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The Algorithmic Ulama: Generative AI, Religious Authority, and the Reconfiguration of Adab in Indonesian Islamic Communication

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ABSTRACT

Anyone with a mobile phone can now ask generative artificial intelligence for religious answers in fluent Indonesian, complete with verses and hadiths, at any hour. This article examines what that change means for religious authority and for adab, the ethics of conduct through which knowledge is transmitted and received in Islamic tradition, by conceptualising such a system as an algorithmic ulama. The study is a qualitative interpretive analysis. Thematic analysis was applied to 24 scholarly works, and document analysis to 15 dated public primary documents, comprising statements of Nahdlatul Ulama, the Indonesian Ulama Council, and Muhammadiyah, together with state guidance, international and interfaith frameworks, and a Malaysian comparator, supported by data on internet use. Three findings emerge. First, generative artificial intelligence reproduces the form of a scholarly answer while disrupting five dimensions of the adab of knowledge: sanad, the verifiable chain of transmission; ṣuḥbah, the formative bond between teacher and learner; tawaqquf, the humility to suspend judgement; ikhtilāf, legitimate scholarly disagreement; and accountability. Second, the major Islamic organisations agree that artificial intelligence may not act as a mufti or a teacher of religion, but they diverge on its use in da'wah and learning, from prohibition, to setting boundaries, to ethical enablement. Third, these responses address users and scholars rather than the systems themselves, so system design remains largely ungoverned. The article therefore proposes an adab-by-design framework that translates the five dimensions into requirements for developers, religious institutions, and users, and argues that adab can give artificial intelligence ethics a concrete vocabulary beyond general principles of transparency and human oversight.

Keywords: *adab; artificial intelligence ethics; digital religion; fatwa; generative artificial intelligence; religious authority*

INTRODUCTION

The national conference of the largest Islamic body, Nahdlatul Ulama (NU) declared in September 2023 that it is not allowed (haram) to use answers produced by artificial intelligence (AI) as guidance for religious rulings (CNN Indonesia, 2023; Luxiana, 2023). Two years later, the chairman of the Ulama Council (MUI) of Indonesia announced at the international conference of fatwa issuers that AI cannot take the place of the ulama in issuing fatwas (NU Online, 2025), and the council, in turn, put AI on

the agenda of its national congress with the statement that AI is "not a teacher of religion" (Jannah, 2025). The Muhammadiyah was the second largest, providing a contrasting perspective by asserting that the application of AI is inevitable and that people should learn to be "literate" about it, but that they also need to have a "digital ethics" in the use of AI, rather than banning it (Muhammadiyah, 2025a).

These statements are in answer to a real change. Indonesia has more than 229 million people who use the internet (Bisnis.com, 2025) and many people are already learning about religion through apps, social media and on the internet through religious preachers (Fakhruroji, 2019; Slama, 2018). Previous digital media enabled more voices in the name of Islam to be heard (Bunt, 2018; Turner, 2007). In generative systems, answers are generated without any human author, but in the register of a learned scholar, quoting scripture, summarising legal opinions and giving counsel. ISIs are also demonstrated in research to appear authoritative and yet be in the wrong in jurisprudence and attribution questions (Wahid, 2025b; Ahmad, 2026). This article proposes that the resulting number is an algorithmic ulama—a system which can possess some of the properties of a religious scholar but not the properties which make his word authoritative.

The article considers this number in the context of adab. In knowledge, adab refers to the arrangement, refinement and process of acquiring knowledge; in Islamic instruction, it refers to right conduct, the manner in which the teacher imparts knowledge, and the manner in which the student acquires knowledge. (Metcalf, 1984). No Muslim society ever had a situation where religious authority is purely based on information. It has been resting on the links of communication between a scholar and his sources of inspiration; on the bond formed between teacher and pupil; on the qualities it is expected to have from the traditions it represents, humility, restraint and responsibility. It gives information without relation, answers without responsibility and confidence without relationship.

The subject of the influence of new media on religious authority has been studied in the field of religion and Internet for long time. Turner (2007) proposed that new media threatens the authority of the traditional media in several ways: firstly, it produces a range of religious opinions and secondly, anyone can make judgements, thus deconstructing the authority of experts. Campbell (2007) proposed a more complex distinction between levels of authority: both religious and religious hierarchy, religious structure, religious ideology and religious text, and suggested that not only can the internet strengthen offline authority, but that it also can not. Cheong (2017) also argues for a dialectic of the religious leaders modifying their practices to the new media to reach and re-legitimate their authority. Bunt (2018) details the existence of 'cyber-Islamic environments', such as online fatwa services, applications and social media which have opened new access points for religious knowledge and have encouraged the traditional institutions to go online.

The results of the research in Indonesia validate both trends. The social media has revolutionized the economy of Islamic preaching as it was demonstrated by Slama (2017, 2018) that Islamic preachers have been able to maintain a continuous relationship

with their audience via social media. Nisa (2018) discusses a unique da'wa culture developed by young Muslim women on Instagram, an original and commercially successful practice, and Hew (2018) explores the visual persuasions of one popular preacher in the dissemination of an Islamist message. Husein and Slama (2018) name some of the fears that accompany online piety such as the fear of superficial learning and loss of guidance from qualified teachers. In Islamic Apps, Fakhruroji (2019) shows how religious teachings are being digitised and how it brings about new forms of interaction. Although the groups are traditional, such as the ḥabāʾib, the author, Wahid (2025a), finishes by asserting that they resocialise their authority online through the role of community relations, social action and transparency. Thus in Indonesia authority in digital Islam is not just fractured, but also re-negotiated via relations.

Adab is one way to 'circumstantiate' what's at stake in this renegotiation. The discipline of adab, related to the external manifestation and internal disposition, and its power to situate persons and things in their proper place, constituted an important category for Metcalf (1984) in an understanding of how to behave morally and ethically in Muslim societies. Adab literature explains the responsibility of the teacher and student, the method of reading texts and the values that are expected of a teacher and a ruler for religious affairs. This tradition repeats five dimensions which are particularly relevant to digital religious communication.

The first is sanad, the chain of transmission of a statement from the source and a scholar from earlier scholars; the second is the placement of a speaker in a recognized lineage by making some statements verifiable. The second is ṣuḥbah, companionship between teacher and student, knowledge is transmitted with character and it is possible for the teacher to put an answer into the mouth of the one asking. The third is tawaqquf, that is, a readiness to hold back from making a judgment or saying 'I do not know' where the evidence is not clear; the tradition considers it a moral failing to make a judgment prematurely. The fourth is the acceptance of ikhtilāf (legitimate disagreement between schools and scholars), the recognition of which is to answer an alternative view, so that it can be recognized, not in order to make it seem to be the only choice. The fifth is: Responsibility – The one who responds is accountable for the implications of their response to God and community. In this way religious authority is not the product of the content of the answer, but belongs to its production and delivery.

The issue of fatwas (iftāʾ) is a good illustration of the five dimensions. A fatwa is a legal opinion (fatwa), which is not enforceable, but is issued in answer to a question, and there has always been a tradition to specify the qualifications and conditions for issuing a fatwa. The answerer should know enough about the sources as well as the principles of reasoning in law; he should have an upright character and he should know the circumstances of the questioner and the society from which the questioner comes. In different situations, different people may answer differently to the same question, therefore, it is essential that there is a meeting between the Mufti and the questioner.

In modern Indonesia these expectations are enshrined in formal documents. In mass organisations, there are their own forums or bodies that consult legal matters, such as NU (baḥth al-masāʾil) and Majelis Tarjih of Muhammadiyah which issue fatwas on

a particular matter. While the approaches vary, all of these bodies have a process of deliberation in which an array of suitably qualified persons participate, rather than the influence of a single source. They are the institutionalisation of the elements of sanad, ikhtilāf and accountability in the modern Indonesia Islam. It is in this context that the organisations' responses to AI, as shown in the findings below, should be interpreted: it is not only a matter of a right answer, it is also a question of whether an outside technology that generates answers can impact the institutional conditions of the production of authoritative answers.

AI usage in religion is a new field of literature. In Singler's analysis (2020), internet discourse on algorithms attributes quasi-divine qualities to them, and enables a process of objectification whereby the knowledge production of AI becomes a process. Cheong (2020) discusses robots and AI in religious contexts and how their communicative affordances impact upon the construction of spiritual knowledge and community. As demonstrated in the case of Tsuria and Tsuria (2024), generative AI technologies have a unique moralistic take on religion that may fail to capture the granularity of religion. Studies regarding the role of Chatbots in the Islamic context indicated that the systems can produce common opinions but also make errors in jurisprudence, attribution and context (Wahid, 2025b; Ahmad, 2026).

The outcomes are consistent with the overall study on LLM. These models can generate text by predicting likely sequences instead of relying on verified sources, and are thus able to produce fluent, but unverifiable statements (Bender et al., 2021; Floridi & Chiriatti, 2020). The issue of "hallucination", or generating content that is not strictly faithful to the source and/or to fact, is well-known to persist (Ji et al., 2023). Research on AI-mediated communication also suggests that inferences about the source of the message are altered when the message is generated or is influenced by AI (Hancock et al., 2020).

The literature thus provides two incomplete pictures. The aim of digital religion studies is to understand how authority is being negotiated among the different human actors on the Internet, and for AI studies, the aim is to create convincing, but misinforming, text. What has been lacking, however, is a reportage of what occurs when the second enters the first; when a non-human system occupies a space of authority that is being appraised by Indonesian Muslims using adab's vocabulary. This article is a link between these two literatures in that language.

The fragmented and reconfigured nature of religious authority in Indonesia mediated by social media has already been studied; a literature has emerged on how AI is a representation of religion (Husein & Slama, 2018; Nisa, 2018; Wahid, 2025a; Tsuria & Tsuria, 2024; Singler, 2020). There is little research to be found that has correlated these literatures with the norms of Indonesian Muslims in assessing religious communication in their language. This article aims to do just that.

There are three contributions in the article. It's an algorithmic ulama that conceptualises it and it recognizes five dimensions of adab that are disrupted by generative AI. It focuses on the attitude and actions of NU, MUI and Muhammadiyah towards the policies and guidelines given by the state and from external and interfaith

sources. It presents an 'adab-by-design' approach which aims to make a religious ethics of knowledge operational in terms of systems, institutions and users.

The article is guided by three research questions: (RQ1) how does generative AI challenge the adab of religious knowledge that underpins authority in Indonesian Islamic communication; (RQ2) how have Indonesia's major Islamic organisations, the state and international frameworks responded to AI as a source of religious guidance; and (RQ3) what would it mean to design and govern AI religious communication according to adab?

METHOD

This study is qualitative interpretive analysis which thematic synthesis of scholarship and document analysis of public documents. The design is appropriate to the research questions that focused on meanings and normative evaluations of the use of AI, as well as how adab is referenced to evaluate the use of AI, but not usage or impact. Six phases of thematic analysis described by Braun and Clarke (2006) were used: familiarisation, initial coding, searching for themes, reviewing themes, defining themes and reporting. Document analysis was done in an iterative fashion with the aid of the process described by Bowen (2009) for skimming the documents, reading them and interpreting them as evidence of how the institution views a problem.

The scientific community consists of 24 works that are divided into four thematic strands: religious authority and digital media, Indonesian digital Islam, ethics of knowledge from Islamic tradition and AI, language models and religion. For conceptual relevance, and where a corresponding work was available, for open access, works were chosen; thirteen of 24 are open access.

There are fifteen dated documents in the main body (see Figure 1) which consist of public documents. Inclusion criteria for a document were: (a) reporting or stating a position concerning AI and religious guidance/religious communication and/or religious ethics concerning AI related to Indonesia; (b) having a publication date; and (c) being publicly accessible without logon. The positions of NU and MUI were derived from the reports of national news agencies which cite the decision and positions of leaders of those organisations; while the position of Muhammadiyah was taken from articles published on the official website of the organisation. Context documents include discussions on the use of the Internet in Indonesia, Indonesian News consumption, and the guidance of ethics for AI by the State of Indonesia. Comparative documents consist of a recommendation by the UNESCO, an interfaith pledge, a Vatican document and the launch of a chatbot aligned to Shariah in Malaysia.

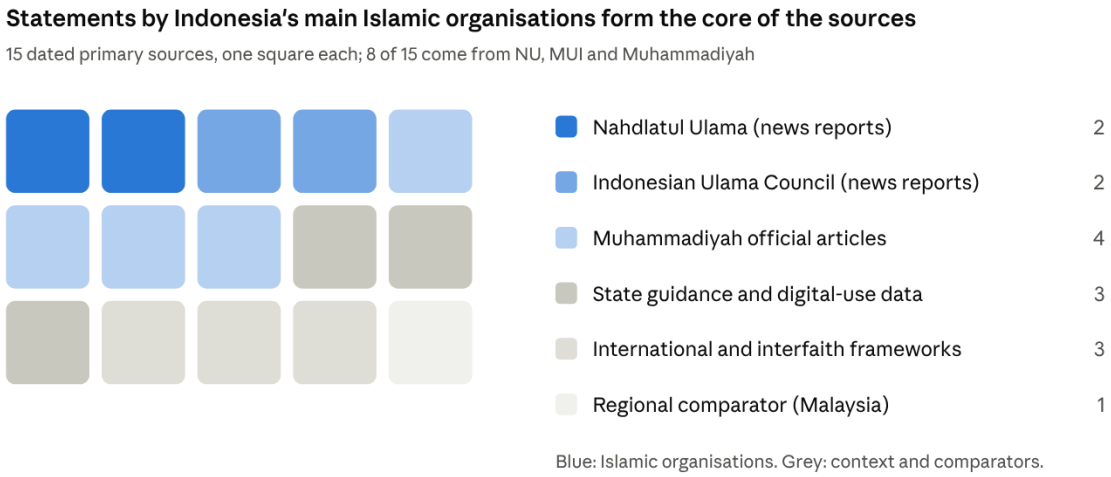


Figure 1. Primary sources (n = 15) by issuer. There are fifteen sources that make statements, eight of which are from the Nahdlatul Ulama, the Indonesian Ulama Council, and Muhammadiyah.

Analysis was carried out in three stages. In the first step, the scholarly corpus was coded deductively for the five dimensions of adab identified in the introduction (sanad, ṣuḥbah, tawaqquf, ikhtilāf and accountability), and inductively for the properties of the generative AI that bear on each. During the second step each of the primary documents was coded according to its attitude and approach to AI as a source of religious guidance, whether it was prohibitive, boundary-setting or enabling; whether the focus was on fatwa and legal rulings or da'wah and learning; whether any justification was provided or proposed, and whether any remedy was provided or proposed. In the third step, these two sets of codes were compared, to find out where disruptions identified in the scholarship are being met with institutional response, and where they are not being met. The comparison resulted in the themes reported in the findings and the framework proposed in the discussion.

Triangulation in scholarly as well as primary sources supported trustworthiness, as did the reference to a negative case, statements that encourage rather than restrict the use of AI (Nowell et al., 2017), and attention to an audit trail that connects each theme to the documents that support it. The analysis is delimited by two limits. Here, the positions of NU and MUI are only known from news reports, and the analysis therefore does not consider either of these positions as a complete legal text but rather as a public framing. The reading is done in the original in Indonesian language; translations are the author's.

FINDINGS AND DISCUSSION

Four themes emerged. The first answer addresses RQ1 by demonstrating the reproduction of the form of a scholarly answer, but without the conduct that makes it authoritative. Answer RQ2 is achieved in the second and third answers, with a consensus that AI is not allowed to make fatwas, and a differing opinion on its role in

da'wah and learning. The fourth one states a governance deficit that serves as the basis for a discussion on RQ3.

The form minus the conduct

The scholarly corpus reveals that generative AI is impacting every dimension of the adab of knowledge as outlined in Figure 2. In both, what remains is the exterior impression of a schooled response--flowing words, citations of scripture and of the academic experts, a logical structure. What is gone is the conduct which is, in Islamic tradition, the basis for such an answer to be trustworthy.

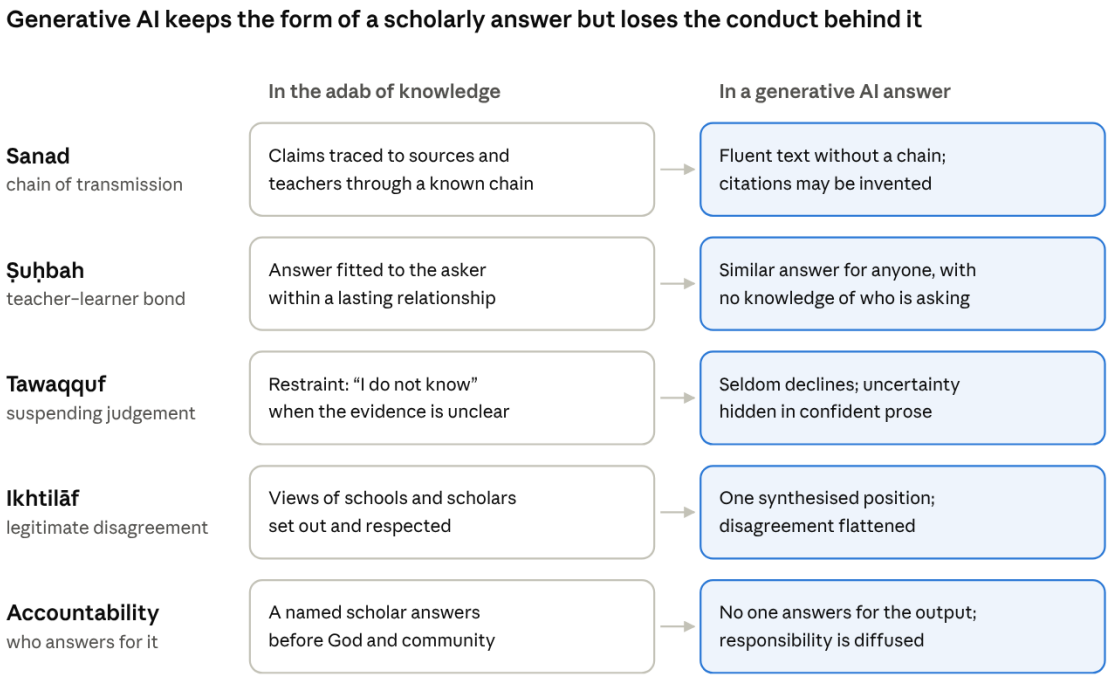


Figure 2. The 5 aspects of adab being disrupted by AI. Each row makes a comparison between the behavior of the transmission of the religious knowledge and the behavior of the generated answer.

Sanad. Language models are poor at recalling confirmed evidence, and they can say things that are not in line with the evidence that they have included (Bender et al., 2021; Ji et al., 2023). In religious use, it means that a chatbot can either be misrepresentative of the source of a hadith, create a false reference or merge two distinct opinions, as demonstrated by the assessment of the Islamic chatbots (Wahid, 2025b; Ahmad, 2026). This is not just error, which human scholars make as well, but a lack of a chain, a trail, that would enable the error to be followed and corrected.

Ṣuḥbah. The Indonesian literature also shows that even online, authority is created by continuous relationship, for example, the repetition of interaction between preachers and their audience (Slama, 2017) and the positive reinforcement of the foundations of trust by the relationship between traditional authorities and the community and social action (Wahid, 2025a). Interacting without connection is a "generative system. It can be pretending (or feigning) to pay attention to what the interlocutor says, but is not aware

of the interlocutor's context, context to development, and context to assuming responsibility for the interlocutor's development, as adab means by teaching (Metcalf, 1984).

Tawaqquf. The custom is that, if he has not enough evidence, he shall not answer to the favor of the tradition. Sometimes they can be so fluent they project confidence on their message, but the opposite can be the case and instead it will be interpreted as a resolution of a disputed question (Hancock et al., 2020).

Ikhtilāf. Religion is generally represented in generative tools through one perspective which is moralistic (Tsuria & Tsuria, 2024). In Islamic jurisprudence, it means harmonizing and merging the diversity of schools faced by Indonesian Muslims into a "synthetic average" which is non-school and cannot be held accountable to anyone, for example, the confluence of each party's perspective of the NU and Muhammadiyah.

Accountability. Finally, the answer which was generated does not have an author behind it. The developer is not responsible for content, user is not the author of content and scholars whose words have been incorporated into training content have not accepted it.

The response to RQ1 is, therefore, that generative AI is not just one in a range of voices that earlier studies (Turner, 2007; Bunt, 2018) have identified as being present in the fragmented field. It presents an outward appearance of authority, but is lacking in the five internal requisites of authority. Hence it is referred to as an algorithmic ulama rather than another source of information.

Guarding the fatwa

One thing is apparent in the primary sources: that AI cannot give fatwas. The information that comes from AI cannot be used as a reference for religious decision making, CNN Indonesia reported, citing NU's National Conference 2023. Prior to the meeting of fatwa officials from various countries, MUI's chairman stated that AI is not a substitute for the ulama in fatwa issuance (NU Online, 2025). Meanwhile, the ulama council's national congress in 2025 discussed AI and issued the message that AI is not a teacher of religion (Jannah, 2025).

There is a structure of these roles. They claim that the fatwa is not only right, it is the result of a qualified person who has passed through a recognised procedure—AI cannot be a qualified person who has passed through a recognised procedure. They do not question the content, but are firm in the dimensions of behaviour, largely sanad and accountability, in the spirit of this article, in the name of authority. Religious communities, as Campbell (2007) has observed, respond to a new media by recapturing structures and legitimising power.

The difference between da'wah and learning

The organisations are different from the fatwa (Figure 3; Table 1). The boundary has been extended from rulings to teaching in that MUI's understanding of AI as "not a teacher of religion" does just that. The public statements of Muhammadiyah focus on the following: AI should not be abided by (Muhammadiyah, 2025a); AI should be

guided by an ethics of information (Muhammadiyah, 2025b); and AI should be guided by an ethics of da'wah and mercy (Muhammadiyah, 2026a); and AI should be guided by an ethics and a maṣlaḥah (public good) (Muhammadiyah, 2026b).



Figure 3. Institutional stances towards AI as a religious source, placed by zone rather than to scale. Indonesian organisations converge in guarding the fatwa but diverge on AI in da'wah and learning.

Table 1. Institutional responses to AI as a source of religious guidance

Actor	Date	Stance	Locus	Main claim	Implied remedy
Nahdlatul Ulama (Luxiana, 2023)	Sep 2023	Prohibitive	Fatwa	AI answers may not be taken as guidance for rulings	Users must seek qualified scholars
Indonesian Ulama Council (NU Online, 2025; Jannah, 2025)	Aug and Nov 2025	Boundary-setting	Fatwa and teaching	AI cannot replace ulama; it is not a teacher of religion	Institutional guidance on AI use
Muhammadiyah (2025a, 2026b)	2025–2026	Enabling	Da'wah and learning	AI is unavoidable; use it for the public good	Literacy and digital ethics
Ministry of Communication and Informatics (Muamar, 2024)	Dec 2023	Enabling with principles	General	Non-binding ethics for AI developers and users	Self-regulation
Zetrix, Malaysia (Soyacincau, 2025)	Aug 2025	Enabling by design	Religious guidance	A chatbot built to be Shariah-aligned	Build compliant systems
Interfaith and international (UNESCO, 2021; Rome Call for AI Ethics, 2023)	2021–2023	Principles	General	Transparency, responsibility, human oversight	Shared ethical commitments

The split is more than just a difference of temperament. Those organizations whose focus is on the person and process of the scholar see AI as a threat to be contained. Organisations that do it individually and rationally, take advantage of it as a teaching instrument to be disciplined. Both are based on the language of adab but each on a different aspect; the first emphasizes sanad and accountability, while the second emphasizes the ethics of the user and the public good. The answer of RQ2 will be convergence on the fatwa and divergence on everything below the fatwa.

Adab is a common language

Although there are some differences, the organisations assess the capabilities of AI in the same language. Three terms recur. The first of these is verification. NUS is based on the concern of relying on answers that are not verifiable, while Muhammadiyah is based on jurisprudence of the information that requires the user to verify the use of AI (Luxiana, 2023; Muhammadiyah, 2025b). Both are inspired by a Qur'anic rule of "tabayyun" (consulting before acting), which has become popular lately in Indonesia's debates about hoaxes and religious information online. The second is that of tool and teacher. The concept of teaching, which is considered as a human relation and can't be replaced by a tool, is assumed by AI is "not a teacher of religion" (Jannah, 2025) and "Muhammadiyah's call for ethical and humane direction in da'wah using AI" (Muhammadiyah, 2026a). The third one is the public good. For the sake of Islamic legal theory, Muhammadiyah's affirmation of the permissibility of using AI as a means to support maṣlaḥah (Muhammadiyah, 2026b) raises the question of whether such a means is permissible or not, subject to the ends that are sought.

There are two reasons that this is a shared vocabulary. First, it is a confirmation that adab is not an analytic category which is imposed on religious communication but it is a living framework with which the Indonesian Muslims and the institutions assess religious communication. Secondly, it can serve as a common ground for collaboration. There is consensus across organisations with diverging views about the scale of the use of AI that the answers needed are ones that can be substantiated, that machines will not be teachers and that the technology is being used for the public good. The points of agreement are those points which can be carried over to the design requirements as proposed in the adab-by-design framework below.

A governance gap

The fourth theme is one that the answers lack. All three organizations are speaking to the users and to the ulama: They are reminding the Muslims that AI should not be utilized as a mufti, and they once more confirm the importance of scholars. There were no documents analysed which required the systems themselves to set requirements on citing, refusal or disagreement. There is no prescribed guidance from the State (Muamar, 2024) and there are guidelines from international organisations (e.g., UNESCO, 2021) that set out principles, not specific to religious knowledge. In addition, the interfaith statement, Responsibility and Reliability for AI from 2023 (Rome Call for AI Ethics, 2023), is general rather than prescriptive, and the Vatican's note on AI and human

intelligence distinguishes the work of machines from the work of human intelligence (Dicastery for the Doctrine of the Faith & Dicastery for Culture and Education, 2025). A possible solution is to build religiously compliant systems (Soyacincau, 2025), but this is not religious conformity, as it can be seen in the case of the introduction of a chatbot in Malaysia that is claimed to be Shariah compliant. This gap is significant as in Indonesia, the majority of people are now online, with social platforms playing an important role in the way in which information is accessed (Bisnis.com, 2025; Reuters Institute, 2025), Indonesian Muslims are likely to turn to general-purpose systems regardless of whether they are encouraged or discouraged by institutions.

Authorities moved to a new location and not disbanded

The findings show that although the efforts of the Islamic institutions in Indonesia to safeguard the persons and processes that support religious authority have been met by the use of generative AI, the same cannot be said for the systems.

A question that was brought up in previous debates was whether digital media poses a threat to religious authority or enhances it (Turner, 2007; Campbell, 2007; Cheong, 2017). In the Indonesian context, another possibility is shift of authority, which is the answer to the generative AI. The withdrawal of the fatwa takes place behind a barrier that can be impenetrable to AI; the authority is an quality of the qualified and recognised procedures. In the meantime an enormous amount of common religion questions with regard to prayer, family, money and morals is left to the human preachers and the machines. The answer here reminds the Muslims of the etiquette involved in the usage of AI: Muslims should not use AI as a mufti and they should verify what they read.

Some benefits to this approach. It will not allow the trivialisation of the institution of fatwa by the production of facsimiles, and it is based on a vocabulary which Indonesian Muslims understand and honour. But it has a limit. It assumes that users will have an idea of when they need a ruling and that they will take action as soon as they see that a quicker answer is available. From literature on AI mediated communication, both of these assumptions are shaky, since literature indicates that the shape of a message affects its authority of the AI (Hancock et al., 2020). The type of ulama that does not identify itself as a mufti is called algorithmic ulama. It simply answers.

Three ways of religion's response

Three models of religious response to generative AI can be discerned when the Indonesian perspective is compared to the comparative sources. The first is the expression of what they think AI can and cannot do, which I am starting to refer to as boundary-setting, a tactic religious institutions have used in the past, in the example of the fatwa, to convey the importance of human scholars. The second is principle-setting, with religious and international organisations making more general ethical statements about AI, including the Rome Call on the Abrahamic commitment (Rome Call for AI Ethics, 2023), a Vatican note on AI and human intelligence (Dicastery for the Doctrine of the Faith & Dicastery for Culture and Education, 2025), and the UNESCO recommendation (UNESCO, 2021). The third is system-building, in which religious or

commercial entities develop systems that copy religious practices such as the Malaysian chatbot, Shariah-aligned (Soyacincau, 2025).

There are disadvantages to all models. Boundary-setting means to maintain core institutions while giving ungoverned systems to religious matters. Principle-setting is a process of consensus building, but it doesn't usually specify what principles are needed in a particular area. Tools created in System-Building can respect the rulings, but risk being interpreted as the rulings themselves, thereby invalidating any alternative views, and thus acting to centralise power in those that create and control the system. The diversity of the organisational system is one of the special assets that is found in Indonesia. This multiplicity, sometimes regarded as the source of disunity, is beneficial for the governance of AI: what it asks of an AI is just as it is natural to ask of it, to attribute and present multiple positions.

Adab-by-design

To be a model for adab, the algorithmic ulama must be extended beyond individual activities to system and institutional activities. The framework that is suggested in the figure 4 suggests four layers of the five dimensions.

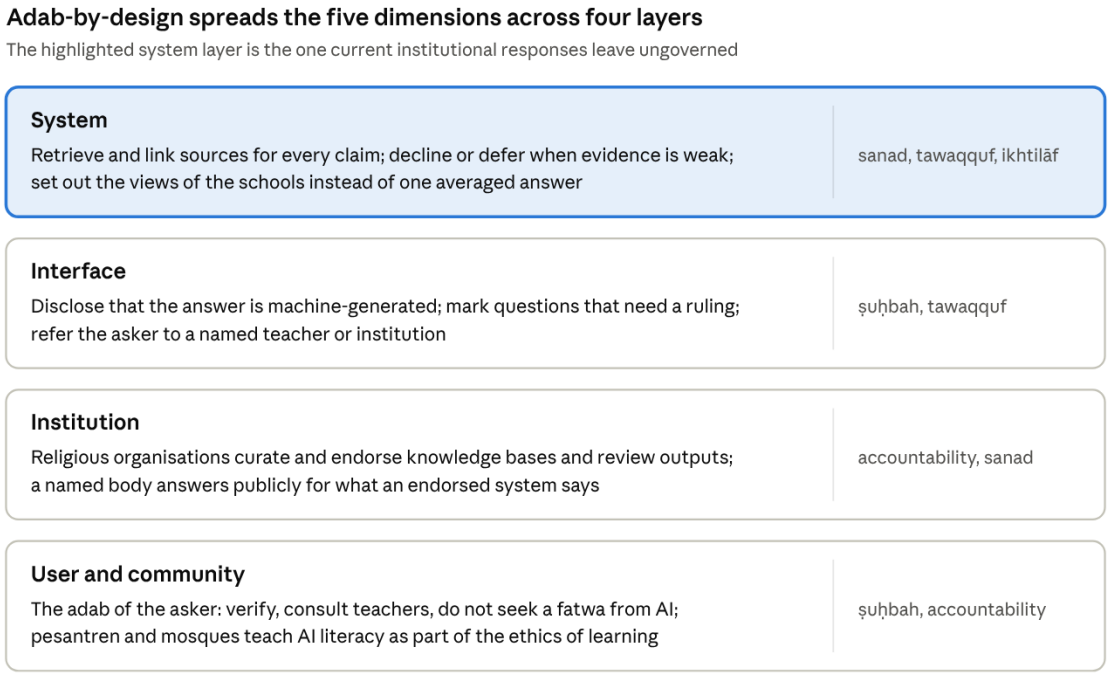


Figure 4. The adab-by-design framework. These five dimensions are spread over each layer of the system and only the ungoverned system layer is not covered by the current institutional responses.

From a system level, sanad becomes a necessity to access and connect sources for every religious claim that can be followed back from answer to text by the user. When the sources are weak, or the question demands a ruling, then Tawaqquf comes into effect to reject or postpone. The requirement of ikhtilāf is to establish the positions of various schools and for the major Indonesian organisations, not to come up with a single

averaged answer. At the interface level, disclosure and referral replace ṣuḥbah – the system declares itself a machine and refers the user to an individual teacher or institution for personal assistance. Religious organisations can reinstate accountability by keeping knowledge bases and endorsing them; by reviewing what they publish and give answers in public about systems they endorse, as they do about the fatwas they issue. At the user and community level, the adab of the seeker of knowledge is revitalized through the awareness of AI literacy, which is incorporated into the ethics of learning in pesantren, madrasah and mosques. Table 2 translates the framework into specific requirements.

Table 2. Translating the five dimensions of adab into requirements

Dimension	Requirement for systems	Role of religious institutions	Practice for users
Sanad	Cite and link a verifiable source for every claim about scripture, hadith or rulings	Curate and certify knowledge bases drawn from recognised works	Check the source before relying on an answer
Ṣuḥbah	Disclose machine authorship; refer personal questions to human teachers	Provide channels to reach qualified scholars	Keep a relationship with a teacher or community
Tawaqquf	Decline or defer on questions that require a ruling or lack clear evidence	Define which questions require a mufti	Do not ask AI for a fatwa
Ikhtilāf	Present the positions of schools and organisations, attributed and unranked	Supply authoritative statements of their own positions	Recognise disagreement as legitimate
Accountability	Log and expose the provenance of answers for review	Answer publicly for systems they endorse	Take responsibility for how answers are used

It adds to the requirement to have systems producing answers to be sanad and accountable already in place at NU and MUI. This is only a sample of how the effort to make a Shariah-compliant chatbot can be done in such a way by religious actors that it is also "adab-compliant" (conforms to "adab"; a set of rules) rather than simply "Shariah-compliant" (conforms to Shariah; a set of rules).

An illustrative scenario

The scenario below is a fictional case which is included as an example of how the framework would affect practice. The student of a university in Yogyakarta asks a general purpose chatbot service about the status of a particular kind of earnings online as being zakat and the amount she is supposed to pay if it is zakat? During this context, the chat bot will give a smooth response that is a combination of opinions from various sources, it may quote a hadith or a scholar that's not backed up with source, it may give one number as the answer, and it never asks anything about her situation. She may just do it without realizing that it is a topic that has been discussed by the Indonesian organizations, and that they have different opinions about it.

The same question would be discussed in a different way in the adab-by-design exchange. This would be a ruling question and the system would display that. It would publish the positions that are available in the various organisations with links, but would

not rank them. It would inform him/her that it depends upon their income and status and it would not give any value for the amount they are obligated to. It would point him/her to the body for zakat or religious body of their religion. If the system were endorsed by a religious organisation, then that organisation would be the one deemed as responsible for the content of its knowledge base. The student would be less certain of the answer but be more informed; would know that there is a structure to the question; would know there are legitimate alternatives; and where to get a personal answer.

Objections

There are three objections that are to be answered. The second is that having to express disagreement or to reject disagreement makes the systems less valuable, and users less vigilant about it. A system that makes a statement about its limits and then refers to humans is better than one that is sure and wrong; and the outcomes of testing of Islamic Chatbots demonstrate that the risk of not being confident error is a current danger (Wahid, 2025b).

Another argument is that if the institutions endorse it, then it can lead to a lack of balance among institutions and minority voices can be overlooked. This is a real risk and is what the framework calls for, a side by side comparison of the position of various schools and organisations and the attribution rather than an endorsed single position. The pluralism is one of the elements of adab and systems to support pluralism can be created in Indonesia which is diverse from the organisational point of view.

The third objection is that adab is related to religion, and it is a religious ethic, and therefore it does not impact on the technology governance in a plural state. There is no mandate for state action of religious doctrine in the framework. It places the developer and religious groups at fault if they don't meet the requirements, which are in line with the key principles of AI ethics such as human oversight, responsibility, and transparency (UNESCO, 2021; Rome Call for AI Ethics, 2023). The general principles cannot give us any insight into what transparency and responsibility are in the transmission of religious knowledge, but Adab can.

Implications

The results call for a shift in message from the Islamic organisations from prohibition to engagement with systems users who will be using systems, irrespective of the Islamic message. This can be done through publishing machine-readable statements of their respective positions, endorse or create da'wah and religious education retrieval-based tools that meet the criteria listed in Table 2, or introducing AI literacy in da'wah and religious education. The framework provides specific design principles for religious queries, such as citation, deferral, attributed plurality and disclosure, to developers. For the state, this means that there should be more guidance on specific sectors, based on the religious organisations than state rules on religious content, to complement the general AI ethics guidance (Muamar, 2024).

Religions have the capacity to foresee and respond to AI, and more, as this study demonstrates. Theories of education, like those of adab, are developed in detail with regard to how knowledge should be conveyed, by whom and with what virtues. As

language models proliferate, these stories can be shared to the AI ethics community to inform them on how to practically implement the ethics principle in AI and on emerging questions regarding meaning and authorship (Floridi & Chiriatti, 2020).

Limitations and future research

There are four limitations of the study. First, it is not based on observation of the use of AI or interviews with ulama, developers or users, but is document-based and based on scholarship rather. Second, the site of NU and MUI is known here, based on national news reports, which may make it easier to explain the rationale of the original decisions. Thirdly, the field evolves rapidly and the jobs posted may have been affected since the survey. Fourth, the framework is still normative, yet hasn't been trialed with designers or religious institutions, and so the viability of the framework, including disagreement between schools, is open to question.

There are three lines of future research. General-purpose and religious chatbots might be subject to audits regarding their ability to quote, defer and mention disagreement to questions related to Indonesian religious matters. Ethnographic and interview research can be utilized in analyzing the use of AI among Indonesian Muslims, particularly those in the pesantren and universities, and adab words in relation to AI. The testing of the implementation of the adab-by-design requirements can be carried out by participatory design studies in NU, MUI and Muhammadiyah which will be accepted by the organizations.

CONCLUSION

The question of this article was what would occur when religious authority and adab starts to be replaced by the algorithmic ulama in Indonesian Islamic communication by the use of generative AI? It saw that generative AI used to mimic the outward appearance of an academic response, but was unable to meet a set of criteria that define the adab of knowledge positing on the concept of authority: the chain of transmission that can be verified, the formative relationship, the ability to withhold judgement, the awareness of legitimate difference, and the understanding of personal accountability. Secondly, there are differences in the attitude of the big Islamic organisations towards the use of AI in da'wah and learning. Even though NU and MUI are very clear about the limits of the role of AI, in Muhammadiyah, they have emphasized the use of AI to educate the public in an ethical manner and also for good purposes. Third, these answers are all about users and ulama, instead of systems, and little is done to consider the design of the tools which will be used by millions of Indonesians to explore religious answers.

There are two contributions to the article. It theoretically refers to the algorithmic ulama, and demonstrates that the danger it brings is not only that of error but the division of religious knowledge from what makes it reliable. In practice, it implies an adab-by-design ethics that takes the ethics of knowledge to the systems and interfaces and to the people, the institutions and communities of the world.

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