

Reconstructing Islamic Educational Epistemology for Society 5.0: An Integrative-Transformative Pedagogy for Algorithmically Mediated Moral Agency

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Abstract

Society 5.0 has turned digital technology from a tool learners use into an environment that mediates how they encounter, evaluate, and act on information. This study asks how Islamic education can respond to the resulting digital moral disruption through an integrative epistemological framework for algorithmically mediated learning. It applied a qualitative Critical Interpretive Synthesis (CIS) to a 70-source corpus: 25 foundational or conceptual works and 45 contemporary empirical or conceptual studies published between 2018 and 2026 (792 records identified, 774 screened after removing 18 duplicates, 80 assessed in full text). Three patterns emerged. First, digital moral disruption, documented through cyberbullying, cyber-aggression, problematic digital behavior, and shifting agency, is examined mainly through psychological, behavioral, technological, or educational constructs. Second, Islamic educational scholarship reports persistent knowledge fragmentation and difficulty connecting normative, empirical, technological, and reflective reasoning. Third, *Bayani–burhani–irfani* scholarship already informs discussions of educational and digital ethics, but its contributions remain dispersed. Interpretive reconstruction yields the Integrative-Transformative Pedagogy (ITP) model, which positions *Bayani* as textual-normative orientation, *Burhani* as critical-technological inquiry, and *Irfani* as spiritual-moral interiorization. The model reframes digital literacy as an epistemically and morally situated capacity and offers a conceptual basis for curriculum, teacher education, and institutional AI guidance.

Keywords: Society 5.0; Islamic education; Islamic epistemology; *bayani–burhani–irfani*; algorithmic ethics; artificial intelligence.

Introduction

The transition toward Society 5.0 has repositioned digital technology from an instrument that humans use to an environment within which they increasingly live, learn, communicate, and make decisions. Artificial intelligence (AI), recommender systems, generative models, and algorithmic curation increasingly mediate how information is encountered, prioritized, interpreted, and acted upon. Recent scholarship on algorithmic alienation, for example, draws attention to perceived algorithmic steering, weakened deliberative choice, automated content consumption, and changes in how individuals experience agency and identity. In educational settings, the growing use of AI and digital platforms therefore changes not only the availability of information but also the conditions under which learners encounter evidence, evaluate alternatives, and form judgments.¹

This transformation poses a particular challenge for Islamic education because digital competence and moral formation do not necessarily develop through the same educational processes. Research on character formation in madrasah and pesantren settings identifies technological, social, cultural, and institutional challenges associated with the Society 5.0 transition. At the same time, studies of Islamic educational values indicate that concepts such as *amanah* and *mas'uliyah* become consequential for digital conduct only when they are deliberately internalized and connected to practice. Research on AI adoption in Islamic higher education likewise identifies tensions among institutional readiness, academic practice, technological capability, and the alignment of emerging technologies with Islamic norms. These studies suggest that the central educational problem is not simply whether Islamic values are present in digital education, but how such values can function as resources for judgment when technological systems increasingly mediate information and interaction.²

1 B. Arkan, Y. Kanbay, and A. Akcam, "From algorithms to the self: Understanding algorithmic alienation in the digital age," *BMC Psychology* 14, no. 1 (2026): Article 930, <https://doi.org/10.1186/s40359-026-04677-1>; Achruh et al., "Challenges and opportunities of artificial intelligence adoption in Islamic education in Indonesian higher education institutions," *International Journal of Learning, Teaching and Educational Research* 23, no. 11 (2024): 423–443, <https://doi.org/10.26803/ijlter.23.11.22>; Z. Almajdoub et al., "Artificial intelligence in Qur'anic education: Pedagogical promise, practical challenges, and ethical concerns," *Frontiers in Education* 11 (2026): Article 1876380, <https://doi.org/10.3389/feduc.2026.1876380>.

2 A. Zuhri et al., "How madrasahs build students' character in Indonesia's Society 5.0 era: Emerging challenges," *Nazhruna: Jurnal Pendidikan Islam* 9, no. 1 (2026): 166–186, <https://doi.org/10.31538/nzh.v9i1.412>; Mutammam et al., "Adaptation and transformation of pesantren education in facing the era of Muslim Society 5.0," *Nazhruna: Jurnal Pendidikan Islam* 7, no. 3 (2024):

One longstanding response to fragmentation in Islamic education is the discourse of knowledge integration. Tawhidic approaches to educational epistemology challenge the separation of religious knowledge from rational, empirical, and scientific inquiry by locating knowledge within a broader ethical and metaphysical orientation. Al-Attas-oriented scholarship similarly connects knowledge with adab, educational purpose, and the formation of the learner rather than reducing education to the transmission of technically useful information. Contemporary scholarship continues to revisit these epistemological assumptions in relation to modern knowledge production, curriculum reconstruction, and the challenges posed by digital transformation.³

Within this broader intellectual tradition, the *Bayani–burhani–irfani* triad provides a differentiated vocabulary for understanding complementary modes of knowing. *Bayani* is associated broadly with textual authority and interpretation; *burhani* with demonstrative, rational, and evidentiary inquiry; and *irfani* with experiential, spiritual, and reflective forms of knowing. Importantly, the triad is not new to educational scholarship. Asrofi and El-Yunusi, for example, apply the three epistemologies to Islamic religious education, while Sya’adah and colleagues formulate them as complementary

705–726, <https://doi.org/10.31538/nzh.v7i3.114>; A. Afif et al., “Pesantren values in the digital age: Shaping academic ethics and social responsibility among university students,” *International Journal of Learning, Teaching and Educational Research* 25, no. 7 (2026): 905–924, <https://doi.org/10.26803/ijlter.25.7.41>; Achruh et al., “Challenges and opportunities of artificial intelligence adoption”; F. Syukur et al., “Integration of artificial intelligence in Islamic higher education: Comparative responses between Indonesia and Thailand,” *Nazhruna: Jurnal Pendidikan Islam* 7, no. 3 (2024): 531–553, <https://doi.org/10.31538/nzh.v7i3.13>; S. Aflahah et al., “AI, ethics, and Islamic higher education: Navigating the tensions between practical risk mitigation and religious normativity,” *Jurnal Ilmiah Islam Futura* 26, no. 1 (2026): 1–24, <https://doi.org/10.22373/jiifv26.i1.32978>.

3 K. Sassi, “Principles of Islamic education epistemology tauhid paradigm (Analysis of the thinking of Naquib al-Attas),” *Millah: Journal of Religious Studies* 20, no. 1 (2020): 135–172, <https://doi.org/10.20885/millah.vol20.iss1.art6>; M. Kosim, M. Kustati, and Murkilim, “Syed Muhammad Naquib al-Attas’ ideas on the Islamization of knowledge and its relevance with Islamic education in Indonesia,” *Miqot: Jurnal Ilmu-ilmu Keislaman* 44, no. 2 (2020): 250–267, <https://doi.org/10.30821/miqot.v44i2.724>; M. Fauziah et al., “Reconstructing curriculum epistemology through the tawhidic worldview: A conceptual framework based on Syed Muhammad Naquib al-Attas,” *International Journal of Islamic Khazanah* 16, no. 1 (2026): 55–77, <https://doi.org/10.15575/ijik.v16i1.54317>; F. Ahmed, “An exploration of Naquib al-Attas’ theory of Islamic education as ta’dīb as an ‘indigenous’ educational philosophy,” *Educational Philosophy and Theory* 50, no. 8 (2018): 786–794, <https://doi.org/10.1080/00131857.2016.1247685>; E. A. Hidayatullah and S. Arif, “Syed Muhammad Naquib al-Attas’ exposition on the concept of ethics,” *Afkar* 24, no. 1 (2022): 409–446, <https://doi.org/10.22452/afkar.vol24no1.12>; J. Arroisi, H. F. Zarkasyi, and W. Roini, “The relevance of contemporary epistemology on existing knowledge: A critical analysis of Western scientific worldview according to Al-Attas perspective,” *Afkar* 25, no. 2 (2023): 225–256, <https://doi.org/10.22452/afkar.vol25no2.7>; M. Halstead, “Knowledge as worship: Some epistemological assumptions in the educational thinking of Syed Ali Ashraf,” in *Handbook of Islamic Philosophy* (Springer, 2026), 579–603, https://doi.org/10.1007/978-981-95-4666-4_26.

normative, rational-analytical, and ethical-spiritual dimensions and explicitly discuss technological ethics. The relevant question for the present study is therefore not whether the triad can be associated with contemporary education, but how its differentiated epistemic functions can be reconstructed into a pedagogical architecture for ethical judgment under algorithmically mediated conditions.⁴

The same qualification applies to the relationship between Islamic epistemology and AI ethics. Islamic AI-ethics scholarship has already addressed questions concerning autonomy, privacy, fairness, transparency, human welfare, and *maṣlaḥah*. Other studies connect AI and digital transformation with *wasatiyyah*, Islamic law, *maqāṣid al-sharī'ah*, and questions of algorithmic power and Islamic epistemic sovereignty. At the educational level, research on AI adoption, digital literacy, digital citizenship, and digital transformation demonstrates that technology and Islamic educational practice are increasingly being examined together. The literature, therefore, does not support a claim that Islamic ethics, Islamic epistemology, or the *Bayani–burhani–irfani* triad are absent from discussions of AI and digital education.⁵

The more specific issue concerns the relationship among these strands. Recent studies have begun to connect the triad directly with digital-era epistemic questions.

4 A. F. Abbas, "Integration approach of bayani, burhani, and irfani in Muhammadiyah ijtihad," *Ahkam: Jurnal Ilmu Syariah* 12, no. 1 (2012): 51–58, <https://doi.org/10.15408/ajis.v12i1.979>; R. Khatamunisa and I. Koniah, "Kritik metodologi (bayani, irfani dan burhani) Muhammad Abed al-Jabiri," *El-Mashlahah* 10, no. 2 (2020): 43–51, <https://doi.org/10.23971/maslahah.v10i2.1984>; M. I. Asrofi and M. Y. M. El-Yunusi, "Penerapan epistemologi bayani, burhani, dan irfani dalam pembelajaran PAI," *MIDA: Jurnal Pendidikan Dasar Islam* 7, no. 1 (2024): 86–97; F. Sya'adah, M. Munir, and I. Ismail, "Epistemologi integratif bayani-burhani-irfani: Kerangka holistik kontemporer," *Pendas: Jurnal Ilmiah Pendidikan Dasar* 10, no. 4 (2025): 366–378, <https://doi.org/10.23969/jp.v10i04.38060>.

5 E. Elmahjub, "Artificial intelligence (AI) in Islamic ethics: Towards pluralist ethical benchmarking for AI," *Philosophy & Technology* 36 (2023): Article 73, <https://doi.org/10.1007/s13347-023-00668-x>; E. Kosasih, M. R. F. Islamy, and R. S. Wiwaha, "Artificial intelligence in the era of Society 5.0: Compromising technological innovation through the wasathiyyah approach within the framework of Islamic law," *Al-Istinbath: Jurnal Hukum Islam* 9, no. 2 (2024): 551–572, <https://doi.org/10.29240/jhi.v9i2.9596>; S. Ja'far et al., "Digital fiqh and maqāṣid al-sharī'ah in the online condition: A digital hermeneutic critique of algorithmic power for Islamic epistemic sovereignty," *Samarah* 10, no. 1 (2026): 550–571, <https://doi.org/10.22373/sjhk.v10.i1.31868>; N. Faizin et al., "Muslim students' acceptance of artificial intelligence in Islamic religious education: An extended TAM approach," *Discover Education* 4, no. 1 (2025): Article 304, <https://doi.org/10.1007/s44217-025-00767-1>; A. Juhaidi et al., "Digital citizenship of Generation Z in Indonesia: Does Islamic higher education matter?," *Journal of Higher Education Theory and Practice* 23, no. 13 (2023): 165–181, <https://doi.org/10.33423/jhetp.v23i13.6325>; Ferdinan et al., "Examining the enactment of digital literacy in Islamic education across two school contexts in Indonesia and Thailand," *Discover Education* 5, no. 1 (2026): Article 764, <https://doi.org/10.1007/s44217-026-02044-1>; A. Wedi, D. Mardiana, and Umiarso, "Digital transformation model of Islamic religious education in the AI era: A case study of Madrasah Aliyah in East Java, Indonesia," *International Journal of Learning, Teaching and Educational Research* 24, no. 8 (2025): 842–863, <https://doi.org/10.26803/ijlter.24.8.37>.

Sya'adah and colleagues explicitly discuss the triad in relation to technological ethics; Tampubolon and colleagues connect Islamic epistemology with digital epistemic literacy; and Afriani and Dewi relate *Bayani* to tabayyun, *burhani* to algorithmic-bias detection, and *irfani* to muraqabah. Ja'far and colleagues further examine algorithmic power through digital fiqh, *maqāṣid al-sharī'ah*, and Islamic epistemic sovereignty. These contributions substantially narrow the scope of the originality claim that can reasonably be made. At the same time, they reveal a conceptual problem: relevant epistemological, ethical, technological, and pedagogical contributions remain distributed across different analytical and educational formulations.⁶

The present study, therefore, addresses a more specific gap: the limited articulation of a learner-facing pedagogical architecture that specifies how textual-normative orientation, critical-technological inquiry, and spiritual-moral interiorization can interact when learners evaluate and act upon algorithmically mediated information. The contribution is consequently not the invention of the *Bayani–burhani–irfani* triad, nor the first association of Islamic epistemology with digital technology or AI ethics. Rather, the study reconstructs these dispersed strands into an operational conceptual architecture for moral judgment in algorithmically mediated learning environments.

Three research questions guide the synthesis: RQ1: What are the characteristics, manifestations, and epistemological dimensions of digital moral disruption affecting students in the Society 5.0 era, as evidenced in contemporary literature? RQ2: How does the literature characterize knowledge fragmentation in Islamic education, and what methodological and philosophical challenges does it pose for reasoning about contemporary digital ethical dilemmas? RQ3: How can *Bayani*, *burhani*, *irfani*, and algorithmic ethics be synthesized into an operational pedagogical framework for Islamic education? The study consequently aims to reconstruct an integrative epistemology of Islamic education for Society 5.0 by bringing together literature on digital moral challenges, Islamic knowledge integration, AI ethics, and contemporary Islamic educational practice. The resulting Integrative-Transformative Pedagogy (ITP) model

6. Sya'adah, Munir, and Ismail, "Epistemologi integratif bayani-burhani-irfani"; A. Tampubolon, E. Dewi, and M. Sanusi, "Rekonstruksi epistemologi Islam untuk era digital," *Pendas: Jurnal Ilmiah Pendidikan Dasar* 11, no. 2 (2026): 309–322, <https://doi.org/10.23969/jp.v11i02.54954>; N. Afriani and E. Dewi, "Epistimologi Islam di era digital: Integrasi bayani, burhani, dan irfani sebagai fondasi akal kritis dan akal spiritual dalam pendidikan Islam," *ACADEMIA: Jurnal Inovasi Riset Akademik* 6, no. 4 (2026): 3282–3291, <https://doi.org/10.51878/academia.v6i4.12413>; Ja'far et al., "Digital fiqh and maqāṣid al-sharī'ah."

distinguishes three complementary functions: *Bayani* as a textual-normative orientation, *burhani* as a critical-technological inquiry, and *irfani* as a spiritual-moral interiorization. The model is presented as a conceptual reconstruction generated through Critical Interpretive Synthesis rather than as an empirically validated educational intervention.

Methods

This study employed a qualitative research design within a critical-interpretive paradigm and used Critical Interpretive Synthesis (CIS) as its primary review methodology. CIS was selected because the purpose of the review was not to estimate effect sizes, prevalence, or the average direction of evidence, but to critically interpret a heterogeneous body of philosophical, educational, technological, and empirical literature to develop a theoretically informed conceptual framework. The review also adopted a hermeneutic reading orientation in which searching, selection, reading, interpretation, and conceptual refinement were treated as interconnected activities rather than as strictly sequential procedures. Because the review synthesizes texts rather than measuring field variables, it makes no claim concerning population prevalence or statistical generalizability.⁷

The literature search was last updated on 12 September 2026. Scopus served as the principal indexed database, supplemented by Web of Science, Google Scholar, and SINTA (Science and Technology Index, Indonesia's national citation index). Foundational Islamic philosophical and epistemological works were examined as primary texts because their canonical status made publication-date restriction inappropriate. The search strategy combined three conceptual blocks: (1) Islamic epistemology and educational integration; (2) technology and digital context; and (3) moral and educational consequences. Search terms included Islamic education, Islamic epistemology, *Bayani*, *burhani*, *irfani*, tawhidic, integration of knowledge, artificial intelligence, algorithmic ethics, digital ethics, Society 5.0, digital transformation, moral disruption, character education, cyberbullying, digital citizenship, and akhlak. Database-specific syntax and truncation were adapted to each platform.

7M. Dixon-Woods et al., "Conducting a critical interpretive synthesis of the literature on access to healthcare by vulnerable groups," *BMC Medical Research Methodology* 6 (2006): Article 35, <https://doi.org/10.1186/1471-2288-6-35>; S. K. Boell and D. Ceez-Kecmanovic, "A hermeneutic approach for conducting literature reviews and literature searches," *Communications of the Association for Information Systems* 34 (2014): Article 12, <https://doi.org/10.17705/1CAIS.03412>.

Because the CIS process was iterative, targeted supplementary searches were conducted when emerging conceptual clusters required closer verification. These searches combined *Bayani*, *burhani*, and *irfani* with terms such as AI, algorithm, digital ethics, education, Society 5.0, and epistemic literacy. The supplementary search stage also included targeted retrieval of closely related work on algorithmic alienation and moral or character education. These targeted searches were used to reduce terminology-based retrieval failure and to identify potentially competing or closely adjacent formulations that the primary keyword strategy might not have captured.

The primary database search identified 792 records (Scopus, $n = 412$; Web of Science, $n = 186$; Google Scholar, $n = 142$; SINTA, $n = 52$). After removal of 18 duplicate records, 774 unique records remained for title-and-abstract screening. At this stage, 694 records were excluded because they fell outside the thematic scope, lacked a relevant educational or youth context, or did not provide substantive engagement with the review domains. A total of 80 full-text reports were subsequently assessed for eligibility, of which 10 were excluded for documented eligibility reasons. The resulting analytic corpus comprised 70 sources: 25 foundational or conceptual sources and 45 contemporary empirical or conceptual sources published between 2018 and 2026. The primary quantitative screening pathway is presented in Figure 1.

The additional targeted Scopus exports were not included in the numerical PRISMA pathway because they served as supplementary verification searches rather than as a separate initial identification pool. In particular, targeted retrieval was used to examine close conceptual antecedents and contemporary formulations relevant to the study's assessment of the gap and novelty. This distinction preserves the transparency of the primary database-screening pathway while acknowledging that CIS permits iterative searching beyond an initial keyword strategy.

Backward and forward citation searching was conducted after key full-text and anchor sources had been identified. Backward searching examined the reference lists of relevant sources, while forward searching examined later publications citing those sources. Citation-derived candidates were evaluated using the same substantive eligibility logic. This procedure served primarily to test the robustness of the conceptual gap, identify close or potentially competing formulations, and reduce the risk of overstating originality. Citation searching, therefore, functioned as a supplementary verification layer

rather than as an unreported expansion of the fixed 70-source quantitative corpus. Sources identified through citation chasing that were relevant to the novelty assessment but not part of the fixed analytic corpus were treated as supplementary antecedents.

Eligibility criteria were established a priori, before screening began. Contemporary sources were generally limited to 2018–2026, while foundational primary texts were retained irrespective of publication date. Eligible sources included peer-reviewed journal articles, scholarly book chapters, and foundational primary texts that substantively addressed Islamic epistemology or education, digital or AI ethics, knowledge integration, or moral formation in digital contexts. Sources were excluded if they were non-scholarly commentary, blogs, duplicate records, tangential materials, or lacked verifiable bibliographic information. English, Indonesian, and Arabic sources were eligible when the research team could reliably interpret them.

A structured data-charting matrix recorded bibliographic information, publication type, research context, theoretical orientation, methodological approach, where applicable, principal argument or findings, epistemological concepts, digital or algorithmic concerns, and relevance to each research question. Analysis proceeded in three phases. First, inductive coding identified recurring concepts, including algorithmic mediation, algorithmic alienation, digital moral disruption, epistemological fragmentation, textual normativity, rational-critical evaluation, spiritual accountability, muraqabah, muhasabah, digital character, AI ethics, and knowledge integration. Second, related codes were compared and consolidated into higher-order themes. Third, the themes were integrated through conceptual reconstruction to generate a synthesizing argument that is consistent with the interpretive logic of CIS rather than a simple descriptive aggregation.⁸

Table 1.
Inclusion and Exclusion Criteria

Dimension	Inclusion	Exclusion
Source type	Peer-reviewed journal articles, scholarly book chapters, and foundational primary texts	Blogs, editorials, non-scholarly commentary, and unverified web content
Publication period	Contemporary studies published 2018–2026; foundational/canonical	Non-foundational studies outside the contemporary period

8S. Elo and H. Kyngäs, “The qualitative content analysis process,” *Journal of Advanced Nursing* 62, no. 1 (2008): 107–115, <https://doi.org/10.1111/j.1365-2648.2007.04569.x>; V. Braun and V. Clarke, “Using thematic analysis in psychology,” *Qualitative Research in Psychology* 3, no. 2 (2006): 77–101, <https://doi.org/10.1191/1478088706qp063oa>.

Dimension	Inclusion	Exclusion
	texts retained irrespective of publication date	
Thematic relevance	Islamic epistemology/education; digital or AI ethics; knowledge integration; digital moral formation	Tangential to the review domains
Context	Education, youth, digital learning, AI, algorithmic mediation, Islamic epistemology, or closely related conceptual domains	No meaningful connection to the research questions
Language	English, Indonesian, or Arabic	Languages that could not be reliably interpreted
Bibliographic integrity	Verifiable authorship and publication information, preferably identifier-supported	Duplicates or unverifiable records

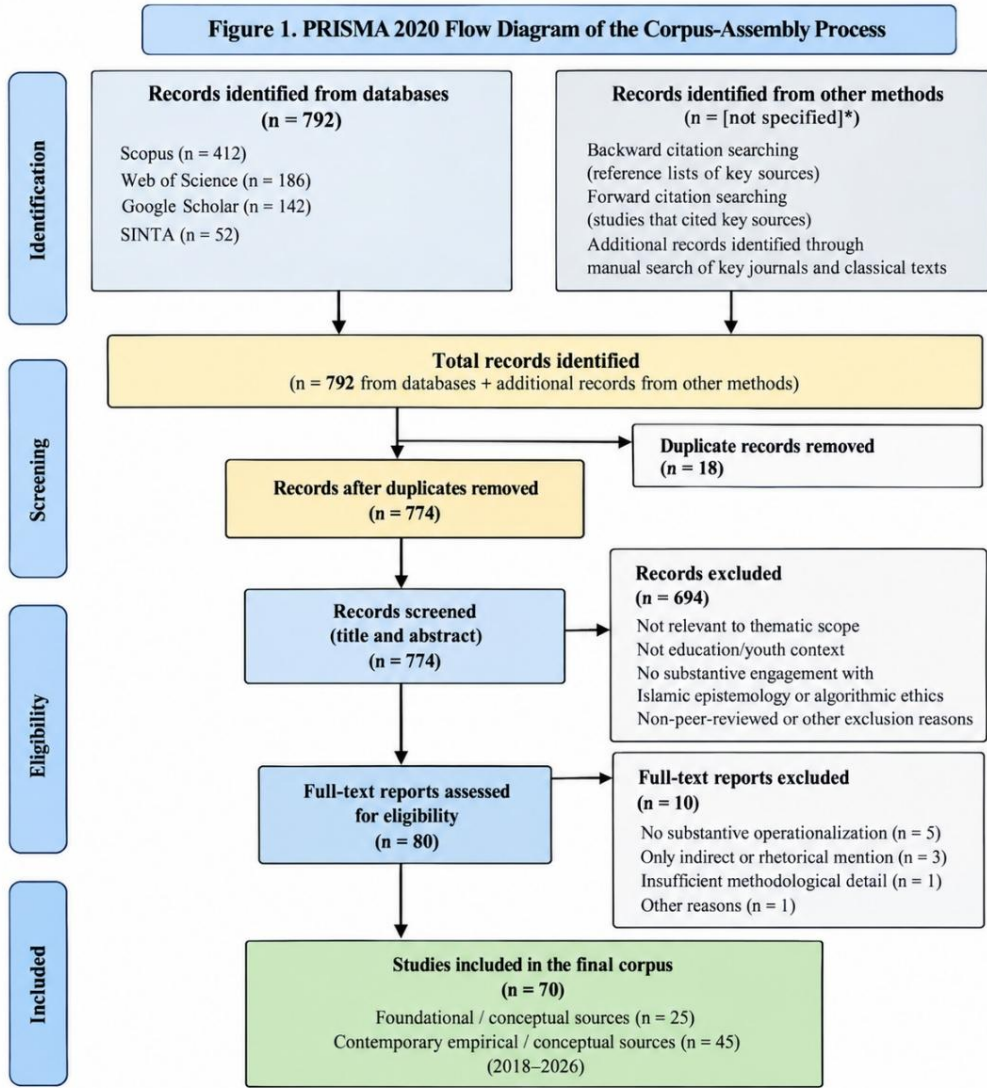


Figure 1. PRISMA 2020-style flow diagram adapted for the CIS corpus-assembly process. The quantitative pathway represents the primary database identification,

duplicate removal, title-and-abstract screening, and full-text eligibility assessment that resulted in the 70-source analytic corpus. Targeted supplementary searches and backward/forward citation searches were conducted as verification procedures for conceptual gap and novelty assessment and were not included in the quantitative PRISMA pathway.

Findings

The findings are organized around the three research questions and derived from the 70-source analytic corpus. Consistent with CIS, the results distinguish between descriptive patterns reported by the reviewed literature and interpretive propositions generated through cross-source synthesis. The findings, therefore, characterize the state and structure of the literature rather than measuring a student population.

Corpus Profile and Analytical Structure

The final corpus comprised 70 sources, including 25 foundational or conceptual sources and 45 contemporary empirical or conceptual studies published between 2018 and 2026. The corpus was heterogeneous in disciplinary orientation and methodological approach. The contemporary tier covered cyberbullying, digital literacy, digital citizenship, artificial intelligence, algorithmic mediation, digital wellbeing, character education, and Islamic educational responses to technological change. The foundational tier covered Islamic epistemology, knowledge integration, ethics, and the intellectual traditions associated with *Bayani*, *burhani*, and *irfani*. Comparative reading revealed three intersecting but incompletely connected strands: empirical and educational studies of digitally mediated moral challenges; epistemological and curricular scholarship on Islamic education; and emerging work linking Islamic values with AI, digital ethics, and educational technology.

The contextual literature surrounding Islamic education in digitally transforming environments included studies of Sufism and moral education in the Society 5.0 era, AI adoption, digital transformation, madrasah management, and practice-based learning in Islamic higher education. These sources provided contextual evidence for the technological and institutional conditions within which Islamic education is being reconfigured.⁹

9A. M. Abitolkha, "Sufism-based moral education of KH. Saleh Darat and KH. Nawawi al-Bantani and the digitization flow in the Society 5.0 era," *Miqot: Jurnal Ilmu-ilmu Keislaman* 46, no. 1 (2022): 70–84, <https://doi.org/10.30821/miqot.v46i1.873>; Achruh et al., "Challenges and opportunities of artificial

A second contextual strand concerned character formation in the Society 5.0 era, digital citizenship, digital literacy, spiritual formation, religious identity, and values-based educational activities. These studies provide contextual support for the relationship between digital capability and moral formation.¹⁰

These contextual sources were not treated as interchangeable evidence. They served different analytic functions within the CIS: some established the digital-education context, some informed the Islamic normative and epistemological background, and others provided adjacent institutional or governance cases. This differentiation was maintained during synthesis to avoid treating heterogeneous sources as if they addressed the same empirical question.

RQ1. Digital moral disruption: manifestations, conditions, and epistemological dimensions

The contemporary literature documents digital moral disruption among young people and students through several related but analytically distinct phenomena. Cyberbullying, cyber-aggression, problematic digital behavior, and changing patterns of digital interaction appear across the empirical literature. In contrast, studies of digital literacy identify differences in how learners and young people respond to digitally mediated risks. Vo and colleagues examine digital literacy as a potential protective factor against cyberbullying among high school students; Eun Jahng identifies socio-behavioral factors associated with cyber-aggression among early adolescents; and Thongnopakun and colleagues report cyberbullying experiences among youth during the COVID-19

intelligence adoption”; Mahsusi et al., “Achieving excellence: The role of digital transformation in madrasah management and Islamic culture,” *Cogent Arts & Humanities* 11, no. 1 (2024): Article 2304407, <https://doi.org/10.1080/23311983.2024.2304407>; I. Muttaqin et al., “Competitive advantage management of madrasah in the artificial intelligence era,” *Munaddhomah* 6, no. 4 (2025): 661–680, <https://doi.org/10.31538/munaddhomah.v6i4.2292>; Ruslin et al., “Practice-based learning in Indonesian Islamic higher education in the era of Society 5.0,” *Frontiers in Education* 11 (2026): Article 1808670, <https://doi.org/10.3389/feduc.2026.1808670>; A. Warisno, M. A. Anshori, and N. Hidayah, “Islamic education management, Sufism, and digital literacy: An interdisciplinary approach,” *Qubahan Academic Journal* 6, no. 1 (2026): 257–271, <https://doi.org/10.48161/qaj.v6n1a2127>.

10Zuhri et al., “How madrasahs build students' character”; Juhaidi et al., “Digital citizenship of Generation Z in Indonesia”; I. Muliati, O. Kanus, and S. Marlina, “The philosophy of the surau in digital spaces: An innovative project-based learning model in Islamic religious education,” *Qualitative Research Journal* (2026): 1–14, <https://doi.org/10.1108/QRJ-10-2025-0364>; S. Muthohar et al., “Guided digital mediation in early childhood Islamic education: Multisensory approaches to religious identity formation,” *Qualitative Research Journal* (2026): 1–15, <https://doi.org/10.1108/QRJ-12-2025-0456>; P. Putra et al., “Digital literacy as a transformative framework for character education: A case study in Madrasah Ibtidaiyah,” *Nazhruna: Jurnal Pendidikan Islam* 9, no. 1 (2025): 33–51, <https://doi.org/10.31538/nzh.v9i1.429>; Warisno, Anshori, and Hidayah, “Islamic education management, Sufism, and digital literacy.”

period. These studies indicate that digital moral problems are not attributable to technology use in isolation but emerge through interactions among individual, interpersonal, technological, and situational conditions.¹¹

A second pattern concerns the changing conditions of agency under algorithmic mediation. Arkan and colleagues conceptualize algorithmic alienation in terms of perceived algorithmic steering, weakened deliberative choice, automated content consumption, and changes in perceived interests and identity. This contribution extends the discussion beyond observable misconduct toward the conditions under which digital subjects encounter alternatives and exercise judgment. The relevance of this finding to Islamic education is not that algorithmic alienation is itself an Islamic construct, but that it identifies a form of mediated agency that cannot be adequately addressed through behavioral regulation alone.¹²

The literature on Islamic digital literacy and character formation further indicates that technological competence does not automatically produce moral judgment. Research on digital citizenship, character education, and digital literacy in Islamic educational settings underscores the importance of linking technological capability to values, reflection, and responsible practice. The findings, therefore, suggest a distinction between having access to digital information, being able to use digital technologies, and being able to judge and act responsibly within digitally mediated environments.¹³

Across this strand of the corpus, explanatory frameworks remain predominantly psychological, behavioral, technological, or educational. The review does not interpret this as evidence that these authors reject Islamic epistemology; rather, it indicates that their analytical categories were generally constructed around other explanatory dimensions. The CIS synthesis adds an interpretive question concerning the relationship among information, judgment, and accountability. Read alongside Islamic moral-

11D. V. Vo et al., "Cyberbullying among high school students: Digital literacy as a protective factor?" *Social Psychology of Education* 29, no. 1 (2026): Article 7, <https://doi.org/10.1007/s11218-026-10174-5>; K. Eun Jahng, "Factors influencing South Korean early adolescents' cyber aggression," *Children and Youth Services Review* 158 (2024): Article 107483, <https://doi.org/10.1016/j.chilyouth.2024.107483>; Thongnopakun et al., "Cyberbullying behaviors among youth during the COVID-19 pandemic in Thailand: A cross-sectional online survey," *Journal of Public Health and Development* 21, no. 3 (2023): 78–93, <https://doi.org/10.55131/jphd/2023/210307>.

12Arkan, Kanbay, and Akcam, "From algorithms to the self."

13 Juhaidi et al., "Digital citizenship of Generation Z in Indonesia"; Putra et al., "Digital literacy as a transformative framework for character education"; Ferdinan et al., "Examining the enactment of digital literacy."

educational scholarship, the findings can be conceptualized as an epistemic–moral disconnect: digitally mediated information may create conditions in which information processing and moral reflection are insufficiently integrated. Muraqabah and muhasabah are used here as an interpretive Islamic vocabulary for moral self-regulation, not as empirically established causal mechanisms.

RQ2. Knowledge fragmentation and the challenge of cross-register ethical reasoning

The second research question concerns the structural and methodological implications of knowledge fragmentation for Islamic education. The literature on tawhidic epistemology frames knowledge integration as a response to the separation of religious knowledge from rational and empirical inquiry. Sassi, Kosim, and colleagues, and Fauziah and colleagues describe knowledge integration within an epistemological orientation that seeks greater coherence between knowledge, educational purpose, and ethical or metaphysical foundations. Al-Attas-oriented scholarship similarly associates education with knowledge, adab, and learner formation rather than with the mere transmission of technically useful information.¹⁴

Contemporary discussions reinforce the persistence of tensions between textual inheritance, critical inquiry, and changing conditions of knowledge production. Studies addressing epistemological crisis and textualism in Islamic higher education indicate that the relationship between inherited textual authority and contemporary forms of inquiry remains an active intellectual concern. At the same time, studies of Society 5.0, digital transformation, and AI adoption in madrasah, pesantren, and Islamic higher education report institutional, technological, and cultural challenges associated with adapting Islamic educational practice to emerging digital conditions.¹⁵

14 Sassi, “Principles of Islamic education epistemology”; Kosim, Kustati, and Murkilim, “Syed Muhammad Naquib al-Attas’ ideas on the Islamization of knowledge”; Fauziah et al., “Reconstructing curriculum epistemology through the tawhidic worldview”; Ahmed, “An exploration of Naquib al-Attas’ theory of Islamic education”; Hidayatullah and Arif, “Syed Muhammad Naquib al-Attas’ exposition on the concept of ethics.”

15 R. M. Fatkhi and H. Firdausy, “Stagnant textualism and epistemological crisis: Revisiting hadith scholarship in Indonesia's Islamic universities,” *Jurnal Studi Ilmu-ilmu al-Qur'an dan Hadis* 27, no. 1 (2026): 303–326, <https://doi.org/10.14421/qh.v27i1.6727>; Arroisi, Zarkasyi, and Roini, “The relevance of contemporary epistemology on existing knowledge”; Zuhri et al., “How madrasahs build students' character”; Mutammam et al., “Adaptation and transformation of pesantren education”; Mahsusi et al., “Achieving excellence”; Achruh et al., “Challenges and opportunities of artificial intelligence adoption”; Syukur et al., “Integration of artificial intelligence in Islamic higher education”; Aflahah et al., “AI, ethics, and Islamic higher education.”

These studies should not be interpreted as evidence that Islamic education is uniformly dichotomous or universally incapable of integrating different forms of knowledge. The more defensible finding is that the literature repeatedly identifies fragmentation as a problem and proposes integration as a response. In contrast, the pedagogical mechanisms by which different epistemic registers interact are less consistently specified. This distinction is important because the present study does not treat conventional Islamic education as a homogeneous institutional reality.

The practical significance becomes clearer when contemporary digital dilemmas are considered. Problems such as algorithmic bias, misinformation, privacy concerns, automated recommendations, and responsible use of generative AI cannot be adequately addressed by a single mode of reasoning. They require students to determine what normative principles apply, examine how a technological or informational system actually functions, assess evidence and uncertainty, and reflect on intention, responsibility, and consequence. The reviewed literature includes these elements across studies, but they are not consistently formulated as a coherent learner process.

The RQ2 finding is therefore best understood as a cross-register reasoning problem. Knowledge integration becomes meaningful when learners are required to use different forms of knowledge to address the same problem. A digital ethical dilemma may simultaneously require attention to normative principles, technological mechanisms, empirical evidence, uncertainty, and reflective responsibility. Integration is thus not achieved simply by placing religious and scientific subjects within the same curriculum, but by enabling learners to bring different epistemic registers into reciprocal reasoning.

RQ3. From epistemological resources to an operational integrative framework

The foundational literature establishes *Bayani*, *burhani*, and *irfani* as differentiated epistemic modes rather than interchangeable labels. Contemporary scholarship confirms that the triad has already entered discussions in education and the digital era. Asrofi and El-Yunusi apply the three epistemologies to PAI learning. At the same time, Sya'adah and colleagues formulate the triad as complementary normative, rational-analytical, and ethical-spiritual dimensions and explicitly discuss technological ethics. Tampubolon and colleagues connect Islamic epistemology with digital epistemic literacy, while Afriani and Dewi relate the three modes to tabayyun, algorithmic-bias detection, and muraqabah.

These studies establish that the triad is already being interpreted in relation to contemporary educational and technological conditions.¹⁶

Cross-question synthesis

Across the three research questions, the corpus points to a common problem at the intersection of digital mediation, knowledge, and moral agency. The literature documents digitally mediated risks and changing conditions of agency; it also provides substantial philosophical and educational arguments for integrating religious, rational, empirical, and reflective forms of knowledge. At the same time, contemporary scholarship increasingly connects the *Bayani–burhani–irfani* triad with education, digital epistemology, technological ethics, and algorithmic challenges. The remaining analytical task addressed by this study is therefore not to establish the existence of these individual strands, but to reconstruct their functional relationship within a learner-facing pedagogical architecture.

Table 2.

Evidence-to-Synthesis Matrix Across the Three Research Questions

Research question	Evidence pattern	Critical-interpretive synthesis	Status of claim
RQ1	Digital moral disruption is documented through cyberbullying, cyber-aggression, problematic digital behavior, changing agency, algorithmic mediation, and digital literacy challenges.	The literature supports an interpretive focus on the relationship among information processing, judgment, agency, and moral accountability.	Interpretive construct: epistemic–moral disconnect
RQ2	Islamic educational scholarship repeatedly identifies knowledge fragmentation and proposes integration across religious, rational, empirical, and ethical domains.	Contemporary digital dilemmas require movement across normative, technological/empirical, and reflective registers.	Critical synthesis: fragmentation is a recurrent concern, not evidence of universal institutional failure
RQ3	The triad is already used in PAI, contemporary epistemology, technological ethics,	Dispersed epistemological, ethical, technological, and educational strands can be reconstructed into a learner-facing architecture	Conceptual reconstruction: not empirical validation

16 Abbas, “Integration approach of bayani, burhani, and irfani”; Khatamunisa and Koniah, “Kritik metodologi”; Asrofi and El-Yunusi, “Penerapan epistemologi bayani, burhani, dan irfani”; Sya’adah, Munir, and Ismail, “Epistemologi integratif bayani-burhani-irfani”; Tampubolon, Dewi, and Sanusi, “Rekonstruksi epistemologi Islam untuk era digital”; Afriani and Dewi, “Epistimologi Islam di era digital.”

Research question	Evidence pattern	Critical-interpretive synthesis	Status of claim
	and digital-era discussions; Islamic AI ethics and algorithmic critique are also established areas of scholarship.	for algorithmically mediated moral judgment.	
Cross-question synthesis	Islamic epistemology, digital ethics, AI education, and character formation increasingly overlap across the literature.	The ITP model specifies functional relationships among normative orientation, critical-technological inquiry, and spiritual-moral interiorization.	Original contribution: synthesis and pedagogical reconstruction

Table 3.

Comparison with Closest Prior Studies

Study	What it establishes	Relation to the present study	Boundary of the present contribution
Asrofi and El-Yunusi (2024)	Applies <i>Bayani–burhani–irfani</i> to PAI learning.	Direct educational antecedent.	The present study extends the discussion toward algorithmically mediated information and moral judgment.
Elmahjub (2023)	Develops an Islamic AI ethics framework that addresses autonomy, privacy, fairness, transparency, and <i>maṣlahah</i> .	Direct AI-ethics antecedent.	The present study translates related ethical concerns into a learner-facing epistemological architecture.
Sya’adah et al. (2025)	Frames the triad through normative, rational-analytical, and ethical-spiritual dimensions and discusses technological ethics.	Close conceptual antecedent.	The present study identifies learner-facing interaction as one of the three functions under algorithmically mediated conditions.
Tampubolon et al. (2026)	Connects the triad with digital Islamic epistemic literacy and algorithm-dominated information conditions.	Very close digital-epistemic antecedent.	The present study emphasizes pedagogical functional relationships and moral-formation processes.
Afriani and Dewi (2026)	Relates the triad to tabayyun, algorithmic-bias detection, and muraqabah.	Very close contemporary antecedent.	The present study synthesizes these functions with broader dimensions of AI ethics and

Study	What it establishes	Relation to the present study	Boundary of the present contribution
Ja'far et al. (2026)	Examines algorithmic power through digital fiqh, <i>maqāṣid al-sharī'ah</i> , and Islamic epistemic sovereignty.	Algorithmic-governance antecedent.	educational implementation. The present study focuses on learner-facing pedagogical reasoning rather than primarily legal-epistemic critique.
Yusuf et al. (2026)	Develops an empirical model of digital integration for multicultural Islamic education.	Relevant educational-integration antecedent.	The present study uses a different epistemological architecture centered on <i>Bayani–burhani–irfani</i> .

Discussion

From digital behavioral risk to the epistemic conditions of moral agency

The synthesis suggests that the educational significance of digital moral disruption lies not only in the behaviors that become visible online but also in the conditions under which learners form judgments. Research on cyberbullying, cyber-aggression, digital literacy, and algorithmic alienation points to different dimensions of digitally mediated conduct and agency. Taken together, these strands suggest that moral education in digital environments cannot be reduced to behavioral prohibition or technical competence alone. The relevant educational question is how learners interpret information, assess mediated alternatives, and connect their judgments to responsibility.¹⁷

This interpretation extends the role of digital literacy. Digital literacy is commonly treated as the capacity to access, evaluate, and use digital information, whereas the synthesis developed here positions it within a broader epistemic and moral process. A learner may possess the technical ability to retrieve information, use an AI system, or navigate a digital platform while still lacking the capacity to interrogate the evidentiary status, bias, uncertainty, and normative implications of what is encountered. Conversely, moral instruction that remains detached from the mechanisms by which digital platforms shape visibility and choice may offer principles without sufficiently addressing the conditions under which those principles must be exercised.

¹⁷Vo et al., “Cyberbullying among high school students”; Eun Jahng, “Factors influencing South Korean early adolescents’ cyber aggression”; Thongnopakun et al., “Cyberbullying behaviors among youth during the COVID-19 pandemic”; Arkan, Kanbay, and Akcam, “From algorithms to the self.”

The significance of *muraqabah* and *muhasabah* within the present framework is therefore pedagogical rather than merely terminological. They provide a conceptual language for reconnecting the use of information with self-examination, accountability, and disposition. The synthesis does not establish that these practices causally reduce digital misconduct; rather, it proposes that they can function as reflective dimensions of moral formation within environments characterized by continuous digital mediation. In this sense, the problem of digital moral disruption can be interpreted as partly a problem of moral agency: the learner is not only deciding what to do but also learning how to remain a responsible knowing subject as information is increasingly selected, ranked, and generated by technological systems.

Knowledge integration as cross-register reasoning

The second theoretical implication concerns the meaning of knowledge integration in contemporary Islamic education. The reviewed epistemological literature provides a broad rationale for overcoming the separation of religious, rational, and empirical knowledge. At the same time, Al-Attas-oriented scholarship connects educational purpose with knowledge, *adab*, and learner formation. Contemporary studies on AI and digital transformation demonstrate that these epistemological questions take on practical significance as education encounters rapidly changing technological environments.¹⁸

The synthesis, therefore, refines the notion of integration from a structural arrangement of subjects toward the cross-register reasoning identified in the RQ2 findings. The normative, technological, empirical, and reflective dimensions of a digital dilemma are related but not reducible to one another.

This distinction is important for Islamic education because it avoids two equally limited approaches. The first is to treat religious education primarily as the transmission of normative rules without sufficient engagement with how contemporary technological systems actually operate. The second is to treat technological competence as sufficient preparation for digital participation while leaving ethical judgment to an external or

18 Sassi, "Principles of Islamic education epistemology"; Kosim, Kustati, and Murkilim, "Syed Muhammad Naquib al-Attas' ideas on the Islamization of knowledge"; Fauziah et al., "Reconstructing curriculum epistemology through the tawhidic worldview"; Ahmed, "An exploration of Naquib al-Attas' theory of Islamic education"; Hidayatullah and Arif, "Syed Muhammad Naquib al-Attas' exposition on the concept of ethics"; Achruh et al., "Challenges and opportunities of artificial intelligence adoption"; Syukur et al., "Integration of artificial intelligence in Islamic higher education"; Ferdinan et al., "Examining the enactment of digital literacy."

separate domain. The ITP reconstruction instead treats the learner's capacity to move across these registers as part of the educational task.

In an algorithmic-bias case, for example, textual and ethical considerations may establish concerns about justice and responsibility; technological inquiry may examine how bias emerges through data, model design, or platform mechanisms; and reflective evaluation may ask how intention, accountability, and consequence should shape the learner's response.

Reconstructing *Bayani*, *burhani*, and *irfani* for algorithmically mediated learning

The central theoretical contribution of the study is the reconstruction of the *Bayani*–*burhani*–*irfani* triad in relation to a specific pedagogical problem. This is not a proposal for a new epistemological taxonomy. The literature already demonstrates that the triad has been used in PAI, contemporary Islamic epistemology, technological ethics, and digital-era discussions. The contribution instead lies in specifying the functional relationship among the three epistemic dimensions in a learning environment shaped by algorithmic mediation.¹⁹

Within the ITP model, *Bayani* functions as a textual-normative orientation. It enables learners to identify relevant principles, moral boundaries, duties, and purposes through Qur'anic and Prophetic guidance and related ethical reasoning. *Burhani* functions as a critical-technological inquiry. It directs attention toward evidence, data, algorithmic processes, uncertainty, bias, and consequences. *Irfani* functions as a spiritual-moral interiorization by connecting knowledge and judgment to self-examination, accountability, character, and a responsible disposition. The three functions are therefore complementary rather than hierarchical and recursive rather than strictly sequential. This functional distinction also clarifies the place of algorithmic ethics. Algorithmic ethics is not equated with *burhani*, nor is it treated as an independent fourth epistemology. Rather, it represents a contemporary problem domain in which critical technological reasoning is particularly important. The ethical evaluation of an algorithmic system, however, cannot be completed through technical analysis alone.

19 Asrofi and El-Yunusi, "Penerapan epistemologi bayani, burhani, dan irfani"; Sya'adah, Munir, and Ismail, "Epistemologi integratif bayani-burhani-irfani"; Tampubolon, Dewi, and Sanusi, "Rekonstruksi epistemologi Islam untuk era digital"; Afriani and Dewi, "Epistemologi Islam di era digital."

Normative boundaries require *Bayani* orientation, while responsible conduct requires *irfani* interiorization.²⁰

Relationship to adjacent scholarship and locus of contribution

The comparison with the closest prior studies (Table 3) indicates that the contribution should be understood relationally rather than as a claim of absolute novelty: existing research already provides several of the elements from which the present framework is reconstructed.²¹

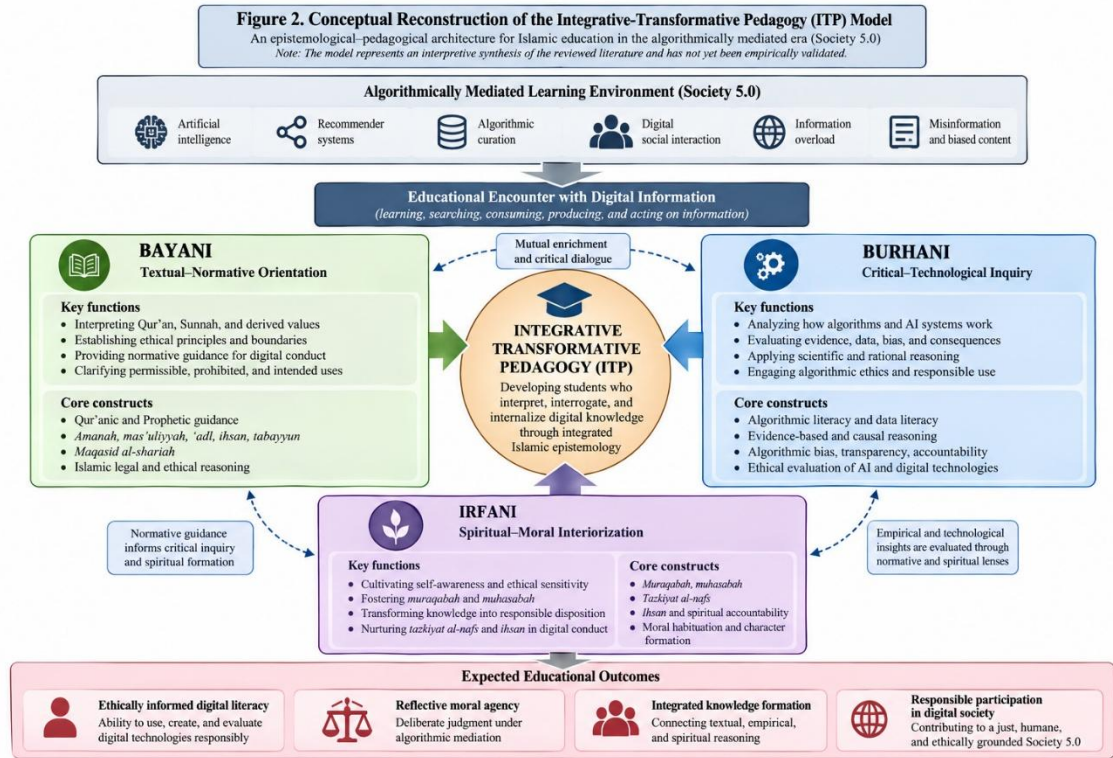
The distinction made by the present study is therefore not that these strands are absent, but that they have been developed through different analytical purposes. Some provide philosophical foundations, others specify ethical principles, others examine digital epistemic conditions, and others focus on educational integration or empirical practice. The CIS undertaken here reconstructs these dispersed functions into a common pedagogical architecture organized around three mutually informing epistemic processes.

The resulting contribution can consequently be stated at three levels. First, theoretically, the study moves knowledge integration from a broad philosophical principle toward a more explicit account of how different epistemic functions may operate within learner judgment. Second, pedagogically, it connects digital literacy with normative evaluation, critical-technological inquiry, and spiritual-moral reflection rather than treating digital competence as a purely technical outcome. Third, conceptually, it provides a framework for examining moral agency under conditions in which information is not only digitally available but also algorithmically mediated.

The model shifts the pedagogical objective from simply producing digitally competent students to developing learners who can interpret, interrogate, and internalize digital knowledge. It also preserves an important methodological boundary: the model describes a conceptual architecture derived from literature, not an empirically demonstrated sequence of learning effects.

20 Elmahjub, “Artificial intelligence (AI) in Islamic ethics”; Ja’far et al., “Digital fiqh and maqāṣid al-sharī’ah.”

21 Asrofi and El-Yunusi, “Penerapan epistemologi bayani, burhani, dan irfani”; Sya’adah, Munir, and Ismail, “Epistemologi integratif bayani-burhani-irfani”; Tampubolon, Dewi, and Sanusi, “Rekonstruksi epistemologi Islam untuk era digital”; Afriani and Dewi, “Epistemologi Islam di era digital”; Elmahjub, “Artificial intelligence (AI) in Islamic ethics”; Ja’far et al., “Digital fiqh and maqāṣid al-sharī’ah.”



Implications for Islamic educational practice

At the curriculum level, digital ethics can be embedded in problem- and case-based learning activities that address algorithmic bias, misinformation, privacy, recommendation systems, and generative AI. Such activities can require learners to identify relevant textual and ethical principles through *Bayani*, investigate technological and evidentiary dimensions through *burhani*, and conduct reflective evaluation through *irfani*. The resulting task is not simply to provide a correct answer but to make the reasoning process visible.

At the teacher-education level, educators require a multidimensional competence that includes technological understanding, ethical reasoning, and pedagogical capacity. Teachers need sufficient knowledge of algorithmic systems to facilitate critical inquiry and to connect technical questions to Islamic ethical reasoning and reflective formation. This implication is consistent with the literature reviewed on AI adoption and digital competence in Islamic education.²²

22 Faizin et al., "Muslim students' acceptance of artificial intelligence"; A. A. Ritonga, Khadijah, and F. E. Harahap, "Beyond technical skills: Digital competence in in-service training for Islamic religious education professional teachers," *Jurnal Pendidikan Agama Islam* 23, no. 1 (2026): 86–108, <https://doi.org/10.14421/v23i1.12218>; Wedi, Mardiana, and Umiarso, "Digital transformation model of Islamic religious education."

At the institutional level, AI governance and curriculum policy can be treated as mutually reinforcing domains. Institutional rules concerning responsible AI use, data privacy, academic integrity, and transparency establish external conditions for ethical practice, while pedagogy develops learners' capacity to reason and act responsibly within those conditions. Institutional governance and character formation, therefore, address different but complementary dimensions of digital ethics.²³

Boundary Conditions and Limitations

Three limitations define the present contribution. First, the ITP model is a conceptual reconstruction rather than an empirically validated intervention. No claim can therefore yet be made regarding its effectiveness in improving digital literacy, moral judgment, or student behavior. Second, the corpus is heterogeneous, combining philosophical, conceptual, qualitative, and quantitative sources whose epistemic status is not equivalent. The synthesis consequently prioritizes conceptual integration rather than evidentiary aggregation. Third, the meanings assigned to *Bayani*, *burhani*, and *irfani* vary across intellectual traditions. The functional mapping proposed here should therefore be understood as a contemporary reconstruction for pedagogical purposes rather than as a definitive historical interpretation.

A further methodological boundary concerns the relationship between the primary database pathway and supplementary searches. The quantitative PRISMA pathway represents the documented database-screening sequence, while targeted searches and backward/forward citation searching were used to verify conceptual gaps and identify close antecedents. The resulting originality claim is therefore corpus-bounded. It should be understood as a claim about the analytical reconstruction achieved through this synthesis rather than a universal assertion concerning all scholarship.

Digital transformation in Islamic education requires more than adding ethical rules to technological training; it requires attention to the epistemic conditions under which learners recognize knowledge, evaluate technologically mediated claims, and turn judgment into morally accountable action. Knowledge integration, in this view, is an educational process that brings different modes of knowing into relation with one another around shared problems. The *Bayani–burhani–irfani* reconstruction articulates this

23 Aflahah et al., “AI, ethics, and Islamic higher education”; Muttaqin et al., “Competitive advantage management of madrasah.”

process: *Bayani* orients judgment normatively, *burhani* examines the evidentiary and technological conditions of a claim, and *irfani* links judgment to reflective moral formation.

Conclusion

This Critical Interpretive Synthesis examined how Islamic education can respond to moral disruption within the algorithmically mediated environment of Society 5.0. Across 70 sources, the review identified a recurring analytical separation among digital information, critical judgment, and moral-spiritual accountability. The literature documents cyberbullying, cyber-aggression, problematic digital behavior, changing agency, and other digitally mediated risks, while also showing that Islamic educational scholarship increasingly addresses knowledge integration, AI ethics, digital literacy, and contemporary epistemological challenges. The evidence does not support treating Islamic ethics or the *bayani–burhani–irfani* tradition as absent from digital-education scholarship. Rather, the reviewed contributions remain distributed across different epistemological, ethical, technological, and pedagogical formulations.

The study's contribution is therefore a conceptual reconstruction. The Integrative-Transformative Pedagogy (ITP) model specifies three complementary functions: *Bayani* provides textual-normative orientation; *burhani* supports critical-technological inquiry into evidence, algorithms, data, uncertainty, bias, and consequences; and *irfani* supports spiritual-moral interiorization through self-reflection, accountability, and character formation. Their interaction positions digital literacy not merely as technical competence but as a capacity for informed and morally accountable judgment.

The framework has implications for curriculum design, teacher education, and institutional AI governance. It suggests that integration becomes pedagogically meaningful when learners move across normative, technological, empirical, and reflective registers while addressing concrete digital dilemmas. However, ITP remains a literature-grounded conceptual reconstruction rather than an empirically validated model. Its proposed relationships require further testing across diverse Islamic educational settings to examine implementation, learner outcomes, and the conditions under which epistemological integration can support responsible moral agency in algorithmically mediated environments.

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Ethics Statement

This study is a literature-based Critical Interpretive Synthesis that analyzed only published scholarly sources. It involved no human participants, personal data, or animal subjects, and therefore did not require ethics committee approval or informed consent.

Conflict of Interest Statement

The authors declare no conflict of interest.

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Author Contributions

Musdalifah Nihaya: Conceptualization, Methodology, Formal analysis, Writing-original draft. St Muthahhara: Methodology, Investigation, Data curation, Writing-original draft. Indriana: Investigation, Data curation, Visualization. Adistian: Validation, Resources, Writing-review & editing. Wan Juliana Amirah Wan Ab Aziz: Supervision, Validation, Writing-editing. All authors read and approved the final manuscript.

Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

During the preparation of this work, the authors used Claude to improve the language and readability of the manuscript. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

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