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Digital Islam as an Institutional Governance Lens: An Exploratory Survey of Digital Practices and Knowledge Integration in Sharia Study Programs at UIN Antasari

Arie Sulistyoko[1], Ergina Faralita[2]
[1,2]Universitas Islam Negeri Antasari, Banjarmasin, Indonesia
Email: ariesulistyoko51@gmail.com

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Abstract

Digital transformation in Islamic higher education involves institutional arrangements as well as technological services. This cross-sectional, descriptive-exploratory survey maps perceptions of digital practices, knowledge integration, and governance-change priorities in Sharia-related study programs at UIN Antasari. The online questionnaire was circulated through class WhatsApp groups in each participating study program and by direct WhatsApp contact with lecturers during May 1–June 19, 2026. Responses came from 53 participants (43 students and 10 lecturers) recruited through nonprobability channels; the number invited and response rate were not documented. Descriptive statistics and thematic coding were used. Digital-practice items were completed by only 10 lecturers, with a composite score of 82.8/100; knowledge integration scored 82.9/100 (n = 53), and perceived need for governance transformation scored 84.2/100 (n = 53). Five items measuring existing governance conditions had no responses in the raw export; current governance performance was therefore not assessed. Thematic coding identified 38 substantive responses on knowledge integration (multiple codes permitted) and 30 substantive governance-improvement priorities (one dominant theme each). Results inform a tentative four-domain governance mapping, with Digital Islam employed as an interpretive ethical lens, not a measured variable. SIGAP-Syariah is proposed as an unvalidated self-assessment prototype; institutional competitiveness is a prospective implication rather than an observed outcome.

Keywords: Digital governance; Digital Islam; Islamic higher education; knowledge integration; exploratory survey; Sharia study programs

Abstrak

Transformasi digital di perguruan tinggi Islam menyangkut pengaturan kelembagaan selain layanan berbasis teknologi. Penelitian survei potong lintang deskriptif-eksploratif ini memetakan persepsi praktik digital, integrasi keilmuan, dan prioritas perubahan tata kelola pada program studi bidang Syariah di UIN Antasari. Kuesioner daring disebarkan melalui grup WhatsApp kelas di masing-masing program studi serta pesan WhatsApp langsung kepada dosen pada 1 Mei–19 Juni 2026. Terkumpul 53 respons (43 mahasiswa dan 10 dosen) melalui rekrutmen nonprobabilitas; jumlah penerima undangan dan tingkat respons tidak terdokumentasi. Analisis mencakup statistik deskriptif dan pengodean tematik. Bagian praktik digital hanya diisi 10 dosen dengan skor komposit 82,8/100; integrasi keilmuan mencapai 82,9/100 (n = 53), dan persepsi kebutuhan transformasi tata kelola 84,2/100 (n = 53). Lima butir kondisi tata kelola yang sedang berjalan tidak memiliki jawaban dalam data mentah, sehingga kinerja tata kelola aktual tidak dapat dinilai. Pengodean tematik meliputi 38 jawaban substantif tentang integrasi keilmuan (dapat memiliki lebih dari satu kode) serta 30 prioritas perbaikan tata kelola (satu tema dominan per jawaban). Temuan digunakan untuk merumuskan pemetaan sementara empat ranah tata kelola. Digital Islam dipakai sebagai lensa etis interpretatif, bukan variabel terukur; SIGAP-Syariah masih berupa usulan prototipe asesmen mandiri yang belum divalidasi. Daya saing institusi diposisikan sebagai implikasi prospektif, bukan hasil penelitian yang terukur.

Kata Kunci: tata kelola digital; Digital Islam; pendidikan tinggi Islam; integrasi keilmuan; survei eksploratif; program studi Syariah

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I. INTRODUCTION

Higher education governance is increasingly expected to reconcile institutional autonomy with accountability, quality, transparency, and responsiveness. Governance therefore extends beyond formal structures to the distribution of authority, decision-making processes, performance monitoring, stakeholder relationships, and mechanisms through which institutions demonstrate responsibility for academic outcomes (Goedegebuure & Hayden, 2007; Pandey, 2004). Reforms that expand autonomy can create new coordination and accountability challenges when organizational capacity does not develop at the same pace (Christensen, 2011). In this setting, accountability and quality assurance become central to credible governance because they connect institutional intentions with evidence, evaluation, and corrective action (Macheridis & Paulsson, 2021; Rowlands, 2012). Studies of quality assurance further show that its effectiveness depends on organizational conditions, data use, managerial interpretation, and the extent to which quality processes lead to actual improvement rather than procedural compliance (Beerkens, 2018; Haapakorpi, 2011; Seyfried & Pohlenz, 2018).

These governance pressures intersect with digital transformation. Digital transformation is conceptually different from simply converting analog information into digital form or adding isolated information systems. Digital strategy literature emphasizes the convergence of technology, organizational strategy, business processes, and value creation (Bharadwaj et al., 2013; Matt et al., 2016). Vial (2019) frames digital transformation as organizational change triggered by digital technologies, while Verhoef et al. (2021) distinguish digitization, digitalization, and transformation as progressively deeper forms of change. From a capability perspective, sustainable transformation requires continuous strategic renewal and the capacity to sense, seize, and reconfigure resources rather than one-time technology acquisition (Teece et al., 1997; Warner & Wäger, 2019). A broad systematic review similarly shows that digital transformation tends to reshape organizational design toward continuous adaptation and ecosystem-based change (Hanelt et al., 2021).

In higher education, digital transformation affects learning, academic administration, infrastructure, information governance, stakeholder interaction, and institutional strategy simultaneously. Systematic and multivocal reviews show that universities often struggle not with the availability of technology alone but with fragmented systems, weak governance, organizational readiness, digital competencies, data integration, and change management (Castro Benavides et al., 2020; Fernández et al., 2023). Research on the transition from parallel or 'dual' digitalization toward integrated digital learning spaces also illustrates that institutional routines and pedagogical arrangements must be redesigned together (Bygstad et al., 2022). More recent evidence identifies leadership, digital skills, infrastructure, financial constraints, culture, and resistance to change as recurring barriers to higher education digital transformation (Singun, 2025).

For Islamic higher education institutions (Perguruan Tinggi Keagamaan Islam, PTKI), digital change raises questions that are not exhausted by service efficiency. Scholarship on digital religion and cyber-Islamic environments principally examines mediated religious practices, authority, participation, and circulation of religious knowledge (Bunt, 2018; Campbell, 2013). That literature should not be equated with evidence that administrative digitalization itself constitutes a distinct form of Digital

Islam. Instead, this article makes a bounded conceptual extension: Digital Islam serves as an interpretive lens for asking how digitally mediated institutional routines in Sharia study programs relate to Islamic academic responsibilities and governance values. Concerns such as amanah, musyawarah, accountability, and stewardship are relevant normative criteria for evaluating governance, as proposed in research on Islamic digital leadership (Ali et al., 2025), while Islamic educational values remain relevant to institutional adaptation (Hidayat et al., 2022). These normative criteria were not measured as an independent survey scale; their use here is conceptual and should be distinguished from the observed perceptions of digital practices.

A second defining issue is knowledge integration. The integration-interconnection paradigm in Indonesian Islamic higher education rejects a rigid dichotomy between religious and general sciences and instead encourages dialogue among revelation, social sciences, humanities, natural sciences, and contemporary knowledge (Abdullah, 2014; Masyitoh, 2020). Studies of Islam-science integration emphasize that integration requires both epistemological clarification and methodological translation into institutional and academic practice (Khozin & Umiarso, 2019; Muqowim & Lessy, 2021). At the curriculum level, this requires alignment among graduate profiles, bodies of knowledge, learning outcomes, semester learning plans (Rencana Pembelajaran Semester, RPS), teaching strategies, research, and community engagement (Latipah et al., 2023; Suwadi, 2016). The transformation of Islamic higher education programs consequently depends on how integration is embodied in competencies and academic practices, not merely stated as an institutional slogan (Usman et al., 2017).

Governance, digital capability, knowledge integration, and service quality are also relevant to institutional competitiveness. Competitiveness in higher education is better understood as an institution's capacity to sustain quality, relevance, innovation, reputation, partnerships, research performance, and graduate outcomes than as ranking position alone. Evidence from Indonesian Islamic higher education indicates that dynamic capabilities, knowledge management, and information technology are associated with stronger institutional performance (Hamdani, 2023), while digital transformation has been identified as a strategic initiative for strengthening the competitiveness of Indonesian higher education institutions (Priyanto & Suhandi, 2022). In the Islamic higher education context, perceived service quality also depends on how well institutional processes meet academic and value-based expectations, implying that governance quality is experienced directly by stakeholders (Asnawi & Setyaningsih, 2020).

Prior scholarship provides several relevant but only partially connected accounts: university studies analyze digital strategies and organizational change (Vial, 2019; Castro Benavides et al., 2020); digital-religion studies examine religious authority and practice in mediated settings (Bunt, 2018; Campbell, 2013); Islamic higher education research addresses integration-interconnection in knowledge and curricula (Abdullah, 2014; Khozin & Umiarso, 2019); and governance scholarship focuses on accountability and quality assurance (Macheridis & Paulsson, 2021; Beerkens, 2018). Taken together, these strands leave a narrower study-program question insufficiently specified: how do participating lecturers and students describe digital practices, knowledge integration, and governance priorities when considered in the same Sharia-program context? The empirical contribution of this article is a transparent,

limited descriptive mapping of those perceptions, including item nonresponse and unequal subsample coverage. Its separate conceptual contribution is a tentative synthesis of four proposed governance domains, informed by the survey priorities and the literature. The article neither measures Digital Islam as a distinct variable nor tests a relationship between these domains and institutional competitiveness. Any claim about competitiveness is therefore a future-facing implication, not a finding.

II. METHOD

The study used a cross-sectional, descriptive-exploratory survey with brief written responses as qualitative enrichment. Its purpose was to describe participating respondents' perspectives on digital practices, knowledge integration, and the perceived need for change, not to estimate population parameters or test a causal model. The qualitative material was organized into themes following the general approach of Braun and Clarke (2006, 2021); because the source material comprised short questionnaire responses, themes are used to contextualize the numerical items rather than to claim the depth of interview-based thematic inquiry. The units of analysis are individual survey responses and respondent-level perceptions, not independently verified program performance.

The Google Forms questionnaire was available from May 1 to June 19, 2026. The link was disseminated through WhatsApp class groups within the participating Sharia-related study programs for student responses, while lecturers were approached directly through individual WhatsApp messages. Eligibility for the student group was at least fourth-semester enrollment, selected to capture respondents with prior exposure to academic services. The resulting nonprobability recruitment yielded 53 usable submissions (43 students and 10 lecturers). This channel-based approach provided access to participants but cannot be characterized as random sampling; it may entail self-selection and network-coverage bias. The number of individuals reached by the forwarded link, the invitation denominator, and a valid response rate are not available from the spreadsheet or author-supplied records. Consequently, the findings describe these respondents rather than a probability sample of the institution.

Table 1. Respondent Characteristics

Variable	Category	n	%
Status	Students in at least semester 4	43	81.1
Status	Lecturers	10	18.9
Study Program	HKI	24	45.3
Study Program	HTN	20	37.7
Study Program	PM	6	11.3
Study Program	HES	2	3.8
Study Program	Combined PM/HES/HKI/HTN	1	1.9
Length of interaction	1-3 years	41	77.4
Length of interaction	> 6 years	7	13.2
Length of interaction	< 1 year	3	5.7
Length of interaction	4-6 years	2	3.8

Source: Research survey data, processed, 2026.

The original spreadsheet contains the wording of the five-point Likert-type statements (1–5), with higher values indicating stronger endorsement. Three analyzable item groups are present: digital practices (five unique items), knowledge integration (five items), and perceived need for governance transformation (four items). Item wording is traceable to the original Google Forms export, but the files supplied do not establish whether the items were newly authored or adapted from published measures, nor whether an expert review or pilot was conducted. The groups

are therefore treated as exploratory indices, not validated instruments. In addition, five items intended to describe *existing governance conditions*—systematic governance, transparency of decisions, comprehensibility of academic policy, periodic evaluation, and program–faculty coordination—and the related open-ended governance-weakness question are entirely blank for all 53 rows in the raw workbook. Neither the raw spreadsheet nor its supplementary tables identify whether this reflects question routing, form configuration, collection practice, or another cause; the original form settings would be needed to establish one. These missing responses were not replaced, and no current-governance performance index was constructed.

The raw Excel export includes two e-learning columns containing identical responses in all 10 lecturer records; one was excluded to avoid double counting, leaving five unique digital items. The digital-practice questions were answered by lecturers only (n = 10), whereas all 53 respondents completed the knowledge-integration and governance-change item groups. Nine lecturers provided a digital-barriers narrative, 39 participants supplied an integration narrative, and 36 supplied a governance-improvement narrative. Because the three quantitative item groups have different response bases, their scores are presented as separate exploratory summaries rather than paired comparisons. Table S1 of the accompanying supplementary material records response completeness by questionnaire section.

Quantitative analysis comprised counts, percentages, item means, sample standard deviations, agreement proportions (responses 4 or 5), and composites calculated as the mean item response × 20. On this metric 100 indicates the five-point scale maximum, while the theoretical minimum is 20; it is not a true zero-based score. The raw-data composite results are 82.8/100 for digital practices (n = 10), 82.9/100 for knowledge integration (n = 53), and 84.2/100 for governance-change endorsement (n = 53). Cronbach's alpha estimates reported in the supplementary statistical audit were 0.968, 0.942, and 0.921, respectively. Alpha does not establish construct validity or factor structure (Tavakol & Dennick, 2011); the digital estimate is especially unstable given only ten lecturers. Brief written responses were reviewed and grouped by semantic content for descriptive thematic enrichment (Braun & Clarke, 2006, 2021). The supplementary code-to-respondent tables record multi-label coding for digital barriers (Table S10) and ideal integration (Table S11), permitting a single response to contribute to several themes. For governance-improvement priorities (Table S12), each of 30 substantive responses was assigned one dominant theme. Qualitative frequencies are thus denominated by the number of substantive responses, and multi-coded percentages are not expected to total 100%. These coding categories are exploratory, not independently reliability-tested qualitative measures.

III. RESULTS AND DISCUSSION

1. Results

a. Respondent Profile and Data Coverage

The 53 participants included 43 students in at least their fourth semester (81.1%) and 10 lecturers (18.9%). HKI (45.3%) and HTN (37.7%) formed the largest reported study-program categories, and 41 respondents (77.4%) reported one to three years of interaction with their programs. This distribution provides an exploratory description of participating students' experiences, not a representative basis for estimating the

institutional student experience; program managers and external stakeholders were not specifically sampled.

b. Digital Transformation

Among the 10 lecturers who completed the digital section, the digital-practice composite was 4.14/5, equivalent to 82.8% of the maximum possible five-point score. This lecturer-only result describes reported use and perceived adequacy of systems; it should not be read as an institution-wide digital-maturity index. Scores for the availability and use of academic digital services and e-learning exceeded those for infrastructure adequacy and data-informed decision-making, indicating areas for further inquiry within this small subsample.

Table 2. Lecturer Perceptions of Digital Transformation

Indicator	n	Mean	SD	Agree + Strongly Agree (%)
Digital systems are used in academic services	10	4.30	1.06	80.0
Digital systems facilitate academic administration	10	4.30	1.34	80.0
Learning is supported by an e-learning platform	10	4.30	1.06	80.0
Data-driven digital decision-making has been implemented	10	4.00	0.94	80.0
Study program technology infrastructure is adequate	10	3.80	0.92	70.0

Note: Digital-practice indicators were answered only by lecturers (n = 10); the duplicate e-learning item was included once.

Within the lecturer subsample (n = 10), the two lowest mean items concerned technological infrastructure (3.80) and data-informed digital decisions (4.00). Written comments referring to network quality, access, facilities, training, guidance, and usability provide context consistent with these item patterns. These observations point to practical questions about readiness and service arrangements, but they cannot establish the prevalence of these constraints across all academic units.

c. Knowledge Integration

All 53 respondents completed the five knowledge-integration items. The mean composite was 4.143/5, or 82.9/100 using the original mean × 20 conversion. Relevance to modern societal needs received the highest item mean (4.26; 84.9% agreement), while perceived multidisciplinary lecturer research was lowest (4.02; 75.5% agreement). These are perceived orientations rather than independently verified curriculum or research outcomes.

Table 3. Perceptions of Knowledge Integration

Indicator	n	Mean	SD	Agree + Strongly Agree (%)
The curriculum reflects the integration of Islamic and general sciences	53	4.17	1.09	79.2
Lecturers integrate multiple disciplines into teaching	53	4.08	1.07	77.4
Lecturer research reflects a multidisciplinary approach	53	4.02	1.08	75.5
Integration is relevant to the needs of modern society	53	4.26	0.92	84.9
The study program has a clear direction for knowledge integration	53	4.19	1.08	81.1

Source: Research survey data, processed, 2026.

The raw workbook contains 39 integration-related written answers, one of which consisted only of punctuation ('..', R19); 38 responses were substantive. The supplementary coding register (Table S11) permits multiple thematic codes for a single response. Anti-dichotomy and balance between Islamic and general knowledge appeared in 19 of 38 responses (50.0%); holistic and applied problem-solving in 14 (36.8%); and contemporary/contextual relevance in 13 (34.2%). Interdisciplinary collaboration and Islamic ethical foundations each appeared in 10 responses (26.3%), while curriculum/RPS and tridharma implementation appeared in eight (21.1%).

Because responses could receive more than one code, the frequencies overlap and should not be added or interpreted as exclusive group shares. Table 4 reproduces this summary with the coding rule made explicit.

Table 4. Thematic Coding of Ideal Knowledge Integration (38 Substantive Responses; Multiple Codes Allowed)

Theme (count and % of 38)	Analytical meaning
Anti-dichotomy and balance (19/38; 50.0%)	Islamic and general sciences as complementary domains
Holistic, applied and problem-solving (14/38; 36.8%)	Integrative knowledge used to address practical problems
Contemporary/contextual relevance (13/38; 34.2%)	Society, technology, changing times and professional contexts
Interdisciplinary and collaborative (10/38; 26.3%)	Connections and cooperation across disciplinary approaches
Islamic values, tawhid and public benefit (10/38; 26.3%)	Islamic ethics and responsibility inform knowledge use
Curriculum/RPS/tridharma practice (8/38; 21.1%)	Application in learning plans, classroom work, research and service

Source: Original open-ended survey responses and Supplementary Table S11. Percentages use 38 substantive responses as denominator; themes overlap.

d. Need for Governance Transformation

Four items measuring the need for governance transformation produced a composite score of 4.21/5, or 84.2/100. The strongest support was for the statement that governance transformation would improve study program quality (mean = 4.26). Digitalization and knowledge integration also received strong support as priorities in study program development and academic policy (both mean = 4.23).

Table 5. Need for Governance Transformation

Indicator	n	Mean	SD	Agree + Strongly Agree (%)
The study program needs to transform its governance	53	4.13	1.04	79.2
Digitalization is important in study program development	53	4.23	1.01	81.1
Knowledge integration should be strengthened in academic policy	53	4.23	1.17	83.0
Governance transformation will improve study program quality	53	4.26	1.15	81.1

Source: Research survey data, processed, 2026.

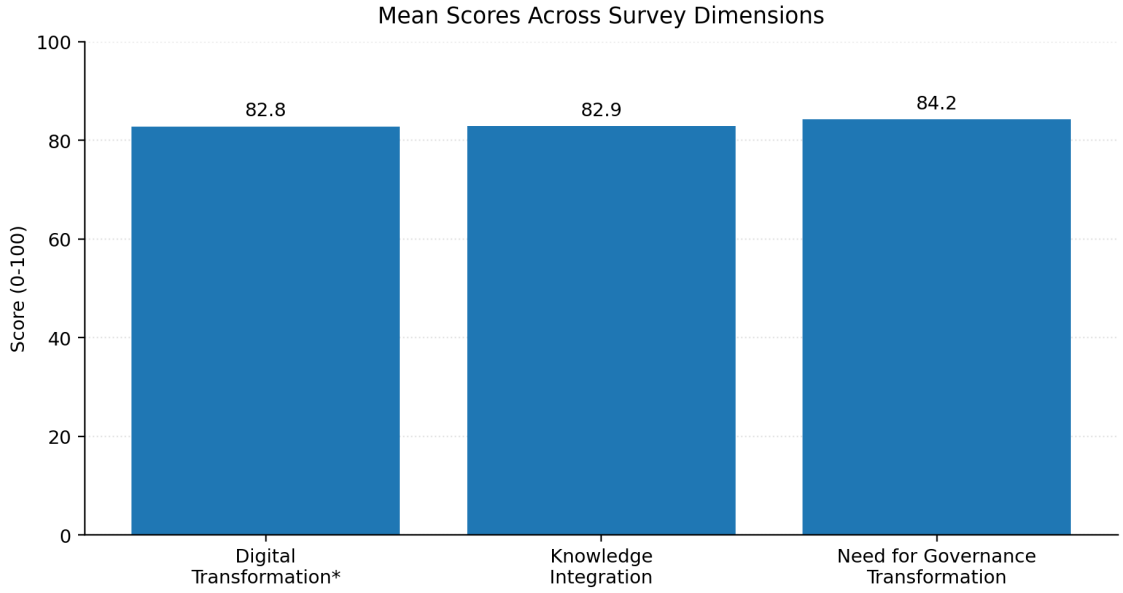


Figure 1. Mean Scores Across Survey Dimensions

e. Governance Improvement Priorities

Thirty-six respondents submitted text about governance improvement. Five entries were punctuation or dashes and one additional response was non-substantive for priority classification, leaving 30 codable substantive answers, as documented in Supplementary Table S12. Each was assigned one dominant theme: digital services and data integration (11; 36.7%); management, quality systems, and human-resource development (7; 23.3%); communication, transparency, and service responsiveness (6; 20.0%); curriculum and academic support (4; 13.3%); and facilities (2; 6.7%). These mutually exclusive counts describe primary concerns within the 30 codable answers; secondary concerns in longer responses are not reflected in the frequency table. They should not be generalized to all 53 participants.

Table 6. Themes of Governance Improvement Priorities

Theme	Frequency	% of substantive responses
Digitalization, data integration, and digital academic services	11	36.7
Management, quality, systems, and human resource strengthening	7	23.3
Communication, transparency, responsiveness, and service	6	20.0
Curriculum, learning, and academic support	4	13.3
Infrastructure/facilities	2	6.7

Source: Original open-ended survey responses and Supplementary Table S12. One dominant theme per response (n = 30).

Several responses emphasized the need for centralized digital administration, integrated archives, data access for the academic community, and technological updates. Management-related themes stressed a shift from administrative governance toward governance based on quality, data, relevance, impact, internal quality assurance, and stronger human resources. Communication themes highlighted information transparency, responsiveness, lecturer-student coordination, and professional services. Academic themes addressed curriculum evaluation, the direction of program competencies, teaching methods, academic and non-academic support, and alignment with the world of work.

2. Discussion

a. Digital Transformation Must Move Beyond Administrative Digitalization

The 82.8% maximum-score figure reflects the perceptions of just 10 lecturer respondents and should not be interpreted as evidence of institution-wide digital maturity. Their ratings differentiate the reported presence of academic digital services and e-learning from relatively weaker confidence in infrastructure and data-informed decisions. That descriptive contrast is consistent with the conceptual difference between adopting technological tools and transforming organizational routines (Vial, 2019; Verhoef et al., 2021). The survey did not test whether digital practices produced improved service, learning, or governance outcomes.

Reviews of higher education digital transformation emphasize technology, organizational processes, pedagogical arrangements, and strategic coordination (Castro Benavides et al., 2020; Fernández et al., 2023). Bygstad et al. (2022) describe movement toward integrated digital learning spaces, and Singun (2025) identifies recurring barriers involving skills, infrastructure, leadership, and culture. In the present exploratory responses, requests for integrated data, infrastructure, support, and staff development resemble concerns in that literature. The similarity is

interpretive, not a replication or direct confirmation of an institutional transformation trajectory.

A specifically PTKI-oriented reading adds a normative question to this socio-technical account: how should digital service and data practices meet obligations of trust, deliberation, responsibility, and educational benefit? Scholarship on digital religion concerns the reshaping of religious communication and authority (Bunt, 2018; Campbell, 2013), whereas the present questionnaire directly addresses institutional services and academic integration. The move from Digital Islam scholarship to Sharia program governance is therefore an authorial conceptual proposition rather than a measured research result. Related work on Islamic education and Islamic digital leadership (Hidayat et al., 2022; Ali et al., 2025) helps motivate, but does not empirically verify, an ethics-oriented governance interpretation. This boundary prevents the article from claiming that the survey tested religious digital authority or Islamic values in practice.

b. Knowledge Integration as Epistemic Identity and a Strategy for Relevance

The knowledge-integration composite was 82.9/100 among all 53 respondents, with modern societal relevance the highest-rated item (mean 4.26). This represents positive perceptions, not an independent audit of curriculum implementation. In the multi-coded narratives, 19 of 38 substantive respondents referred to non-dichotomous integration between Islamic and general knowledge and 13 to contemporary relevance. These responses are compatible with Abdullah's (2014) integration-interconnection perspective; they do not demonstrate that a particular integration policy has been implemented or caused measurable improvements.

However, integration becomes institutionally meaningful only when it is translated into academic design. Khozin and Umiarso (2019) emphasize the philosophical and methodological dimensions of Islam-science integration, while Muqowim and Lessy (2021) argue for renewed foundations that connect Islamic studies with science and wider knowledge. At the curriculum level, Suwadi (2016) demonstrates the importance of translating integration-interconnection into curriculum architecture, whereas Latipah et al. (2023) show that curriculum reconstruction requires alignment among graduate profiles, bodies of knowledge, and learning outcomes. These perspectives support the respondents' emphasis on integration within RPS, classroom learning, research, and community engagement.

The comparatively lower mean for multidisciplinary lecturer research (4.02) is therefore analytically important. It suggests that integrative discourse may be more established at the level of curriculum ideals than in research practice. Prior work on Islamic educational transformation highlights the need to connect scientific development with program competencies (Usman et al., 2017). For Sharia study programs, this can be operationalized through interdisciplinary research clusters and student projects linking Sharia with law, public policy, economics, family studies, digital finance, data, technology, and social transformation. Such an agenda would move knowledge integration from symbolic identity toward demonstrable academic production

c. The Required Governance Is Socio-Technical

Of the 30 substantive, exclusively classified governance-improvement answers, digital services and data integration represented 11 dominant mentions, management

and human resources seven, communication/transparency six, academic support four, and facilities two. In the separate lecturer digital-barriers responses, the supplementary multi-code register (n = 9) identified personnel readiness and training in five responses, network/infrastructure/access in four, and user guidance in two; the categories overlap. Considered together, these descriptive priorities are compatible with a socio-technical perspective in which systems, working practices, organizational capability, and academic purpose need joint attention (Hanelt et al., 2021; Warner & Wäger, 2019). They do not measure the success of ongoing reform or current governance effectiveness.

From a governance perspective, accountability is the mechanism through which responsibilities, actions, and performance can be examined and justified (Macheridis & Paulsson, 2021). In higher education, academic governance also intersects with quality assurance, evidence, and performativity (Rowlands, 2012). Effective quality assurance depends on institutional conditions and the ability to convert evaluation into organizational learning (Haapakorpi, 2011), while evidence-based quality systems require meaningful rather than merely ceremonial use of information (Beerkens, 2018). Quality managers' assessments further show that formal systems are insufficient when structures do not produce perceived effectiveness (Seyfried & Pohlenz, 2018). These insights correspond closely to respondents' requests for clearer communication, consistent information, monitoring, and more measurable governance.

The combined descriptive evidence suggests four provisional domains for further author-led study and validation: (1) digital governance (services, integration of records, infrastructure, usability, staff capability), supported by five lecturer digital items and 11 of 30 improvement priorities; (2) quality governance (standards, audit trails, monitoring, follow-up), suggested by the seven management/quality/HR priorities but unmeasured in the five entirely blank current-governance items; (3) knowledge-integration governance (curriculum, RPS, teaching, research, community engagement), informed by five survey items and 38 multi-coded narratives; and (4) stakeholder-responsive governance (transparent communication, consultation, service feedback), illustrated by six dominant improvement mentions. These four areas are author-proposed organizing dimensions, not psychometrically estimated factors or empirically proven causal drivers. Table 7 distinguishes their observed indicators from the evidence that would be necessary to validate each domain.

Table 7. Exploratory Evidence-to-Governance-Domain Mapping

Proposed domain	Source within this study	What remains unmeasured
Digital governance	Five lecturer-only digital items (n = 10; infrastructure mean 3.80), nine digital-constraint narratives; digital/data services were the dominant governance priority in 11 of 30 substantive answers.	Institution-wide digital maturity, verified service quality, and information-system performance.
Quality governance	Governance-transformation endorsement (n = 53); management, quality systems and HR accounted for 7/30 improvement priorities. Five existing-governance items were entirely unanswered.	All five items on existing governance conditions were unanswered; actual quality processes were not rated.
Knowledge-integration governance	Five knowledge-integration items (n = 53; 82.9/100); 38 substantive narratives coded with overlapping themes, including 19 anti-dichotomy mentions.	Verified curriculum/RPS integration, research outputs, and actual tridharma implementation.

Stakeholder-responsive governance	Communication, transparency and service responsiveness formed the dominant priority in 6/30 governance answers; other stakeholder experiences require independent evidence.	Stakeholder satisfaction, transparency performance, decision processes, and nonrespondent perspectives.

Source: Provisional author interpretation of raw survey items and Supplementary Tables S10–S12; domains are neither validated factors nor observed institutional-performance scores.

d. A Pathway for Strengthening PTKI Competitiveness

Institutional competitiveness was not operationalized through performance indicators, and no causal or correlational model was tested. A possible future pathway may connect more integrated digital services, knowledge-relevant curricula, quality routines, and responsive communication with longer-term outcomes such as accreditation readiness, partnerships, research visibility, and graduate results. This is a hypothesis for subsequent study, not an observed effect in the present sample. Independent program records and longitudinal evidence would be needed before attributing any competitiveness gains to governance reform.

This pathway is consistent with a dynamic-capabilities perspective, in which competitiveness depends on an organization's ability to sense change, seize opportunities, and reconfigure resources over time (Teece et al., 1997). Hamdani (2023) demonstrates the relevance of dynamic capabilities, knowledge management, and information technology to the performance of Islamic higher education institutions, while Priyanto and Suhandi (2022) position digital transformation as a strategic initiative for Indonesian higher education competitiveness. Consequently, the contribution of digitalization should be evaluated through its conversion into measurable quality, relevance, innovation, and stakeholder value rather than through technology adoption alone.

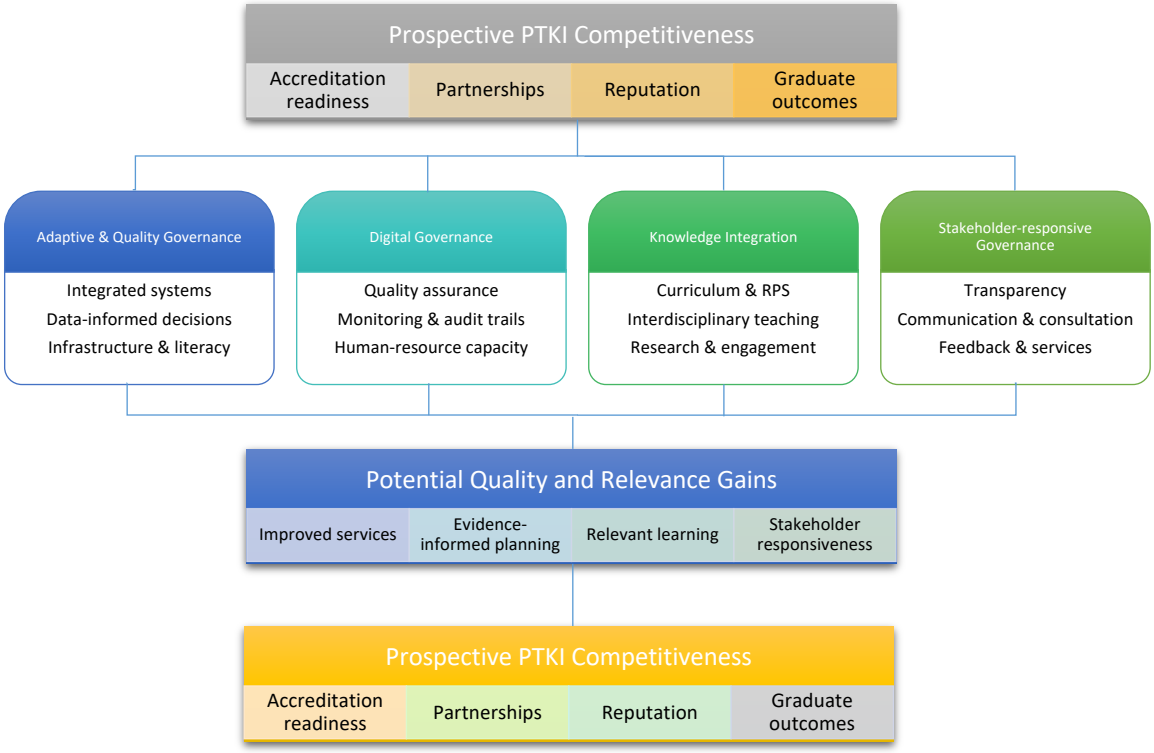


Figure 2. Proposed Four-Domain Framework for Sharia Study Program Governance Transformation

e. Policy and Practical Implications

At the study-program level, the findings support a phased transformation roadmap with explicit indicators, timelines, responsible units, data sources, and review cycles. Short-term priorities include data integration, service standardization, digital archiving, and capacity building; medium-term priorities include dashboards for evidence-informed decision-making and stronger cross-unit integration; longer-term priorities should connect digital investments to institutional strategy and continuous capability renewal. This staged approach is consistent with research that treats digital transformation as strategic organizational change rather than a discrete IT project (Matt et al., 2016; Warner & Wäger, 2019).

On the academic side, knowledge integration should be operationalized through curriculum review, RPS alignment, problem-based learning, interdisciplinary research, and community engagement. Curriculum studies in Islamic higher education demonstrate that integration becomes more credible when graduate profiles, knowledge structures, and learning outcomes are aligned (Latipah et al., 2023; Suwadi, 2016). Program-level policies should therefore specify observable forms of integration and connect them to graduate competencies, research themes, and societal contribution rather than relying on general normative statements.

SIGAP-Syariah is retained here only as a working label for a research-derived proposal for a Sharia-program self-assessment prototype; the manuscript does not document a functioning software application, pilot deployment, or completed instrument validation. Its proposed content follows the four governance domains in Table 7: digital systems and data practices; quality processes; applied knowledge integration; and stakeholder responsiveness. Candidate evidence would include item responses, service records, curriculum/RPS audits, quality-assurance reports, and documented stakeholder feedback. The existing survey can inform initial themes, but it cannot furnish validated weights, thresholds, causal scores, or a competitiveness ranking. Expert review, cognitive pretesting, measurement validation, transparent scoring rules, and field pilots are prerequisites to practical use. The prototype is thus a conceptual output to be developed and tested by the authors, not an implemented or validated research result.

f. Research Limitations

The findings are constrained by WhatsApp-based, nonprobability recruitment, an unrecorded invitation denominator, potential self-selection and coverage bias, and a student-heavy sample (43 students versus 10 lecturers). Digital responses came only from ten lecturers, making their composite and alpha particularly uncertain. The raw workbook confirmed that five existing-governance statements and one governance-weakness prompt have no answers in any of 53 cases; the original form or distribution settings would be required to determine why. Although the supplementary material makes the multi-code and dominant-code conventions transparent, short written responses do not substitute for in-depth interview or observation data, and independent coding reliability was not evaluated. Instrument provenance, expert assessment and piloting are undocumented in the material provided. The study measures perceptions rather than verified service performance, curriculum outcomes, Islamic values in institutional action, or competitiveness. SIGAP-Syariah remains an untested proposal.

Future research should document the number invited through each recruitment channel, securely archive the administered questionnaire and survey routing settings, and obtain source evidence on item development, content validation and piloting. A broader, probability-oriented or explicitly stratified sample and a larger lecturer subgroup could support more stable statistical and subgroup analyses. An independent qualitative coding audit, interview triangulation, administrative process records, academic-performance evidence, and outcome indicators would help evaluate whether the four proposed domains reflect operational governance. The conceptual SIGAP-Syariah prototype requires expert content review, usability testing, instrument validation, and field trials before scores or benchmarking are considered. Competitiveness effects would require longitudinal, independently collected outcomes.

IV. CONCLUSION

This exploratory, WhatsApp-recruited survey documents perceptions among 43 students and ten lecturers in Sharia-related study programs at UIN Antasari. The lecturer-only digital score was 82.8/100, with infrastructure (mean 3.80) and data-based decision-making (4.00) relatively weaker than service-system use and e-learning. Among all 53 participants, knowledge integration scored 82.9/100 and support for governance transformation 84.2/100. These summaries are item endorsements, not institutional performance measurements.

The original open-ended dataset yielded 38 substantive knowledge-integration accounts coded to potentially overlapping themes, led by anti-dichotomous integration (19; 50.0%), and 30 substantive governance-priority accounts coded to a single dominant theme, led by digital/data integration (11; 36.7%). Five uncompleted questionnaire items mean actual existing-governance conditions remain unmeasured, and the small digital lecturer subgroup limits inference. The four-domain synthesis maps these perceptions to digital, quality, knowledge-integration, and stakeholder-responsive governance while keeping the supporting evidence and missing indicators visible.

The article's contribution is a transparent, program-level exploratory mapping of uneven survey evidence and an expressly provisional governance interpretation informed by Digital Islam as an institutional-ethics lens. The related SIGAP-Syariah proposal is a research-derived self-assessment concept, not an implemented or validated tool. Neither causal governance effects nor gains in institutional competitiveness were tested; both remain tasks for independent, adequately powered and multi-source future studies.

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Author Contributions

Arie Sulistyoko: Conceptualization, Methodology, Investigation, Formal Analysis, Data Curation, Writing – Original Draft, and Visualization.
Ergina Faralita: Conceptualization, Methodology, Validation, Writing – Review & Editing, Supervision, and Project Administration.
Both authors reviewed and approved the final version of the manuscript and accept responsibility for the integrity and accuracy of their respective contributions.

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Declaration of AI Usage
The authors used artificial intelligence tools solely for limited language editing and grammar checking during manuscript preparation. AI-assisted editing accounted for less than 20% of the manuscript preparation process, with no delegation of research design, data collection, statistical analysis, interpretation of findings, or formulation of the study's conclusions to AI tools. All substantive content was reviewed and verified by the authors, who take full responsibility for the manuscript's accuracy, originality, and academic integrity.

Conflict of Interest
The authors declare that they have no financial, institutional, professional, or personal conflicts of interest that could have influenced the research, its analysis, or the publication of this article.

Data Availability
The data supporting the findings of this study consist of the original survey responses and supplementary analytical tables prepared by the authors. The supplementary material accompanying this article documents the questionnaire items, response completeness, descriptive statistics, and thematic coding procedures. The underlying respondent-level data are not publicly available in a repository at present. Access to the raw data may be considered upon reasonable request to the corresponding author, subject to applicable ethical requirements, participant confidentiality, and data-protection considerations.

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