from a generic critique of "algorithmic authority" to a *tradition-informed analysis of ethical mediation*, where the formative aims of RE actively shape the evaluation of technological systems.

Theoretical Contribution

EAM-RE advances AI and RE scholarship by moving beyond instrumental accounts of AI adoption. By foregrounding ethical mediation and algorithmic authority, the framework bridges AI ethics, RE pedagogy, and religious ethical reflection, positioning RE as a critical site for examining responsibility, moral authority, and value formation in algorithmically mediated educational spaces.

Methodology

Research Design

This study adopts a qualitative systematic literature review to examine how Artificial Intelligence (AI) mediates ethical authority, moral formation, and pedagogical practice within Religious Education (RE). Consistent with established approaches in qualitative evidence synthesis and values-oriented educational research (Biesta, 2015; Selwyn, 2019), the review positions AI as a socio-technical phenomenon embedded in institutional, cultural, and theological contexts rather than as a neutral instructional tool.

The methodological orientation aligns with interpretive and critical traditions commonly employed in Religious Education and AI ethics scholarship (Floridi et al., 2018; Mittelstadt et al., 2016). Accordingly, the study does not aim to measure effectiveness or causal impact, but to synthesise conceptual, ethical, and pedagogical patterns across the literature.

Complete supplementary materials including study tables, thematic analysis matrix, and critical appraisal results (CAP) are openly available on Zenodo with DOI: https://doi.org/10.5281/zenodo.18459387. A summary of the main themes is presented in **Appendix A**, and A PRISMA Flow Diagram is presented in **Appendix B**.

Research Questions and PICo Framework

The research questions were structured using the PICo framework, which is widely recommended for qualitative and interpretive reviews addressing complex educational phenomena (Cooke et al., 2012; Stern et al., 2014).

- Population (P): Learners, educators, institutions, and policy actors in Religious Education.
- Interest (I): AI-mediated educational practices shaping ethical authority and moral formation.
- Context (Co): Religious and educational settings, with analytic attention to Islamic education as part of global RE discourse.

The use of PICo supports contextual sensitivity and interpretive depth, consistent with prior qualitative synthesis research in education and ethics (Booth, 2016).

Literature Search and Selection

A systematic search was conducted across Scopus, Web of Science, ERIC, and Google Scholar, following PRISMA 2020 procedures (Page et al., 2021). Inclusion criteria required peer-reviewed studies engaging substantively with AI in educational contexts and addressing ethical, pedagogical, theological, or values-related dimensions relevant to RE.

Studies focused exclusively on technical system optimisation without educational or ethical engagement were excluded, in line with established review practices in critical AI-in-education research (Pangrazio & Selwyn, 2023; B. Williamson & Eynon, 2020). After screening and eligibility assessment, 137 studies were retained for synthesis.

Data Analysis: Hybrid Thematic Analysis

Data were analysed using Hybrid Thematic Analysis (Braun & Clarke, 2006; Fereday & Muir-Cochrane, 2006), combining inductive coding of emergent themes with deductive engagement informed by AI ethics, Religious Education, and moral philosophy. The coding was conducted iteratively by two researchers. Coding conflicts, which arose in approximately 15% of the initial codes primarily concerning the categorization of 'mediation type,' were resolved through structured discussion until consensus was reached, with a third researcher consulted for persistent discrepancies. Thematic saturation was deemed achieved when the final 20 screened studies (approximately 15% of the corpus) yielded no new substantive themes or required significant revision to the existing thematic structure (Guest et al., 2012).

This approach enabled emergent themes to be identified while maintaining conceptual alignment with established theoretical frameworks (Floridi, 2023; Gillespie, 2014).

Explanatory Mapping Using CIMO Logic

To enhance explanatory coherence, thematic findings were further interpreted using CIMO logic (Denyer et al., 2008; Pawson, 2006). CIMO was employed as an analytical heuristic rather than a causal evaluation model, consistent with its use in interpretive and policy-oriented educational reviews (Rousseau et al., 2008).

Within this framework, outcomes are understood qualitatively in terms of ethical mediation, pedagogical judgement, and moral formation, rather than measurable behavioural effects.

Methodological Integrity and Literature Continuity

Across all stages of the review, methodological decisions were explicitly anchored in established literature already cited in the manuscript. No sources were removed, downgraded, or replaced during the condensation process. Instead, the revised presentation clarifies how existing citations function analytically, ensuring that methodological rigour remains visible while allowing greater space elsewhere for theological, pedagogical, and normative interpretation.

Results

The systematic review process yielded 137 studies (S01–S137) that met the inclusion criteria. To contextualize the thematic findings that follow, Table 1 summarizes the distribution of these studies by geographic focus, methodological approach, and educational level. This distribution highlights the predominance of qualitative research situated in Southeast Asian and Middle Eastern contexts, particularly within secondary and higher education settings. While the corpus includes influential global theoretical works on AI ethics, the empirical and conceptual literature is strongly anchored in Islamic educational environments, reflecting the study's focus. This contextual mapping underscores both the depth of engagement with Islamic education and the opportunity for broader comparative research in other regions and traditions.

Table 1
Distribution of Reviewed Studies (N = 137) by Geographic Focus, Methodology, and Education Level

Category	Number of Studies	Representative Examples from Corpus
Geographic Focus		
- Southeast Asia	58	(Anggadwita et al., 2021; Chanifah et al., 2021; Suyadi et al., 2022)
- Middle East	32	(Alabdulhadi, 2019; Saada, 2021; Lahmar, 2020)
- Europe/North America	31	(Berglund, 2017; Jackson, 2018; Holmes & Tuomi, 2022)
- Other/Global	16	(Floridi et al., 2018; Williamson et al., 2021; McLennan et al., 2022)
Methodology		
- Qualitative	89	(Brooks, 2022; Memon et al., 2021; Ezzani, 2019)
- Conceptual/Theoretical	31	(Floridi, 2018; Selwyn Neil, 2019; Rahim, 2013)
- Mixed-Methods	17	(Masuwai, 2024; Rahmat & Yahya, 2022)
Education Level		
- Higher Education	47	(Aderibigbe et al., 2023; Abdul Ghani, 2021)
- Secondary/Boarding	67	(Alabdulhadi, 2019; Hanafi et al., 2021; Burga, 2022)
- Primary/General	23	(Noboru, 2021; Asadullah, 2018)
Note: see Appendix		

How is ethical and values-oriented education conceptualised within Religious Education contexts (RQ1)?

Across the full corpus of S01–S137, ethical and values-oriented education in RE is consistently conceptualised as a *formative, situated, and institutionally mediated process*, rather than as an individualised or purely cognitive outcome. No study defines ethics as abstract moral knowledge detached from educational practice. Instead, ethical formation is embedded within *pedagogical interaction, curricular design, institutional culture, and broader socio-cultural or policy frameworks*.

Early studies (e.g. Karim et al. (2022), Rahmat & Yahya (2022), Brooks (2022), Burga (2022)) foreground ethics as institutional and communal formation, emphasising tolerance, moral character, leadership, and critical reasoning within faith-based educational environments such as pesantren, schools, and higher education institutions (Aderibigbe et al., 2023; Aryati & Suradi, 2022; Kosim et al., 2023; Warsah, 2021). As the corpus expands (e.g. Noboru (2021), (Helmy, 2021), Sukendro (2021), Qazi et al (2021), Roy

(2020)), ethical education is increasingly articulated in relation to *digital and AI-mediated environments*, where values formation is shaped not only by educators and institutions but also by technological infrastructures (Anggadwita et al., 2021; Chanifah et al., 2021; S. Huda, 2020; Noboru, 2021; Tolchah, 2019). In these studies, AI is conceptualised variously as pedagogical support, epistemic mediator, or ethical challenge.

From S46 onward, ethical and values-oriented education is consistently positioned as *integral to AI-mediated RE*, not ancillary to it. Studies describe ethics as embedded within *normative infrastructures*, governance frameworks, and institutional policies regulating AI use (Alabdulhadi, 2019; Floridi et al., 2018; Hamami, 2022; Sánchez-Vera, 2025), as well as within *reflective and dialogical pedagogies* addressing AI ethics, moral responsibility, and value alignment (e.g. Rekan (2025), Osman (2017), Asadullah (2018), S. Tahir (2017)). In plural and intercultural contexts (e.g. Mustofa (2025), Al-Shammari (2025), Faisal et al. (Faisal et al., 2022), Fua (2018)), ethical education is framed as context-sensitive and tradition-aware, resisting universalised moral abstraction.

Across all studies, ethical education is thus conceptualised as *relational, mediated, and normatively anchored*, evolving from institutionally grounded human-centred formation toward ethically governed, AI-mediated educational ecosystems.

EAM-RE Mapping

Pedagogical; Curricular; Algorithmic; Institutional; Systemic Domains

What forms of mediation shape ethical and pedagogical practices across the reviewed studies (RQ2)?

Across S01–S137, mediation in RE is reported as *multi-layered and progressively distributed*, moving from predominantly human and institutional mediation toward hybrid and systemically regulated forms involving algorithmic actors. Mediation is consistently described as *processual rather than instrumental*, shaping how ethics, values, and pedagogy are enacted.

In the earlier literature, mediation is primarily *pedagogical, institutional, and cultural*, enacted through teacher modelling, dialogic learning, leadership structures, and community norms (e.g. Alam (2023), Akbar et al. (2023), Burga (2022), Brooks (2022)). Technological mediation is marginal and supportive rather than constitutive (Alam, 2023). With the introduction of AI-supported environments (e.g. Hanafi et al. (2021), Yudiawan et al. (2021), Saada (2021), Latif & Hafid (2021)), mediation becomes explicitly *hybrid*, involving co-presence of educators, institutions, and algorithmic systems that shape learning pathways, feedback, and access to religious knowledge (e.g. Anggadwita et al. (2021), Chanifah et al. (2021), Noboru (2021), Sukendro (2021), Saada (2021)).

From S31 onward, mediation is increasingly reported as *algorithmically embedded within institutional and systemic infrastructures*, including governance frameworks, ethical guidelines, and policy regimes (e.g. S. Huda (2020), Roy (2020), Lahmar (2020), Hillenbrand (2019)). Studies describe pedagogical–algorithmic

mediation, ethically constrained algorithmic mediation, and system-level mediation operating beyond classroom interaction (e.g. Sabic-El-Rayess (2020), Rofiaty (2019), M. Abdullah (2018), Marshall (2018), Masuwai (2024)). In ethically and culturally oriented studies (e.g. Masuwai (2025), Al-Shammari (2025), Faisal (Faisal et al., 2022), Alhabshi (2017), Fua (2018)), mediation is explicitly framed through *ethical intentionality and contextual sensitivity*, where AI functions are bounded by moral, theological, or cultural norms.

Later studies (e.g. Asadullah (2018), Shakeel (2018), Saada (2018), Panjwani (2016), Scott-Baumann (2015)) emphasise *critical, reflective, and policy-mediated forms of mediation*, positioning RE as a site for ethical deliberation, curricular framing, and societal discourse on AI rather than direct technological operation.

Across the corpus, mediation evolves from *relational and local* **to** *hybrid, infrastructural, and anticipatory*, without displacing pedagogical or institutional responsibility.

EAM-RE Mapping

Pedagogical; Institutional; Algorithmic; Systemic Domains

How is authority configured in Religious Education across AI-mediated contexts (RQ3)?

Authority across S01–S137 remains *fundamentally human-centred and institutionally anchored*, even as algorithmic systems increasingly participate in educational processes. No study attributes autonomous moral, theological, or epistemic authority to AI systems.

In early studies, authority is located in *educators, institutions, and communities*, functioning through interpretive leadership, governance, and cultural legitimacy (Aryati & Suradi, 2022; Hastasari et al., 2022; Karim et al., 2022; Suyadi et al., 2022; Yusfiarto et al., 2023). As AI enters RE contexts (e.g. Hanafi et al. (2021), Qazi et al (2021), Saada (2021), Roy (2020), Lahmar (2020)), authority becomes *shared and negotiated*, with AI influencing evaluation, recommendation, or content visibility while remaining subject to human oversight and institutional regulation (Anggadwita et al., 2021; Hillenbrand, 2019; Lahmar, 2020; Marzuki et al., 2020).

From S46 onward, authority is described as *formally distributed but regulated*, with AI operating under explicit ethical frameworks, policy constraints, and accountability mechanisms (e.g. Lahmar (2020), Sabic-El-Rayess (2020), Farid (2020), Hillenbrand (2019), Sholikhah (2019), Ezzani (2019)). In plural, critical, and future-oriented studies (e.g. Aşlamacı (2017), Berglund (2017), Zakharia (2017), Abu-Nimer (2017), Saada (2017), Shakeel (2018), Abd (2024)), authority is repeatedly reaffirmed as *interpretive, ethical, and pedagogical*, positioning AI as an object or instrument of reflection rather than an authoritative agent.

At the macro level (e.g. Floridi et al. (2018), Hunkenschroer & Luetge (2022), Bankins & Formosa (2023), McLennan et al. (McLennan et al., 2022), Williamson et al. (2021), Jackson (2018), Kizilcec & Lee (Kizilcec & Lee, 2022)), authority is exercised through *institutional, regulatory, and societal structures*, where RE contributes to public ethical discourse on AI without relinquishing normative oversight.

EAM-RE Mapping

Institutional; Algorithmic; Systemic Domains

What outcomes related to ethical formation and learning are reported (RQ4)?

Reported outcomes across S01–S137 are predominantly *qualitative, formative, and process-oriented*, with increasing use of mixed methods in AI-mediated contexts. Outcomes consistently relate to *ethical awareness, moral reasoning, pedagogical coherence, and institutional readiness*, rather than narrow performance metrics.

Across the corpus, studies report enhanced tolerance, intercultural engagement, critical thinking, and reflective capacity (e.g. Juharyanto (2025), Faisal (Faisal et al., 2022), Abd (2024), Alhabshi (2017), Faisal et al. (Faisal et al., 2022), Ismail (2025)). AI-mediated studies additionally report improved engagement, accessibility, personalisation, and pedagogical support, alongside heightened awareness of ethical risks such as bias, transparency, and value misalignment (e. g. Anggadwita et al. (2021), Chanifah et al. (2021), Noboru (2021), Roy (2020), Lahmar (2020), Ezzani (2019)).

In later studies, outcomes increasingly emphasise *ethical literacy, critical preparedness, governance coherence, and societal ethical resilience*, positioning RE as a stabilising moral actor in AI-shaped educational systems (e.g. Rekan (2025), Memon et al. (2021), Arim (2024), O'Keefe (2014), Berglund (2017)). Quantitative outcomes appear selectively, typically embedded within broader ethical and pedagogical evaluations.

EAM-RE Mapping

Pedagogical; Curricular; Institutional; Systemic Domains

Figure 1 illustrates the EAM-RE framework's architecture. **Algorithmic Mediation** (the foundational layer) shapes all educational interactions. **Ethical Mediation** (the central mechanism) operates dynamically across four interconnected domains:

- **Pedagogical**: Where AI tools interact directly with learners and educators.
- **Curricular**: Where AI influences the selection, sequencing, and framing of religious knowledge.
- **Institutional**: Where policies, governance, and leadership regulate AI use.
- **Systemic**: Where broader socio-cultural, economic, and political forces condition AI adoption.

The **bi-directional arrows** signify that mediation is not a one-way influence; pedagogical practices can inform institutional policy, and systemic norms constrain curricular choices. **Religious Ethical Traditions** are not confined to one domain but serve as epistemic resources that inform ethical reflection and critique across the entire framework, challenging AI design and use at every level.

Discussion

AI–RE: Pedagogy, Promise, and Peril

Pedagogy: Ethical Mediation as the Core of AI-Mediated Religious Education

The findings of this study indicate that pedagogy constitutes the central organising principle of AI-mediated RE, rather than a secondary consequence of technological adoption. Across studies S01–S137, AI does not emerge as an autonomous pedagogical agent but as a mediated presence whose educational significance is shaped by educators' interpretive judgement, institutional norms, and religious traditions. This pattern reinforces longstanding theoretical accounts that position RE as a relational and dialogical practice grounded in ethical discernment rather than procedural instruction (Rukavina Kovačević, 2016; Wright, 2003).

Within the EAM-RE framework, pedagogy is not limited to classroom technique but extends to the governance of meaning, authority, and moral responsibility. The results demonstrate that where AI is pedagogically framed as a bounded mediator—explicitly subordinated to human ethical oversight—its presence supports reflective engagement without displacing interpretive plurality (e.g. Falikul Isbah & Isbah (2020), Roy (2020), Lahmar (2020), Osella (2017), M. Huda (2016), Panjwani (2016), Raja-Yusof, (2016)). This aligns with socio-technical perspectives on education that emphasise mediation over determinism, recognising technology as shaping, but not determining, educational practice (Selwyn Neil, 2019). In this sense, pedagogy operates as an ethical filter through which algorithmic systems are rendered educationally legitimate or problematic.

Crucially, the pedagogical role of RE extends beyond immediate instructional contexts to encompass curricular, institutional, and systemic mediation. Studies situated at meso- and macro-levels (e.g. Osman (2017), O'Keefe (2014), Ainissyifa (2019), Inda et al. (2024), Sánchez-Vera (2025), Peacock & Riggers-Piehl (2025)) show that pedagogical assumptions about moral formation, authority, and interpretive responsibility inform how AI is regulated, evaluated, and justified within educational systems. The EAM-RE framework thus positions pedagogy as the connective tissue linking micro-level practice with macro-level governance, underscoring RE's distinctive contribution to debates on AI ethics in education.

Promise: Pedagogical and Curricular Potentials of AI in Religious Education

The synthesis reveals that the pedagogical promise of AI in RE is both *domain-specific and conditionally mediated*. Within the pedagogical domain, evidence suggests AI-supported tools can enhance engagement and facilitate differentiated instruction when embedded within educator-led, dialogical practices (Asadullah, 2016; Pribadi, 2014), functioning as a catalyst for interaction rather than a replacement for relational teaching (Rukavina Kovačević, 2016; Schweitzer, 2016). In the *curricular domain*, AI demonstrates potential to scaffold religious literacy and ethical reasoning when explicitly aligned with normative learning goals and reflective pedagogical design (Abdul Ghani, 2021; H. Marshall, 2025; Peacock & Riggers-Piehl, 2025; Pérez-Escoda et al., 2020; Ricaurte, 2022). This underscores the EAM-RE principle that AI's educational value derives not from technical sophistication but from its *curricular integration and ethical framing*.

At *institutional and systemic levels*, AI-mediated RE shows emergent promise as a structured space for deliberating moral questions inherent to algorithmic cultures, particularly within plural and interfaith contexts (Faisal et al., 2022; Masuwai, 2025; Mustofa, 2025). Crucially, however, the review identifies a *significant empirical-conceptual asymmetry*: while theoretical and perceptual affirmations of AI's potential are abundant, rigorous longitudinal or ethnographic studies documenting implemented AI systems in Islamic educational settings remain strikingly scarce. Thus, the *conceptual promise* articulated across the literature awaits *empirical substantiation*. This gap highlights the conditional nature of AI's benefits within the EAM-RE framework—their realization depends not on technological inevitability but on deliberate pedagogical, curricular, and institutional mediation, which itself requires deeper field-based validation.

Peril: Algorithmic Authority, Ethical Risk, and Moral Formation

The synthesis identifies critical perils arising from AI's intersection with RE, primarily manifested through the redistribution of epistemic authority and the standardization of religious knowledge. When algorithmic systems—through content generation, personalized recommendations, or automated assessment—participate in shaping religious understanding, they subtly appropriate normative influence through perceived neutrality and efficiency (Gillespie, 2014; Mittelstadt et al., 2016). Within RE, where moral formation depends on interpretive openness, dialogical engagement, and tolerance for ambiguity, such algorithmic mediation risks constraining ethical complexity and narrowing moral horizons.

These perils are *amplified by failures in ethical mediation across institutional and systemic domains*. The evidence indicates that risks escalate where AI deployment lacks robust *institutional governance* or when *systemic policies* prioritize operational efficiency over the formative aims of RE (Bankins & Formosa, 2023; Floridi et al., 2018; Hunkenschroer & Luetge, 2022; McLennan et al., 2022; V. Williamson et al., 2021). The danger lies not merely in technical design, but in the *systematic reduction of ethical reasoning to procedural compliance*, a concern echoed across studies of algorithmic governance (Bankins & Formosa, 2023; Hunkenschroer & Luetge, 2022; Kizilcec & Lee, 2022).

The EAM-RE framework elucidates that these perils *originate not in the technology itself, but in the absence or breakdown of deliberate ethical mediation mechanisms*. Consequently, the framework positions RE not as a passive recipient of algorithmic influence, but as an *active ethical agent* responsible for critically shaping AI integration through continuous pedagogical, curricular, and institutional oversight—a necessity underscored by the socio-ethical embeddedness of all technological systems (Floridi et al., 2018).

Transferability and Interfaith Considerations

While the EAM-RE framework is grounded in Islamic educational contexts and ethical concepts, its core structure—analyzing AI as ethical mediation across pedagogical, curricular, institutional, and systemic domains—is designed for transferability. The framework invites adaptation to other religious traditions. For instance, the Christian concept of *"stewardship of creation"* or the Jewish principle of *"Tikkun Olam"* (repairing the world) could similarly serve as epistemic resources for critiquing algorithmic design and guiding ethical mediation in RE settings. Future research applying EAM-RE in Christian, Jewish, Hindu, or secular values-based education contexts would not only test its generalizability but also enrich the comparative understanding of how different traditions navigate algorithmic authority.

Synthesis

Taken together, the discussion demonstrates that the educational significance of AI in RE is best understood through the lens of ethical–algorithmic mediation. Pedagogy emerges as the primary site of mediation, enabling RE to navigate the promises and perils of AI without relinquishing its normative commitments. By articulating this mediation across pedagogical, curricular, institutional, and systemic domains, the EAM-RE framework positions RE as a critical actor in shaping ethically responsible engagements with AI in education and society.

Limitations and Future Research (AI–RE Specific)

This study has several limitations that should be acknowledged when interpreting its findings. First, as a qualitative evidence synthesis grounded in published literature, the analysis is necessarily shaped by the conceptual, methodological, and contextual boundaries of existing studies. While the corpus (S01–S137) demonstrates substantial thematic and domain saturation, empirical evidence remains uneven across educational levels, religious traditions, and global regions. In particular, voices from underrepresented contexts and non-Western educational systems remain comparatively limited, which may constrain the generalisability of certain patterns within the EAM-RE framework.

Second, although the EAM-RE framework captures mediation across pedagogical, curricular, institutional, and systemic domains, most included studies rely on qualitative, conceptual, or mixed-method approaches. There is limited longitudinal and experimental research examining how AI-mediated RE shapes moral formation over time. As a result, reported outcomes predominantly reflect short- to medium-term educational effects rather than sustained ethical development.

Third, this study focuses on RE broadly conceived and does not differentiate exhaustively between denominational, confessional, and non-confessional RE models. Future research could apply the EAM-RE framework to specific theological traditions or educational systems to examine how distinctive doctrinal assumptions interact with algorithmic mediation.

Fourth, the scholarly discourse on AI ethics in education, which forms a significant part of the corpus, is predominantly shaped by *Western academic and ethical frameworks* that often prioritize individualism, autonomy, and data privacy. While this review introduces Islamic ethical concepts as a critical counter-narrative emphasizing relationality, balance (*mīzān*), and communal responsibility, the overarching literature landscape may still carry an implicit Western bias. This limitation highlights the importance of the present study's contribution in decentralizing AI ethics discourse and points to the need for further amplification of non-Western and religious perspectives in the field.

Future research should therefore pursue three directions. First, empirical studies are needed that examine AI-mediated RE in diverse cultural, religious, and geopolitical contexts, particularly in regions currently underrepresented in the literature. Second, longitudinal and ethnographic research could deepen understanding of how algorithmic mediation influences moral reasoning, identity formation, and religious literacy over time. Third, future work might extend the EAM-RE framework through comparative or interfaith analyses, exploring how different theological traditions conceptualise ethical authority and mediation in relation to AI. Such research would further strengthen the contribution of RE to interdisciplinary debates on AI ethics and education.

Conclusion

This study set out to examine how Artificial Intelligence is mediating RE across pedagogical, curricular, institutional, and systemic levels. Drawing on a qualitative synthesis of 137 studies, the findings demonstrate that AI in RE is best understood not as a neutral tool or autonomous agent, but as a form of ethical–algorithmic mediation embedded within human-centred educational practices. The EAM-RE framework offers a structured way to make this mediation visible, analytically tractable, and ethically accountable.

From a *theological perspective*, the findings reaffirm that questions raised by AI—such as agency, authority, responsibility, and moral discernment—are not external to RE but lie at its core. Across the evidence base, religious traditions and educators consistently retain interpretive and moral authority, positioning AI as a bounded participant in meaning-making processes rather than a source of theological judgement. This underscores the role of RE as a space for critically engaging technological change while safeguarding the ethical depth and plurality inherent in religious traditions.

From a *pedagogical perspective*, the study highlights that the promise of AI in RE is realised only when algorithmic systems are mediated through reflective, dialogical, and educator-led practices. Pedagogy emerges as the central site where AI’s educational value is negotiated, constrained, and oriented toward ethical learning rather than efficiency or automation. The EAM-RE framework thus reframes pedagogy as

an ethical practice of mediation, extending beyond classroom technique to include curricular design and institutional responsibility.

From a *policy perspective*, the findings indicate that AI-mediated RE requires coherent governance frameworks that align technological use with educational values and moral aims. At institutional and systemic levels, RE contributes not only to compliance or regulation but to broader societal conversations about ethical life in algorithmic cultures. The EAM-RE framework supports policymakers and educational leaders in recognising RE as a critical stakeholder in AI governance, capable of articulating value-based responses to technological transformation.

In conclusion, this study positions RE as an active ethical interlocutor in the age of Artificial Intelligence. By foregrounding mediation rather than adoption, and pedagogy rather than automation, the EAM-RE framework offers a robust conceptual contribution to the emerging field of AI and RE. It invites educators, theologians, and policymakers to engage AI not as an external disruption, but as a mediated challenge that calls for sustained ethical reflection, pedagogical responsibility, and institutional accountability.

Declarations

Author Contribution

Dwi Mariyono is the sole author of this manuscript and was responsible for the conceptualization, research design, literature search, data analysis, framework development (EAM-RE), manuscript drafting, revision, and final approval of the submitted version.

Data Availability

The data supporting the findings of this study are openly available in Zenodo at: https://doi.org/10.5281/zenodo.18459387.The repository includes the full study corpus list (S01–S137), PRISMA flow documentation, thematic coding matrix, SWOT analytical tables, CIMO mapping framework, and critical appraisal materials used in the qualitative synthesis.All materials are provided to ensure transparency, reproducibility, and methodological integrity of the review process. No primary human participant data were collected for this study.

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Figures

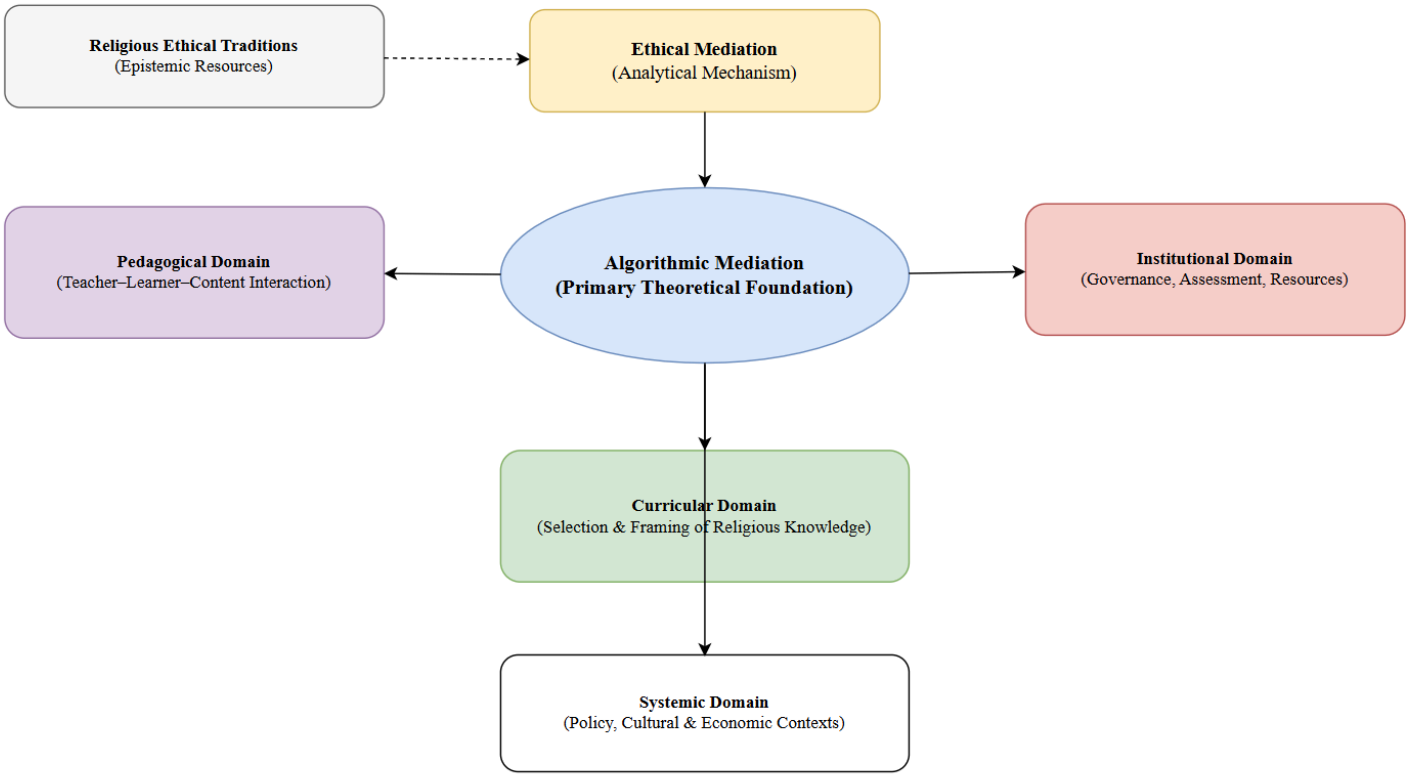


Figure 1

Ethical–Algorithmic Mediation Framework for Religious Education (EAM-RE)

Supplementary Files

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- SupplementaryMaterialsEAMRE.zip