

Managing Curriculum Coherence in Dual Education Systems: A Qualitative Case Study of National and Islamic Boarding School Integration in Indonesia

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Abstract: The expansion of hybrid education systems has intensified challenges in achieving curriculum coherence across multiple normative frameworks. This study aims to analyze how curriculum coherence is strategically managed in a dual education system integrating national and Islamic boarding school curricula within an Indonesian junior secondary school. This research employs a qualitative single-case study design. Data were collected through semi-structured interviews, non-participant observations, and document analysis. Data were analyzed using a hybrid deductive–inductive thematic approach that integrates conceptual frameworks with empirical field findings. The findings reveal that curriculum integration is not an additive process but a distributed governance achievement enacted through three interdependent mechanisms: structural alignment (vision reframing, curriculum mapping, and time allocation design), relational coordination (cross-domain collaboration and contextual integration practices), and adaptive monitoring (integrated evaluation and feedback loops). Despite structured planning, coherence remains dynamic and requires continuous negotiation due to dual accountability pressures, coordination fatigue, and epistemological tensions. This study proposes a distributed coherence governance framework as an analytical lens for understanding complexity management in hybrid faith-based education systems.

Keywords: Curriculum Coherence; Dual Education Systems; Distributed Governance; Islamic Schooling.

Abstrak: Perkembangan sistem pendidikan hibrida telah memperkuat tantangan dalam mencapai keselarasan kurikulum di berbagai kerangka normatif. Studi ini bertujuan untuk menganalisis bagaimana keselarasan kurikulum dikelola secara strategis dalam sistem pendidikan ganda yang mengintegrasikan kurikulum nasional dan Islamic boarding school di sebuah sekolah menengah pertama di Indonesia. Penelitian ini menggunakan desain studi kasus tunggal kualitatif. Data dikumpulkan melalui wawancara semi-terstruktur, observasi non-partisipan, dan analisis dokumen. Data dianalisis menggunakan pendekatan tematik hibrid (deduktif–induktif) yang mengintegrasikan kerangka konseptual dengan temuan empiris lapangan. Hasil penelitian menunjukkan bahwa integrasi kurikulum bukan merupakan proses aditif, melainkan hasil dari tata kelola terdistribusi yang diwujudkan melalui tiga mekanisme saling terkait, yaitu penyelarasan struktural (reframing visi, pemetaan kurikulum, dan desain alokasi waktu), koordinasi relasional (kolaborasi lintas bidang dan praktik integrasi kontekstual), serta pemantauan adaptif (evaluasi terintegrasi dan siklus umpan balik). Meskipun didukung oleh perencanaan yang terstruktur, keselarasan kurikulum tetap bersifat dinamis dan memerlukan negosiasi berkelanjutan akibat tekanan akuntabilitas ganda, kelelahan koordinasi, dan ketegangan epistemologis. Studi ini menawarkan kerangka konseptual tata kelola kohesi terdistribusi sebagai pendekatan analitis yang relevan untuk memahami pengelolaan kompleksitas dalam sistem pendidikan hibrida berbasis agama.

Kata Kunci: Kohesi Kurikulum; Sistem Pendidikan Ganda; Tata Kelola Terdistribusi; Pendidikan Islam.

INTRODUCTION

The growing diversification of schooling models worldwide has intensified scholarly attention to dual and hybrid education systems in which state-mandated curricula intersect with religious or community-based educational traditions. In many countries, faith-based schools operate within national accountability frameworks while maintaining distinctive theological and moral orientations. This dual mandate creates structural and pedagogical complexity, particularly regarding curriculum coherence, governance, and instructional alignment (OECD, 2021; Tan, 2020). In the Indonesian context, Islamic junior secondary schools affiliated with Islamic boarding school (Islamic boarding school traditions) exemplify this dual system, as they are required to implement the national curriculum while simultaneously delivering religious instruction rooted in Islamic boarding school scholarship and character formation (Gobby et al., 2022).

Recent global scholarship underscores that curriculum coherence—defined as the alignment of educational goals, content, pedagogy, assessment, and organizational processes—is a key determinant of sustainable school improvement (Fullan, 2020; Sahlberg, 2021). Coherence becomes especially challenging in systems where multiple curricular authorities and epistemological traditions coexist within a single institution. Without strategic management, dual curriculum systems risk fragmentation, overlapping content, excessive student workload, and competing teacher expectations. Contemporary debates on educational reform further highlight the need for alignment between policy frameworks and school-level practices, particularly in contexts undergoing curriculum transformation (Hallinger, 2020; Leithwood et al., 2020).

Indonesia is currently experiencing significant educational reform, including the implementation of competency-based curriculum policies emphasizing character education, literacy, and differentiated learning (Ministry of Education, Culture, Research and Technology, 2022). For Islamic boarding school-linked schools, these reforms add a new layer of complexity. On the one hand, schools must comply with national standards, standardized assessments, and reporting mechanisms; on the other, they are expected to preserve Islamic intellectual traditions and moral formation central to Islamic boarding school identity. Managing these dual expectations requires more than administrative coordination—it demands strategic governance that ensures curricular coherence across institutional domains.

Recent international research on faith-based schooling provides valuable insights but also reveals notable limitations. First, studies published in the past five years have examined how Islamic schools balance religious identity and state requirements, often focusing on identity negotiation and moral education (Tan, 2020; Yusof & Othman, 2022). These studies illuminate the sociocultural dimensions of integration; however, they tend to prioritize philosophical or pedagogical narratives rather than organizational strategy. The managerial processes through which curriculum alignment is operationalized—such as coordination mechanisms, time allocation strategies, and monitoring systems—remain underexplored.



Second, scholarship on instructional and leadership coherence emphasizes that sustained reform depends on strategic alignment between vision, professional collaboration, and evaluation cycles (Fullan, 2020; Hallinger, 2020). Empirical research across Asia and other regions shows that leadership practices significantly influence curriculum implementation and teacher collaboration (Liu & Hallinger, 2021). Nevertheless, this body of work rarely addresses the distinctive challenges of dual-curriculum systems in faith-based environments, where alignment must span not only policy and practice but also secular and religious epistemologies.

Third, global policy analyses highlight governance tensions in hybrid education systems, particularly regarding accountability, regulatory compliance, and autonomy (OECD, 2021; Jackson, 2021). These macro-level studies underscore the systemic challenges faced by faith-based institutions but offer limited micro-level evidence of how schools actually integrate parallel curricular frameworks into everyday operations. As a result, the literature lacks in-depth qualitative accounts of how curriculum coherence is constructed, negotiated, and sustained at the institutional level in dual education systems.

In Indonesia specifically, recent research has examined the modernization of Islamic boarding school, digital adaptation, and reform of character education (Hefner, 2021; Huda et al., 2020). While these studies contribute to understanding institutional transformation, they do not explicitly conceptualize integration as a problem of curriculum coherence governed through strategic management. Most existing studies either emphasize theological continuity or policy compliance, without systematically analyzing how school leaders design planning structures, coordinate teaching personnel, manage instructional time, and conduct evaluative monitoring to prevent fragmentation between national and religious curricula.

This gap is particularly significant in the current policy climate. As Indonesia advances curriculum reform and competency-based assessment, schools are required to demonstrate measurable outcomes, cross-disciplinary alignment, and character development simultaneously (Ministry of Education, Culture, Research and Technology, 2022). In dual systems, failure to ensure coherence may result in curriculum overload, instructional redundancy, or diminished learning effectiveness. Moreover, globally, hybrid and faith-based schooling models are expanding, making contextually grounded studies of integration strategies increasingly relevant for comparative educational research (Tan, 2020).

Against this backdrop, the central research problem addressed in this study is how to strategically manage curriculum coherence in a dual education system that integrates national and Islamic boarding school curricula within an Indonesian junior secondary school. Specifically, how do institutional actors design planning processes that align divergent curricular goals? What mechanisms are employed to coordinate teachers across secular and religious domains? How is instructional time structured to avoid overload while maintaining depth of learning? Moreover, what evaluative practices ensure continuous alignment and quality assurance?

The novelty of this study lies in three principal contributions. First, it reframes national-religious curriculum integration through the analytical lens of curriculum coherence and strategic management, bridging insights from curriculum theory and educational leadership research. Second, it provides an in-depth qualitative case study that documents concrete governance practices—planning frameworks, collaborative coordination, time management strategies, and evaluative monitoring—



that remain underrepresented in the literature. Third, by situating the analysis within a islamic boarding school-linked junior secondary school, this study contributes empirically grounded evidence to global discussions on managing hybrid education systems in faith-based contexts.

Therefore, the purpose of this research is to analyze how curriculum coherence is strategically managed in a dual education system integrating national and islamic boarding school curricula in Indonesia. Through a qualitative case study approach, the study aims to generate theoretically informed and practically relevant insights into planning, implementation, and evaluation processes that sustain alignment in hybrid schooling environments. By doing so, it seeks to advance scholarly understanding of curriculum coherence in faith-based education and to inform policymakers and school leaders navigating similar dual mandates in contemporary educational reform contexts.

METHOD

Research Design

This study employed a qualitative single-case design to investigate how curriculum coherence is strategically managed in a dual education system integrating the national and islamic boarding school curricula. A case study approach is appropriate when examining a contemporary phenomenon within its real-life institutional context, particularly when the boundaries between the phenomenon and context are intertwined. In this research, curriculum coherence is understood as a governance process embedded in planning, coordination, instructional practices, and evaluation structures within the school. The study is instrumental in nature, as the selected school serves as a representative case to generate broader analytical insights into managing dual-curriculum systems. Rather than merely describing integration practices, the research examines how strategic management mechanisms sustain alignment between two distinct curricular frameworks operating under a unified institutional structure.

Research Site and Participants

The research was conducted at a islamic boarding school-linked Islamic junior secondary school in Rangkasbitung, Indonesia. The school formally implements the national curriculum mandated by the Ministry of Education alongside a structured islamic boarding school curriculum that includes Qur'anic studies, Arabic language, fiqh, and character education. Both curricula operate within a single administrative system under coordinated leadership. Participants were selected through purposive sampling to ensure representation of actors directly involved in curriculum governance and instructional implementation. The selection criteria included: (1) formal responsibility in curriculum planning or delivery, (2) at least one year of service at the institution, and (3) active participation in coordination or evaluation processes. The participant composition is presented in Table 1.

Table 1. Research Participants

Participant Category	Institutional Role	Number of Participants
Principal	Strategic leadership and external policy alignment	1
Vice Principal	Technical coordination of national	1



(Curriculum)	curriculum	
Islamic boarding school Academic Coordinator	Oversight of religious curriculum	1
General Subject Teachers	Implementation of national curriculum and integration practices	4
Religious Teachers (Ustadz/Ustadzah)	Implementation of islamic boarding school curriculum	3
Total		10

The participant distribution reflects the multi-level governance structure of the dual curriculum system. Leadership actors provided insight into strategic planning and policy alignment, while general and religious teachers offered operational perspectives on implementation and coordination. Including both domains enabled a comprehensive understanding of coherence across institutional layers.

Data Collection

Data were collected over three months using three complementary techniques: semi-structured interviews, non-participant observations, and document analysis. The triangulation of these sources ensured analytical depth and credibility. Semi-structured interviews were conducted with all ten participants. Each interview lasted between 45 and 75 minutes and followed a protocol organized around three domains: (1) strategic planning and curriculum design, (2) implementation and coordination practices, and (3) monitoring and evaluation mechanisms. Interviews were audio-recorded with consent and transcribed verbatim.

Non-participant observations were carried out during curriculum coordination meetings, classroom instruction sessions (both general and religious subjects), and institutional scheduling activities. Field notes captured evidence of integration strategies, teacher collaboration, and alignment between planned and enacted curricula. Document analysis included institutional curriculum documents, academic calendars, weekly schedules, lesson plans, meeting minutes, and evaluation reports. These documents were examined to identify formal structures and artifacts supporting curriculum coherence.

Data Analysis

Data were analyzed using a hybrid deductive–inductive thematic analysis. The deductive framework was derived from the conceptual model of curriculum coherence and strategic management, structured into three macro-dimensions: (1) strategic planning, (2) implementation and coordination, and (3) monitoring and evaluation. Within these dimensions, inductive coding allowed context-specific practices to emerge from the data. The analysis followed four stages: Familiarization through repeated reading of transcripts and field notes. Initial open coding across all data sources. Axial coding to cluster codes into thematic categories. Cross-source triangulation to validate patterns and refine interpretations. The analytical framework guiding the study is presented in Table 2.

Table 2. Analytical Framework for Examining Curriculum Coherence

Analytical Dimension	Operational Indicators	Primary Data Sources
Strategic Planning	Vision alignment; instructional time allocation; integration policies	Leadership curriculum schedules; interviews; documents;



Implementation & Coordination	Teacher collaboration; integration strategies in lesson delivery; workload management; coordination meetings	Teacher interviews; classroom observations; meeting notes
Monitoring & Evaluation	Assessment alignment; academic and religious performance indicators; review mechanisms; feedback loops	Interviews; evaluation reports; institutional records

Table 2 demonstrates how abstract theoretical constructs were operationalized into observable indicators. Strategic planning captures coherence at the design level, implementation examines enacted practices, and monitoring ensures sustainability of alignment. The explicit linkage between indicators and data sources strengthens methodological transparency and analytical rigor.

Trustworthiness and Rigor

To ensure credibility and methodological robustness consistent with international qualitative research standards, several validation strategies were implemented. First, data triangulation was conducted across interviews, observations, and documents to corroborate findings. Second, member checking was employed by sharing preliminary interpretations with selected participants to verify contextual accuracy. Third, peer debriefing with two academic colleagues specializing in educational management enhanced interpretative consistency. Finally, an audit trail was maintained, documenting coding decisions, analytical memos, and theme development processes to ensure dependability and confirmability. A thick contextual description is provided to enhance transferability, enabling readers to assess its applicability to similar dual education contexts. Although the study is based on a single case, detailed governance analysis supports theoretical generalization rather than statistical generalization.

Ethical Considerations

Ethical approval was obtained from the relevant institutional authority prior to data collection. All participants provided informed consent and were assured confidentiality and anonymity. Institutional identifiers have been anonymized to protect organizational identity. All research data were securely stored and used exclusively for academic purposes.

Methodological Alignment

The qualitative case study design, multi-source data collection, and structured analytical framework collectively align with the study's objective of examining how curriculum coherence is strategically managed in a dual education system. By operationalizing integration into the governance dimensions—planning, implementation, and evaluation—this methodological approach enables a systematic, empirically grounded exploration of strategic curriculum management within a islamic boarding school-linked junior secondary school.

FINDING AND DISCUSSION

Strategic Planning: Institutionalizing Structural Coherence

Findings indicate that curriculum coherence is deliberately constructed at the strategic planning stage. Rather than treating the national and islamic boarding



school curricula as parallel systems, school leadership reframed integration as a unified institutional project grounded in shared vision alignment. The principal explained:

“At the beginning, both curricula had their own targets and pressure points. If we ran them separately, students would be overwhelmed. So we redesigned the structure—starting from vision, not from subjects.” (P1)

Document analysis confirms that the school developed an internal curriculum alignment matrix that maps national competency standards to islamic boarding school learning objectives. This mapping identified overlapping values (e.g., environmental ethics, civic responsibility, discipline) and clarified non-overlapping domains to prevent redundancy. The Vice Principal for Curriculum elaborated:

“We do not merge content mechanically. We align goals. For example, scientific literacy in the national curriculum can be reinforced through ethical reflection in religious lessons without increasing instructional time.” (P2)

This planning process institutionalized coherence through structural design rather than informal coordination.

Table 3. Strategic Planning Mechanisms Supporting Structural Coherence

Strategic Element	Institutional Practice	Evidence Source	Coherence Function
Vision Reframing	Unified academic–religious institutional mission	Leadership interviews	Prevents goal fragmentation
Curriculum Mapping	Competency alignment matrix	Curriculum documents	Reduces duplication
Time Reallocation	Integrated weekly schedule balancing domains	Academic calendar	Prevents overload
Policy Formalization	Written integration guidelines	School documentation	Institutional sustainability

Strategic coherence in this case is structurally embedded. Integration is governed through formal artifacts—vision statements, mapping matrices, scheduling systems—indicating that coherence is not incidental but architecturally designed.

Implementation: Relational Coordination and Epistemic Bridging

While structural planning provides institutional scaffolding, operational coherence depends on relational coordination among teachers. Monthly cross-domain coordination meetings were held, during which general and religious teachers collaboratively reviewed thematic intersections. A general subject teacher noted:

“In science, when discussing ecosystems, we coordinate with religious teachers so students understand stewardship from both perspectives. It’s not adding content, but aligning meaning.” (T3)

Similarly, a religious teacher reflected:

“Previously, we worked separately. Now we ask: what are students learning this week in general subjects? That helps us avoid repetition and build continuity.” (R2)

Classroom observations confirmed that integration primarily occurred through contextual reinforcement rather than content merging. For instance, the ethical dimensions of environmental responsibility were briefly linked to Qur’anic principles



without extending the lesson duration. However, tensions were also identified. Several teachers reported coordination fatigue and time constraints:

“Coordination requires effort. Sometimes teachers feel pressured because both curricula have performance indicators. Without regular meetings, integration becomes symbolic.” (T1)

These findings suggest that coherence is relationally enacted and requires sustained interactional routines.

Table 4. Implementation and Relational Coordination Practices

Component	Observed Practice	Evidence	Governance Implication
Cross-Domain Meetings	Monthly thematic alignment sessions	Meeting minutes	Distributed decision-making
Contextual Infusion	Ethical/value reinforcement within general subjects	Classroom observation	Epistemic continuity
Informal Micro-Coordination	Daily communication among teachers	Field notes	Operational flexibility
Workload Negotiation	Adjusted assignments to prevent overload	Teacher interviews	Balance maintenance

Coherence at this stage is not hierarchical but distributed. Leadership sets structural conditions, but teachers enact coherence through dialogic coordination. The process can therefore be conceptualized as relational coherence governance.

Monitoring and Evaluation: Adaptive Coherence Mechanisms

Evaluation functions as a cyclical recalibration mechanism, ensuring the sustainability of integration. The school employs dual monitoring indicators: national academic performance metrics and islamic boarding school-based character indicators. The Islamic boarding school Academic Coordinator stated:

“We review exam scores and character indicators together. If academic results are high but discipline declines, we reconsider scheduling or mentoring.” (R1)

Semester review meetings function as adaptive checkpoints. Evaluation reports showed that when student workload increased excessively, adjustments were made in scheduling and assignment distribution. The principal emphasized:

“Evaluation is not ceremonial. If we see imbalance, we revise the structure. Integration must remain sustainable.” (P1)

Table 5. Monitoring and Adaptive Evaluation Mechanisms

Evaluation Domain	Monitoring Practice	Evidence	Strategic Outcome
Academic Performance	Analysis of assessment outcomes	Evaluation reports	State compliance
Religious Development	Monitoring worship participation and conduct	Islamic boarding school logs	Identity preservation
Review Sessions	Semester strategic evaluation meetings	Meeting minutes	Policy recalibration
Feedback Loop	Structural adjustment based on evaluation	Interviews	Sustained coherence



Evaluation operates as a feedback loop, linking monitoring outcomes back to strategic planning. This cyclical adaptation prevents long-term fragmentation and ensures dynamic balance between curricular domains.

Emergent Tensions and Trade-Offs

Despite the presence of structured governance mechanisms, curriculum coherence within the dual system remains inherently fragile and continuously negotiated. The findings reveal that integration is not a stable equilibrium but a dynamic process shaped by competing expectations, institutional pressures, and epistemological negotiations. Three primary tensions emerged from the data: performance pressure duality, coordination fatigue, and epistemological boundaries.

First, teachers experience a duality of performance pressure. They are simultaneously accountable to national academic standards—measured through formal assessments and reporting systems—and to islamic boarding school-based expectations related to character formation, worship discipline, and religious mastery. These parallel accountability regimes generate role strain, particularly during examination periods. A general subject teacher explained:

“When national exams approach, we focus heavily on academic preparation. At the same time, islamic boarding school programs cannot be reduced. Teachers feel pulled in two directions because both outcomes are equally important.” (T1)

Similarly, a religious teacher stated:

“Our responsibility is not only cognitive achievement but also behavior and discipline. Sometimes academic schedules become very tight, and we must negotiate so religious mentoring does not lose space.” (R3)

This dual performance expectation illustrates that coherence requires continuous prioritization and balancing rather than static alignment. Second, the data reveal coordination fatigue as an operational challenge. While cross-domain meetings and collaborative planning are essential for maintaining alignment, they also increase administrative workload and time demands. Teachers acknowledged that sustained coordination requires institutional commitment and personal effort. One participant noted:

“Coordination meetings are necessary, but they take time. After teaching all day, we still have to sit together and align plans. Without strong commitment, it would be easy to return to working separately.” (T2)

Another teacher added:

“Sometimes we feel exhausted because integration means more communication. If communication weakens, coherence weakens.” (T3)

These accounts suggest that relational coherence depends on sustained institutional energy. Without structured routines and leadership reinforcement, integration risks becoming symbolic rather than substantive. Third, epistemological boundaries emerged as a subtle but significant tension. Some teachers initially expressed uncertainty about integrating secular and religious knowledge domains.



The concern was not resistance per se, but apprehension about maintaining disciplinary integrity. As one teacher reflected:

“At first, some felt that science should remain purely scientific. But gradually we realized integration does not mean dilution—it means contextualization.”
(T4)

This statement indicates that coherence requires conceptual negotiation at the epistemic level. Integration was ultimately reframed not as blending or compromising disciplinary rigor, but as providing ethical and contextual framing across domains. Taken together, these tensions demonstrate that curriculum coherence in dual education systems is neither automatic nor permanently secured. Rather, it is continuously constructed through negotiation, recalibration, and collective sense-making. The presence of performance duality, coordination fatigue, and epistemological boundary work highlights that coherence is a dynamic governance achievement rather than a static institutional condition.

Emergent Model: Distributed Coherence Governance

Synthesizing the findings across dimensions, the study identifies an emergent governance model characterized by structural design, relational coordination, and adaptive monitoring.

Table 6. Emergent Distributed Coherence Governance Model

Governance Layer	Core Mechanism	Function in Dual System
Structural Layer	Vision alignment and curriculum mapping	Institutional coherence architecture
Relational Layer	Cross-domain teacher coordination	Operational integration
Adaptive Layer	Cyclical monitoring and feedback loops	Sustainability and recalibration

Curriculum coherence in this dual education system operates as a distributed and recursive governance cycle, comprising strategic design, relational enactment, adaptive evaluation, and structural refinement. This model reconceptualizes coherence not as a static alignment, but as a dynamic and continuously recalibrated process, shaped by iterative interactions between institutional structures, professional practices, and evaluative feedback mechanisms.

The findings demonstrate that managing curriculum coherence in a dual education system requires: Intentional structural alignment at the planning stage. Distributed relational coordination at the implementation stage. Adaptive feedback mechanisms at the evaluation stage. Continuous negotiation of tensions between academic accountability and religious identity. Rather than functioning as parallel programs, the national and islamic boarding school curricula in this case are governed through an integrated, distributed coherence system. This governance pattern offers an empirically grounded conceptual contribution to understanding how hybrid education systems can achieve sustainable alignment without sacrificing institutional identity.

Dsicussion



Curriculum Coherence Beyond Alignment: From Structural Design to Governance Process

Recent scholarship on curriculum reform emphasizes that coherence requires vertical and horizontal alignment across goals, instruction, and assessment (Darling-Hammond et al., 2020; Voogt & Roblin, 2020). However, most frameworks assume a relatively unified policy environment. The present findings extend this literature by demonstrating that in dual systems—where state and religious curricula coexist—coherence must bridge not only pedagogical components but also epistemological foundations and accountability regimes.

The structural mechanisms identified in this study—vision reframing, curriculum mapping matrices, and integrated scheduling—align with research suggesting that institutional coherence depends on deliberate organizational architecture (Honig & Rainey, 2020; Spillane et al., 2021). Yet, unlike conventional reform contexts, the case examined here required explicit negotiation between two knowledge traditions. This duality reinforces arguments that educational governance increasingly operates in multi-actor and multi-normative environments (Gobby et al., 2022). In such settings, coherence cannot be reduced to compliance; it becomes a form of institutional mediation. The study's findings therefore support a shift from understanding coherence as static alignment toward conceptualizing it as a governance process that integrates identity preservation and accountability demands simultaneously.

Distributed Leadership and Relational Coherence

The operationalization of coherence through cross-domain teacher collaboration resonates strongly with scholarship on distributed leadership and collaborative professionalism (Harris & Jones, 2020; Tian et al., 2021). The findings confirm that structural planning alone does not guarantee instructional coherence. Rather, it is enacted through relational coordination, dialogic engagement, and shared sense-making among teachers. In this case, cross-domain meetings functioned as epistemic bridging forums, enabling teachers to contextualize academic knowledge within ethical and religious frameworks without dissolving disciplinary boundaries. This aligns with recent studies emphasizing that curriculum reform becomes sustainable when professional communities internalize reform principles rather than merely implement directives (Admiraal et al., 2021; Postholm, 2020).

However, coordination fatigue complicates idealized models of collaboration. The findings suggest that distributed coherence governance requires time, institutional trust, and protected coordination spaces. Without these, relational coherence risks devolving into superficial alignment. This insight adds nuance to the collaborative leadership literature by highlighting the resource-intensive nature of sustained integration in hybrid systems.

Hybrid Accountability and the Paradox of Dual Performance

One of the most salient findings concerns the dual accountability pressure experienced by teachers. The necessity to satisfy national academic metrics alongside islamic boarding school-based character formation indicators reflects broader global trends toward hybrid accountability regimes (Verger et al., 2021; World Bank, 2022).



In such regimes, institutions are accountable to multiple normative frameworks that may not always align with one another.

The study contributes to this discourse by illustrating how dual accountability can be institutionally mediated rather than hierarchically resolved. Instead of privileging academic performance over religious formation—or vice versa—the school developed integrated evaluative mechanisms that consider both domains simultaneously. This integrative approach challenges zero-sum accountability models and aligns with calls for more holistic evaluation systems in contemporary education reform (Biesta, 2022).

Nevertheless, the reported workload strain among teachers underscores that hybrid accountability carries psychosocial and organizational costs. This finding echoes recent concerns that reform-driven coherence initiatives may inadvertently increase administrative burdens if not carefully designed (Peurach et al., 2021).

Epistemological Pluralism and Boundary Negotiation

The negotiation of epistemological boundaries between secular and religious knowledge domains represents a particularly significant theoretical contribution. Rather than fusing content or subordinating one epistemology to another, the school adopted a contextual infusion model—maintaining disciplinary integrity while fostering ethical cross-referencing. This approach aligns with scholarship advocating epistemological pluralism in multicultural and faith-based education systems (Keddie, 2020; Berglund & Gent, 2022). It suggests that coherence in hybrid contexts may depend on dialogical integration rather than homogenization. By framing integration as contextual reinforcement, teachers preserved the integrity of scientific knowledge while embedding moral meaning, thereby mitigating fears of dilution. This finding advances curriculum theory by demonstrating that coherence can be achieved without collapsing epistemic boundaries. Instead, structured dialogical interaction can enable meaningful alignment while respecting disciplinary autonomy.

Toward a Distributed Coherence Governance Model

Synthesizing across dimensions, the findings support the articulation of a Distributed Coherence Governance Model comprising three interdependent layers: Structural Governance: Institutional design mechanisms that align goals and schedules. Relational Governance: Teacher coordination and collaborative sense-making. Adaptive Governance: Monitoring systems that recalibrate alignment through feedback loops. This model resonates with recent conceptualizations of adaptive educational systems that emphasize feedback-driven recalibration (Mandinach & Schildkamp, 2021). However, the present study extends these frameworks by situating adaptation within a dual normative environment where coherence must simultaneously sustain institutional identity and regulatory compliance.

Importantly, the recursive relationship between planning, enactment, and evaluation suggests that coherence is cyclical rather than linear. Structural alignment enables relational enactment; relational enactment generates evaluative insights; evaluation informs structural recalibration. This dynamic cycle represents a governance logic particularly relevant to hybrid schooling environments.



Implications for International Scholarship and Practice

The findings have broader implications for educational systems experiencing diversification and faith-based expansion. Globally, hybrid schooling models are increasing in contexts where communities seek identity-based education within national accountability frameworks (Berglund & Gent, 2022; Verger et al., 2021). The distributed coherence governance model proposed here offers a theoretically grounded lens for analyzing such systems.

For policymakers, the study suggests that regulatory frameworks should recognize the complexity of dual systems and provide flexibility for contextualized integration strategies. For school leaders, the findings highlight the importance of institutionalizing coordination routines and protecting collaborative time to sustain relational coherence.

Limitations and Future Directions

While this study offers rich qualitative insight, it is limited to a single institutional case. Future research could employ comparative multi-case designs across different regions or religious traditions to assess the transferability of the distributed coherence governance model. Quantitative measures of student outcomes complement qualitative findings to evaluate long-term impact.

In conclusion, this study demonstrates that curriculum coherence in dual education systems is not an outcome of additive curriculum design but a distributed, negotiation-intensive governance process. By integrating structural planning, relational coordination, and adaptive monitoring, schools can mediate dual accountability pressures while preserving epistemological integrity. The concept of distributed coherence governance advances theoretical discussions on curriculum management in hybrid systems and contributes to international debates on faith-based schooling, accountability, and educational reform.

CONCLUSION

This study has examined how curriculum coherence is strategically governed within a dual education system integrating national and pesantren curricula. The findings demonstrate that coherence in hybrid institutional settings is not achieved through additive curriculum design but through a distributed, adaptive governance process that aligns structural planning, relational coordination, and evaluative recalibration.

Empirically, the study reveals that coherence is operationalized through concrete institutional practices, including the development of curriculum alignment matrices, the implementation of integrated scheduling systems to balance academic and religious demands, and the facilitation of regular cross-domain teacher coordination meetings. Furthermore, evaluation is enacted through dual monitoring mechanisms that combine academic performance indicators with pesantren-based character assessments, enabling continuous adjustment of instructional structures. At the same time, the findings highlight persistent challenges such as dual accountability pressures, coordination fatigue among teachers, and the need to negotiate epistemological boundaries between secular and religious knowledge domains.



Building on these findings, the study advances the concept of Distributed Coherence Governance, emphasizing that sustainable integration requires three interdependent mechanisms: institutional structures that formalize alignment, relational processes that enable collaborative enactment, and adaptive evaluation systems that support ongoing recalibration. Coherence, therefore, emerges not as a static condition but as a continuously negotiated achievement within a multi-normative institutional environment.

Despite these contributions, this study is subject to several limitations. First, the research is based on a single-case design, which limits the generalizability of the findings across diverse educational contexts. Second, the study relies primarily on perspectives from institutional actors (leaders and teachers), without incorporating the voices of students, parents, or external stakeholders, which may provide additional insight into the lived experience of curriculum integration. Third, while the study offers rich qualitative insights into governance processes, it does not examine measurable student learning outcomes, leaving questions about the long-term effectiveness of coherence strategies open for further investigation.

Future research is therefore encouraged to adopt comparative multi-case designs across different institutional and cultural contexts, integrate multiple stakeholder perspectives, and combine qualitative and quantitative approaches to assess both process and outcome dimensions of curriculum coherence in hybrid education systems.

In conclusion, this study demonstrates that curriculum coherence in dual education systems is a distributed, negotiation-intensive, and continuously adaptive governance process. By integrating structural design, relational coordination, and adaptive monitoring, schools can mediate dual accountability pressures while preserving epistemological integrity. The concept of distributed coherence governance offers a contextually grounded analytical lens for understanding and managing complexity in hybrid and faith-based educational settings.

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