

DEVELOPING A LEADERSHIP CONTENT KNOWLEDGE MODEL FOR MADRASAH PRINCIPALS TO STRENGTHEN THE MADRASAH LITERACY MOVEMENT

Mahrus¹, Agus Maimun² Indah Aminatuz Zuhriyah³ Zubdatul Itqon⁴

^{1,2,3}Universitas Islam Negeri Maulana Malik Ibrahim Malang

⁴STAI Nahdlatul Ulama (STAINU) Malang

Email: 230106310004@student.uin-malang.ac.id¹, maimun@pai.uin-malang.ac.id²
zuhriyah@pgmi.uin-malang.ac.id³, zubdatulitqon@gmail.com⁴

Abstrak: Gerakan Literasi Madrasah (GLM) merupakan salah satu program strategis untuk meningkatkan budaya literasi, kemampuan berpikir kritis, dan mutu pembelajaran di madrasah. Namun, berbagai penelitian menunjukkan bahwa keberhasilan implementasi GLM sangat dipengaruhi oleh kapasitas kepemimpinan kepala madrasah. Kajian mengenai kepemimpinan madrasah selama ini lebih banyak berfokus pada kepemimpinan transformasional, instruksional, dan distributif, sementara kajian mengenai Leadership Content Knowledge (LCK) kepala madrasah dalam penguatan GLM masih sangat terbatas. Penelitian ini bertujuan mengembangkan model Leadership Content Knowledge kepala madrasah untuk memperkuat Gerakan Literasi Madrasah. Penelitian menggunakan pendekatan kualitatif dengan desain studi multikasus pada MA Almaarif Singosari Kabupaten Malang dan MA Muhammadiyah 1 Kota Malang. Data dikumpulkan melalui wawancara mendalam, observasi partisipatif, dan studi dokumentasi terhadap kepala madrasah, wakil kepala madrasah, ketua tim literasi, guru, dan dokumen pendukung. Analisis data dilakukan melalui analisis kasus individual dan analisis lintas kasus dengan teknik reduksi data, penyajian data, serta penarikan kesimpulan, sedangkan keabsahan data diuji melalui triangulasi sumber, teknik, dan waktu. Hasil penelitian menunjukkan bahwa Leadership Content Knowledge kepala madrasah dikembangkan melalui integrasi pengetahuan kepemimpinan, pedagogik, kurikulum, budaya organisasi, dan literasi yang diwujudkan dalam kebijakan strategis, penguatan kapasitas guru, pengembangan budaya literasi, kolaborasi pemangku kepentingan, serta evaluasi berkelanjutan. Temuan penelitian menghasilkan Model Leadership Content Knowledge Kepala Madrasah yang menjelaskan hubungan dinamis antara kompetensi kepemimpinan berbasis pengetahuan, proses implementasi, dan penguatan Gerakan Literasi Madrasah. Model ini memperluas kajian Leadership Content Knowledge pada konteks pendidikan Islam sekaligus memberikan kontribusi teoritis dan praktis bagi pengembangan kepemimpinan kepala madrasah.

Kata kunci:

Leadership Content Knowledge; Kepala Madrasah; Gerakan Literasi Madrasah; Kepemimpinan pendidikan; Studi Multi Kasus

Abstract: The Madrasah Literacy Movement (MLM) is a strategic initiative designed to foster literacy culture, enhance students' critical thinking skills, and improve the quality of learning in Islamic schools. However, previous studies indicate that the success of the movement largely depends on the leadership capacity of madrasah principals. Existing research has predominantly examined transformational, instructional, and distributed leadership, while limited attention has been given to Leadership Content Knowledge (LCK) as a knowledge-based leadership framework for strengthening the Madrasah Literacy Movement. This study aims to develop a Leadership Content Knowledge model for madrasah principals to strengthen the Madrasah Literacy Movement. Employing a qualitative multi-case study design, the research was conducted at MA Almaarif Singosari, Malang Regency, and MA Muhammadiyah 1 Malang City. Data were collected through in-depth interviews, participant observations, and document analysis involving principals, vice principals, literacy team coordinators, teachers, and

institutional documents. Data were analyzed using within-case and cross-case analysis through data reduction, data display, and conclusion drawing, while credibility was established through source, technique, and time triangulation. The findings reveal that madrasah principals' Leadership Content Knowledge is developed through the integration of leadership, pedagogical, curricular, organizational, and literacy knowledge, which is operationalized in strategic policy-making, teacher capacity building, literacy culture development, stakeholder collaboration, and continuous evaluation. This study proposes a Leadership Content Knowledge Model for Madrasah Principals that explains the dynamic relationship between knowledge-based leadership competencies, implementation processes, and the strengthening of the Madrasah Literacy Movement. The proposed model extends the theoretical discourse on Leadership Content Knowledge within the context of Islamic education while offering practical implications for strengthening educational leadership in madrasahs.

Keywords:

Leadership Content Knowledge; Madrasah Principal; Madrasah Literacy Movement; Educational Leadership; Multi-Case Study.

Introductions

The increasing complexity of twenty-first-century education has positioned literacy as one of the essential competencies for preparing students to participate successfully in knowledge-based societies. Literacy is no longer understood merely as the ability to read and write; rather, it encompasses critical thinking, information processing, communication, collaboration, and digital competence required to solve complex problems in rapidly changing environments (OECD, 2023; UNESCO, 2024). Consequently, educational institutions are expected to transform literacy from an instructional activity into a sustainable organizational culture that promotes lifelong learning. Within this context, educational leadership has become a determining factor in developing literacy-oriented schools because principals influence curriculum implementation, teacher professional learning, instructional quality, and organizational effectiveness (Hallinger, 2020; Hallinger, 2025). Recent scholarship has increasingly recognized learner-centered leadership as a fundamental prerequisite for cultivating sustainable learning cultures and strengthening schools' organizational capacity. A qualitative meta-synthesis of 42 empirical studies found that effective school leaders contribute to organizational improvement by establishing a shared vision, fostering collaborative cultures, facilitating teachers' professional learning, and creating student-centered learning environments. These leadership practices collectively serve as the foundation for enhancing schools' adaptive and organizational capacity. This evidence is further supported by a recent meta-analysis of 26 empirical studies comprising 208 effect sizes, which demonstrated that learner-centered school leadership exerts both direct and indirect effects on student learning outcomes through improvements in instructional quality, teacher professional capacity, and overall school effectiveness (Richardson & Khawaja, 2025; Wu & Shen, 2026). In Indonesia, strengthening literacy has become a national educational priority through the National Literacy Movement, which has subsequently been adapted into the Madrasah Literacy Movement (MLM) by the Ministry of Religious Affairs. Unlike general schools, madrasahs integrate national curriculum standards with Islamic educational values; therefore, literacy development requires leadership that is capable of integrating pedagogical excellence, religious values, curriculum innovation, and organizational learning into a coherent educational system.

Preliminary evidence collected during the initial stage of this study demonstrates that both participating madrasahs had formally implemented literacy programs through institutional literacy policies, daily reading activities, classroom literacy integration, reading corners, teacher professional development, and literacy-based extracurricular programs. Nevertheless, classroom observations and preliminary interviews with principals, vice principals, literacy coordinators, and teachers revealed considerable differences in the sustainability and effectiveness of these initiatives. In schools where principals actively integrated literacy into curriculum planning, teacher learning, organizational decision-making, and stakeholder collaboration, literacy programs evolved into a sustainable institutional culture. Conversely, literacy initiatives tended to remain procedural when leadership focused primarily on administrative compliance. These preliminary findings indicate that successful implementation of the Madrasah Literacy Movement depends not only on leadership authority or managerial competence but also on the principals' ability to integrate leadership knowledge, curriculum knowledge, pedagogical knowledge, organizational learning, assessment literacy, and contextual understanding into strategic educational practices. This preliminary evidence suggests that leadership should be examined as a knowledge-based professional competency rather than merely as a leadership style. These preliminary findings are consistent

with recent empirical evidence demonstrating that the effectiveness of instructional leadership extends beyond classroom supervision to encompass principals' capacity to cultivate organizational learning, strengthen teachers' professional development, and foster collaborative school cultures. A correlational study involving 341 teachers found a statistically significant positive relationship between principals' instructional leadership and multiple dimensions of organizational learning, including trust and collaborative climate, shared vision, initiative and risk-taking, and professional development (Yel & Kazak, 2025). Likewise, a multilevel structural equation modeling study involving 401 teachers demonstrated that instructional leadership enhances teacher professionalism indirectly through teacher collaboration, highlighting collaborative culture as a key mechanism linking leadership to sustainable school improvement. Furthermore, evidence from 47 countries participating in the TALIS survey confirmed that collaborative school culture strengthens the positive relationship between instructional leadership, teacher self-efficacy, and job satisfaction, reinforcing the importance of organizational capacity in improving educational outcomes (Gümüş & Bellibaş, 2025). Collectively, these findings support the argument that educational leadership should be understood as a knowledge-based professional competency rather than merely an administrative or managerial function.

Educational leadership research during the last decade has experienced significant theoretical development. Studies published between 2016 and 2018 predominantly investigated instructional leadership as a mechanism for improving teaching quality, curriculum implementation, and student achievement (Hallinger & Wang, 2015; Hitt & Tucker, 2016). Research conducted during 2019–2021 expanded toward transformational and distributed leadership, emphasizing teacher commitment, organizational learning, and collaborative school improvement (Leithwood et al., 2020; Harris, 2020). More recent studies (2022–2026) increasingly explored literacy leadership, professional learning communities, digital leadership, and organizational capacity as determinants of sustainable literacy development (Hallinger, 2025; Beswick, 2025; Prasetyaningtyas et al., 2026). Instructional leadership research has shifted from examining direct leadership effects toward more sophisticated explanatory models involving mediation and moderation mechanisms, particularly teacher professional learning, organizational capacity, and school improvement. Nevertheless, these studies continue to conceptualize leadership primarily as observable leadership behavior and rarely explain how principals construct, integrate, and mobilize professional knowledge to improve educational practice (Hallinger et al., 2025). Although these studies have substantially advanced educational leadership theory, the majority conceptualize leadership from behavioral, managerial, or organizational perspectives. Only a limited number of studies have examined leadership as an integration of professional knowledge, commonly referred to as Leadership Content Knowledge (LCK), and even fewer have investigated its application within Islamic educational institutions. Furthermore, previous studies generally examined literacy leadership, instructional leadership, curriculum leadership, teacher professional development, and organizational learning as separate constructs, resulting in fragmented explanations regarding how principals develop and mobilize integrated professional knowledge to strengthen institutional literacy movements. Consequently, no empirically validated model has yet explained how Leadership Content Knowledge is constructed and operationalized by madrasah principals to strengthen the Madrasah Literacy Movement.

The concept of Leadership Content Knowledge, originally introduced by Stein and Nelson (2003) and conceptually rooted in Shulman's (1986, 1987) Pedagogical Content Knowledge, offers a promising theoretical framework for addressing this limitation. LCK conceptualizes educational leadership as the integration of leadership knowledge with curriculum leadership, pedagogical leadership, teacher professional learning, assessment literacy, organizational learning, and contextual decision-making required to improve teaching and learning. Unlike conventional leadership theories that primarily explain leadership behaviors, LCK emphasizes the professional knowledge enabling educational leaders to make informed instructional and organizational decisions. However, empirical validation of this framework remains limited, particularly within the context of Islamic education, where leadership practices are simultaneously influenced by national educational policies, religious values, institutional culture, and community expectations. Emerging scholarship has begun to extend the concept of Leadership Content Knowledge (LCK) into specialized educational contexts, particularly STEM education, by conceptualizing leadership as the integration of disciplinary knowledge, pedagogical understanding, and organizational expertise required to improve teaching and learning. Empirical evidence from the *Principals as STEM Leaders* project, involving 87 school principals and 37 follow-up interviews, demonstrated that while principals generally exhibited positive dispositions toward STEM leadership, they showed limited evidence of discipline-specific and integrated STEM knowledge. These findings suggest that effective educational leadership requires not only leadership behaviors but also domain-specific professional knowledge that supports informed instructional and organizational decision-making. Nevertheless, empirical investigations applying Leadership Content Knowledge beyond STEM education remain scarce, particularly within Islamic educational institutions and

literacy-oriented school improvement initiatives (Beswick et al., 2026).

Responding to these theoretical and empirical gaps, this study aims to develop a Leadership Content Knowledge Model for Madrasah Principals to Strengthen the Madrasah Literacy Movement through a qualitative multi-case study conducted in two Indonesian madrasahs. The novelty of this research lies in the development of an empirically grounded leadership model that explains how leadership knowledge is constructed through the integration of pedagogical leadership, curriculum leadership, organizational learning, assessment literacy, teacher professional learning, and literacy leadership within Islamic educational institutions. Rather than positioning leadership merely as managerial practice, the proposed model conceptualizes leadership as a dynamic knowledge system that enables principals to transform literacy policies into sustainable organizational culture. The novelty of this study lies not only in its focus on the madrasah context as a distinctive Islamic educational institution but also in the development of the Madrasah Leadership Content Knowledge (M-LCK) Model, which integrates pedagogical leadership, curriculum leadership, organizational learning, assessment literacy, teacher professional learning, and literacy leadership into a unified conceptual framework. By positioning leadership as a dynamic knowledge system, the proposed model extends previous Leadership Content Knowledge literature beyond general school and STEM contexts toward a more comprehensive framework for literacy-oriented leadership in Islamic education. The findings are expected to contribute theoretically to the advancement of Leadership Content Knowledge literature while providing practical guidance for policymakers, educational leaders, and professional development institutions in strengthening literacy-oriented leadership in madrasahs.

Method

This study employed a qualitative approach using a multi-case study design to develop a Leadership Content Knowledge (LCK) model for madrasah principals in strengthening the Madrasah Literacy Movement (MLM). A multi-case design was selected to enable an in-depth exploration of leadership practices across different institutional settings while identifying recurring patterns and contextual differences that contributed to the development of the proposed model. The study emphasized understanding how principals constructed and enacted Leadership Content Knowledge through leadership practices, organizational learning, curriculum implementation, and literacy development within their respective madrasahs.

The research was conducted at MA Almaarif Singosari, Malang Regency, and MA Muhammadiyah 1 Malang City, Indonesia. These madrasahs were purposively selected because both have consistently implemented literacy programs and have demonstrated institutional commitment to strengthening literacy culture through strategic leadership initiatives. Despite sharing similar educational objectives, the two institutions represent different organizational backgrounds, thereby providing rich opportunities for cross-case comparison.

Participants were selected using purposive sampling based on their direct involvement in planning, implementing, and evaluating the Madrasah Literacy Movement. The participants consisted of two madrasah principals, vice principals responsible for curriculum affairs, literacy team coordinators, teachers actively involved in literacy programs, and supporting staff responsible for school documentation and library services. Additional information was obtained from institutional documents related to literacy policies, annual work programs, literacy implementation reports, curriculum documents, and supporting regulations.

Data were collected from January to May 2026 using three complementary techniques: in-depth interviews, participant observation, and document analysis. Semi-structured interviews were conducted with all key participants to explore leadership experiences, decision-making processes, literacy strategies, teacher professional development, and organizational learning practices. Each interview lasted between 45 and 90 minutes and was audio-recorded with participants' consent before being transcribed verbatim for analysis.

Participant observation was carried out throughout literacy-related activities, including daily reading programs, classroom literacy integration, teacher meetings, literacy team coordination, and school literacy events. Field notes were prepared immediately after each observation to capture leadership interactions, organizational dynamics, and literacy practices occurring within the natural school setting. Document analysis complemented interview and observation data by examining literacy policies, strategic plans, curriculum documents, teacher development programs, meeting minutes, literacy reports, photographs, and other institutional archives relevant to the implementation of the Madrasah Literacy Movement. Triangulation across interviews, observations, and documentary evidence was employed throughout the data collection process to strengthen data credibility.

Data analysis was conducted simultaneously with data collection using an iterative process. Interview transcripts, observation notes, and documentary evidence were first organized and coded to identify meaningful units of information related to Leadership Content Knowledge and literacy leadership. The analysis proceeded through three stages. First, within-case analysis was conducted independently for each madrasah to identify patterns of leadership practices, literacy implementation, and organizational learning. Second, **cross-case analysis**

compared findings from both institutions to identify similarities, differences, and recurring themes that characterized Leadership Content Knowledge across cases. Finally, the synthesized findings were integrated into an empirically grounded Leadership Content Knowledge model explaining the relationships among leadership knowledge, organizational processes, and literacy development. Throughout the analysis, coding categories were continuously refined through constant comparison between emerging themes and empirical evidence until conceptual saturation was achieved.

The trustworthiness of the findings was ensured through prolonged engagement in the field, triangulation of data sources, triangulation of data collection techniques, member checking with key participants, and peer debriefing among educational researchers. In addition, an audit trail documenting field activities, coding procedures, analytical decisions, and model development was maintained throughout the research process to enhance the transparency and dependability of the findings.

Findings

1. Dimensions of Leadership Content Knowledge for Strengthening the Madrasah Literacy Movement

Cross-case analysis revealed that the Leadership Content Knowledge (LCK) of madrasah principals is not represented by a single leadership competency but by an integration of several interrelated domains of professional knowledge. Rather than emphasizing administrative authority alone, effective leadership in strengthening the Madrasah Literacy Movement emerged through the principals' ability to integrate educational leadership with curriculum development, teacher learning, organizational learning, assessment practices, and literacy-oriented decision making.

The analysis identified six interrelated dimensions that consistently characterized Leadership Content Knowledge across the participating madrasahs. These dimensions collectively demonstrate that literacy leadership is fundamentally knowledge-based and requires principals to integrate multiple professional competencies into strategic educational actions.

Tabel 1.
Dimensions of Leadership Content Knowledge

Dimension	Description
Visionary Literacy Leadership	Developing literacy vision and institutional policies.
Curriculum Leadership Knowledge	Integrating literacy into curriculum planning and classroom learning.
Teacher Professional Learning Knowledge	Facilitating continuous teacher learning related to literacy instruction.
Organizational Learning Knowledge	Building collaborative learning culture across the institution.
Assessment and Evaluation Knowledge	Monitoring literacy implementation and utilizing evaluation for improvement.
Stakeholder Collaboration Knowledge	Mobilizing parents, committees, libraries, and community partnerships to strengthen literacy culture.

These dimensions indicate that Leadership Content Knowledge extends beyond conventional instructional leadership because principals simultaneously manage pedagogical, organizational, curricular, and social dimensions that collectively influence literacy development

2. The Construction Process of Leadership Content Knowledge

The second finding demonstrates that Leadership Content Knowledge is developed through a continuous learning process rather than acquired as an individual competency. Cross-case analysis indicates that principals gradually construct leadership knowledge through professional experience, reflective practice, collaborative learning, and organizational problem-solving associated with literacy development.

The construction process begins with professional experiences derived from daily leadership practices. These experiences encourage reflective learning that enables principals to evaluate literacy implementation and identify

institutional needs. Reflection subsequently stimulates the integration of multiple knowledge domains, including curriculum leadership, teacher professional learning, assessment literacy, and organizational learning. Through collaboration with teachers, literacy teams, and stakeholders, principals transform integrated knowledge into strategic decisions that strengthen institutional literacy culture.

The iterative interaction among experience, reflection, knowledge integration, collaboration, and strategic action illustrates that Leadership Content Knowledge develops as a dynamic organizational learning process rather than as isolated leadership expertise.



Figure 1. The Construction Process of Leadership Content Knowledge

3. A Leadership Content Knowledge Model for Madrasah Principals

The synthesis of within-case and cross-case analyses resulted in the development of a Leadership Content Knowledge Model for Madrasah Principals. The model explains how multiple domains of professional knowledge interact to strengthen the Madrasah Literacy Movement.

The proposed model positions leadership knowledge as the central driver connecting curriculum leadership, pedagogical leadership, teacher professional learning, organizational learning, assessment literacy, and stakeholder collaboration. These interconnected knowledge domains collectively shape literacy-oriented leadership practices that influence institutional literacy culture and continuous school improvement.

Unlike previous educational leadership models that primarily emphasize leadership behaviors, the proposed model conceptualizes leadership as a knowledge system integrating educational expertise with organizational decision-making. Consequently, strengthening the Madrasah Literacy Movement depends on principals' capacity to transform professional knowledge into sustainable institutional practices.



Figure 2. Leadership Content Knowledge Model for Madrasah Principals

Discussion

1. Reinterpreting Leadership Content Knowledge in Strengthening the Madrasah Literacy Movement

The findings of this study provide a broader interpretation of Leadership Content Knowledge (LCK) by demonstrating that effective leadership in strengthening the Madrasah Literacy Movement is fundamentally a knowledge-based leadership practice rather than merely the application of managerial authority or instructional supervision. Cross-case analysis revealed that madrasah principals strengthened literacy programs by integrating leadership knowledge with curriculum development, pedagogical improvement, teacher professional learning, organizational learning, assessment literacy, and stakeholder collaboration. These findings indicate that leadership effectiveness is determined not only by *what principals do*, but more importantly by *what principals know* and *how they transform that knowledge into strategic educational actions*. This interpretation reinforces the proposition that sustainable school improvement is driven by leaders' professional knowledge rather than by leadership behaviour alone (Stein & Nelson, 2003; Hallinger, 2025).

The present findings confirm and simultaneously extend the original concept of Leadership Content Knowledge introduced by Stein and Nelson (2003). Their seminal work conceptualized LCK as administrators' knowledge of subject matter, how students learn, and how teachers teach, enabling principals to function effectively as instructional leaders. However, the findings of this study demonstrate that within the context of Indonesian madrasahs, Leadership Content Knowledge extends beyond instructional supervision to encompass curriculum leadership, organizational learning, teacher professional development, assessment literacy, literacy leadership, and collaboration with internal and external stakeholders. Consequently, Leadership Content Knowledge should be understood not as a single leadership competency but as an integrated architecture of professional knowledge that enables principals to coordinate educational improvement across multiple organizational dimensions.

This interpretation also expands Shulman's (1986; 1987) theory of Pedagogical Content Knowledge (PCK). Shulman argued that effective teaching depends on the integration of subject matter knowledge and pedagogical knowledge rather than on mastery of content alone. Drawing upon this theoretical foundation, Stein and Nelson (2003) proposed Leadership Content Knowledge as an extension of PCK into educational leadership. The present study advances this theoretical trajectory by demonstrating that knowledge integration operates not only within classroom instruction but also at the organizational level. Madrasah principals continuously integrate curriculum leadership, pedagogical leadership, teacher professional learning, organizational learning, assessment literacy, and literacy leadership into coherent institutional strategies. Accordingly, Leadership Content Knowledge may be interpreted as an organizational knowledge system that connects educational expertise with strategic leadership for institutional improvement (Shulman, 1986; Stein & Nelson, 2003).

The findings further provide a critical perspective on dominant educational leadership theories. Instructional leadership emphasizes principals' roles in supervising teaching, coordinating curriculum, and monitoring learning outcomes, whereas transformational leadership focuses on motivating teachers and developing a shared organizational vision (Hallinger, 2003; Leithwood et al., 2020). More recently, systematic reviews and meta-analyses have consistently confirmed that instructional leadership positively influences teacher attitudes, instructional quality, and school effectiveness across diverse educational contexts (Hallinger, Liu, & Aung, 2025; Hallinger, Liu, & Chen, 2025). Nevertheless, the present findings suggest that these leadership perspectives primarily explain leadership behaviours, whereas they provide less explanation regarding the professional knowledge base that enables principals to make effective instructional decisions. In contrast, Leadership Content Knowledge explains the cognitive mechanisms underlying leadership by positioning professional knowledge as the foundation from which instructional, transformational, and collaborative leadership practices emerge.

Another significant contribution of this study concerns the contextualization of Leadership Content Knowledge within Islamic educational institutions. Recent scholarship has highlighted the importance of contextual factors in shaping educational leadership practices, arguing that leadership effectiveness cannot be separated from organizational culture, policy environments, and socio-cultural values (Hallinger et al., 2025). The present study supports this argument by demonstrating that madrasah principals construct Leadership Content Knowledge through the integration of national curriculum requirements, Islamic educational values, literacy development, community engagement, and institutional culture. Consequently, Leadership Content Knowledge within madrasahs represents a context-sensitive form of educational leadership in which religious values, organizational learning, and literacy improvement interact dynamically to support sustainable educational change.

The findings also resonate with the emerging discourse on Leadership Content Knowledge in contemporary educational research. Beswick (2025) argues that principals require content-specific leadership knowledge to

support STEM education because general leadership competencies alone are insufficient for improving instructional quality. Although developed within a different educational domain, this perspective is consistent with the present findings. However, this study extends Beswick's conceptualization by demonstrating that, in the context of literacy-oriented Islamic education, Leadership Content Knowledge integrates not only content expertise but also curriculum leadership, teacher professional learning, organizational learning, assessment literacy, literacy leadership, and stakeholder collaboration into a unified leadership framework. Thus, the present study broadens the scope of Leadership Content Knowledge beyond subject-specific instructional leadership toward an integrated model of institutional leadership.

Taken together, these findings suggest that Leadership Content Knowledge should be reinterpreted as an integrated system of professional knowledge that enables educational leaders to connect curriculum innovation, instructional improvement, teacher learning, organizational development, assessment, and literacy culture within a coherent leadership framework. Unlike previous conceptualizations that primarily emphasized instructional expertise, the proposed interpretation positions Leadership Content Knowledge as the cognitive architecture underlying sustainable educational transformation. Accordingly, the findings contribute to extending the theoretical discourse initiated by Stein and Nelson (2003) by demonstrating that Leadership Content Knowledge is simultaneously instructional, organizational, contextual, and transformative within the distinctive environment of Islamic educational institutions.

2. Leadership Content Knowledge as the Foundation for Literacy Leadership

This study therefore argues that Leadership Content Knowledge (LCK) constitutes the cognitive foundation of literacy leadership because it explains how principals transform professional knowledge into strategic decisions that sustain literacy-oriented school improvement. Rather than viewing literacy leadership as an independent leadership style, the findings position it as the practical manifestation of integrated leadership knowledge operating across instructional, organizational, and institutional dimensions.

This interpretation differs from the traditional perspective of instructional leadership, which primarily focuses on supervising instruction, coordinating curriculum, monitoring student learning, and improving classroom practices (Hallinger, 2003; Hallinger & Wang, 2015). Numerous empirical studies have demonstrated that instructional leadership positively influences instructional quality, teacher effectiveness, and student achievement (Hallinger et al., 2025). However, instructional leadership largely explains what principals do to improve teaching, while providing limited explanation regarding the professional knowledge that enables principals to make appropriate instructional decisions. The present study extends this perspective by demonstrating that effective literacy leadership emerges from principals' capacity to integrate curriculum leadership, pedagogical knowledge, assessment literacy, teacher professional learning, and organizational learning into strategic literacy initiatives. Consequently, Leadership Content Knowledge complements instructional leadership by revealing the knowledge architecture underlying effective instructional practices.

The findings also offer a broader perspective than transformational leadership, which emphasizes inspiring teachers, building shared vision, and fostering organizational commitment (Leithwood et al., 2020). Transformational leadership has consistently been associated with positive school climate, teacher motivation, and organizational innovation. Nevertheless, motivation alone does not guarantee successful literacy improvement unless leaders possess sufficient professional knowledge to guide instructional change. The present findings reveal that literacy-oriented transformation requires principals not only to inspire teachers but also to understand literacy pedagogy, curriculum integration, assessment strategies, and professional learning processes. Therefore, Leadership Content Knowledge provides the substantive knowledge base through which transformational leadership can be translated into concrete educational improvement.

Similarly, the findings complement the perspective of distributed leadership, which views leadership as a collaborative practice shared among teachers and school stakeholders (Spillane, 2006). Collaborative leadership was evident in both participating madrasahs through literacy teams, teacher learning communities, and partnerships involving parents, libraries, and local communities. However, collaboration alone does not necessarily produce coherent educational improvement. The findings indicate that collaborative structures become effective only when guided by principals who possess sufficient Leadership Content Knowledge to align collaborative activities with curriculum goals, literacy objectives, and institutional priorities. Accordingly, Leadership Content Knowledge functions as the intellectual framework that coordinates distributed leadership toward common educational purposes.

An important implication emerging from this study is that literacy leadership should be conceptualized as a knowledge-intensive leadership practice rather than merely a managerial responsibility. Literacy improvement

requires principals to understand not only how literacy programs are organized but also why particular literacy strategies are educationally meaningful within their institutional contexts. In the participating madrasahs, literacy leadership was reflected in principals' ability to connect literacy policies with curriculum implementation, teacher professional learning, assessment systems, organizational learning, and stakeholder engagement. This interconnected process illustrates that literacy leadership develops through continuous knowledge integration rather than isolated leadership behaviours. Consequently, Leadership Content Knowledge provides a more comprehensive explanation of literacy leadership because it integrates cognitive, pedagogical, organizational, and contextual dimensions into a unified leadership framework.

The findings further highlight the distinctive characteristics of literacy leadership within Islamic educational institutions. Unlike many school-based literacy initiatives reported in international literature, the Madrasah Literacy Movement operates within educational environments that simultaneously pursue academic excellence, character education, and Islamic values. As a result, principals must integrate national curriculum standards with religious teachings, institutional culture, and community expectations. This complexity requires a form of leadership that extends beyond conventional instructional expertise toward broader organizational and contextual knowledge. Leadership Content Knowledge therefore enables principals to balance educational accountability with religious values while maintaining literacy as a sustainable institutional culture rather than a temporary program.

Overall, this study suggests that Leadership Content Knowledge represents the underlying knowledge system that enables literacy leadership to function effectively. While instructional leadership, transformational leadership, and distributed leadership explain important dimensions of school leadership, each focuses primarily on behavioural or organizational aspects of leadership. Leadership Content Knowledge complements these perspectives by explaining the professional knowledge that informs leadership decisions and sustains educational improvement. Accordingly, literacy leadership should be understood not merely as a set of leadership practices but as the outcome of integrated professional knowledge continuously developed through experience, reflection, organizational learning, and collaborative inquiry. This interpretation strengthens the argument that Leadership Content Knowledge constitutes the conceptual foundation for strengthening the Madrasah Literacy Movement and provides a more comprehensive framework for understanding educational leadership in Islamic schools.

3. Toward a Knowledge-Based Leadership Model for Madrasahs

The proposed Leadership Content Knowledge (LCK) model positions knowledge integration as the central mechanism through which principals initiate, implement, and sustain literacy-oriented school improvement. The empirical model developed in this study demonstrates that Leadership Content Knowledge is constructed through the continuous interaction of six mutually reinforcing domains: curriculum leadership, pedagogical leadership, teacher professional learning, organizational learning, assessment literacy, and stakeholder collaboration. Rather than functioning independently, these domains operate as an integrated knowledge system that enables principals to interpret educational problems, formulate strategic responses, coordinate institutional resources, and evaluate literacy outcomes. This integrated perspective distinguishes the proposed model from previous leadership frameworks that typically examine these dimensions separately. Consequently, the model illustrates that effective literacy leadership is not the product of isolated competencies but emerges from the dynamic integration of multiple knowledge domains operating simultaneously within the organization.

An important feature of the proposed model is its emphasis on organizational learning as the mechanism connecting leadership knowledge with institutional change. The findings indicate that principals continuously refine their Leadership Content Knowledge through professional experience, reflective practice, collaborative inquiry, and evidence-informed decision making. Knowledge is therefore not viewed as a static personal attribute but as a dynamic organizational resource that evolves through interaction among leaders, teachers, literacy teams, and other stakeholders. This interpretation aligns with organizational learning theory, which views schools as learning organizations where continuous knowledge creation supports sustainable educational improvement (Senge, 2006; Nonaka & Takeuchi, 1995). Within the context of madrasahs, organizational learning becomes the medium through which leadership knowledge is transformed into institutional capacity for strengthening literacy culture.

The proposed model also highlights the importance of contextual adaptation. Unlike many educational leadership models developed within secular school systems, leadership practices in madrasahs are embedded within educational environments that integrate national curriculum standards with Islamic educational philosophy, religious values, and community participation. Consequently, principals are required to balance instructional improvement with moral education, organizational accountability, and institutional identity. The findings demonstrate that Leadership Content Knowledge develops through continuous interaction between

universal leadership principles and the distinctive characteristics of Islamic education. This contextual integration enables principals to design literacy programs that are academically meaningful while remaining consistent with the values and mission of madrasahs.

From a theoretical perspective, the proposed model extends the original framework of Stein and Nelson (2003) in three important ways. First, Leadership Content Knowledge is conceptualized not only as knowledge for instructional leadership but also as an integrated system encompassing curriculum leadership, teacher learning, organizational learning, assessment literacy, and collaborative governance. Second, the model positions organizational learning as the dynamic process through which leadership knowledge is continuously constructed and refined. Third, the model explicitly incorporates the socio-cultural and religious context of Islamic education, demonstrating that Leadership Content Knowledge is inherently context-dependent and develops differently across educational settings. These extensions broaden the explanatory power of Leadership Content Knowledge beyond its original formulation and provide a more comprehensive framework for understanding leadership in faith-based educational institutions.

The model further contributes to the growing discourse on knowledge-based educational leadership, which argues that leadership effectiveness depends increasingly on leaders' capacity to mobilize, integrate, and apply professional knowledge to solve complex educational problems. Contemporary schools face rapidly changing curricular demands, technological developments, and societal expectations that cannot be addressed solely through administrative expertise. The present findings indicate that principals require integrated professional knowledge enabling them to connect curriculum innovation, instructional improvement, teacher development, assessment practices, organizational learning, and stakeholder engagement into coherent institutional strategies. Thus, Leadership Content Knowledge represents a practical manifestation of knowledge-based leadership within the specific context of literacy development.

Overall, this study proposes a Knowledge-Based Leadership Model for Madrasahs in which Leadership Content Knowledge functions as the central cognitive system connecting educational knowledge with organizational action. The model demonstrates that literacy improvement is sustained when principals continuously integrate diverse forms of professional knowledge into strategic leadership practices that shape institutional culture. Rather than replacing existing educational leadership theories, the proposed model complements them by explaining the knowledge architecture that underpins effective leadership. Consequently, the model provides both a theoretical framework for future research and a practical guide for leadership preparation, professional development, and literacy policy implementation in Islamic educational institutions.

4. Theoretical Contribution

The primary theoretical contribution of this study is the reconceptualization of Leadership Content Knowledge (LCK) as a dynamic, multidimensional, and context-sensitive knowledge system that underpins effective educational leadership. Drawing upon Shulman's (1986, 1987) Pedagogical Content Knowledge (PCK) and its extension into Leadership Content Knowledge by Stein and Nelson (2003), this study argues that principals' effectiveness cannot be explained solely by instructional expertise or leadership behaviours. Rather, effective leadership emerges from the integration of diverse domains of professional knowledge. While Stein and Nelson primarily positioned LCK within instructional leadership, the present study demonstrates that LCK extends beyond curriculum and instruction to encompass curriculum leadership, pedagogical leadership, teacher professional learning, organizational learning, assessment literacy, literacy leadership, and stakeholder collaboration. Leadership Content Knowledge should therefore be understood as an integrated cognitive architecture that enables principals to interpret educational problems, synthesize multiple knowledge sources, and make informed decisions responsive to institutional contexts.

A second contribution is the repositioning of Leadership Content Knowledge within the broader paradigm of knowledge-based educational leadership. Dominant leadership theories-including Instructional Leadership (Hallinger & Murphy, 1985; Hallinger, 2025), Transformational Leadership (Leithwood et al., 2020), and Distributed Leadership have substantially advanced educational leadership by explaining how principals influence teaching quality, organizational commitment, and collaborative school improvement. However, these perspectives predominantly emphasize leadership behaviours rather than the professional knowledge that shapes those behaviours. This study proposes that Leadership Content Knowledge constitutes the cognitive foundation underlying effective leadership practice. Consistent with Bandura's (1986) Social Cognitive Theory, principals' decisions are not merely behavioural responses but cognitive processes involving the interpretation of evidence, reflection on professional experience, and integration of contextual knowledge. Consequently, this study shifts the

focus of educational leadership research from what leaders do toward what leaders know and how that knowledge informs educational decision-making.

The third contribution lies in identifying organizational learning as the mechanism through which Leadership Content Knowledge is continuously developed and refined. The findings indicate that principals construct LCK through professional experience, reflective practice, collaborative inquiry, evidence-informed decision-making, and sustained interaction with teachers and stakeholders. This perspective reinforces Argyris and Schön's (1978) Organizational Learning Theory, which views learning as a continuous process of organizational adaptation, while extending Nonaka and Takeuchi's (1995) Knowledge Creation Theory. The empirical findings demonstrate that principals' tacit leadership knowledge becomes organizational knowledge through dialogue, policy development, collaborative reflection, and institutional practice, reflecting the dynamic processes described in the SECI model. Likewise, the study aligns with Senge's (2006) Learning Organization Theory by showing that sustainable literacy improvement depends on collective learning, shared vision, systems thinking, and continuous professional growth. In this regard, Leadership Content Knowledge should be viewed not as an individual competency but as an organizational knowledge system that evolves through continuous learning and collaboration.

Another significant contribution is the contextualization of Leadership Content Knowledge within Islamic educational institutions. Most educational leadership theories have been developed in Western contexts where organizational structures, institutional purposes, and educational values differ substantially from those of madrasahs. The findings reveal that principals' Leadership Content Knowledge is constructed through the interaction of national educational policies, Islamic educational philosophy, literacy development, organizational culture, and community engagement. This demonstrates that Leadership Content Knowledge is inherently **context-dependent**, requiring adaptation to the socio-cultural and religious environments in which educational leadership is enacted. Accordingly, the study extends knowledge-based leadership theory by integrating Islamic educational values into contemporary leadership scholarship and highlighting the importance of contextual adaptation rather than universal application.

Building upon these theoretical perspectives, this study proposes the Madrasah Leadership Content Knowledge (M-LCK) Model as a comprehensive framework for knowledge-based educational leadership. The model positions Leadership Content Knowledge as the central knowledge architecture linking professional knowledge with organizational action. It explains that sustainable literacy improvement results from the continuous integration of curriculum leadership, pedagogical leadership, teacher professional learning, organizational learning, assessment literacy, stakeholder collaboration, and literacy leadership within a literacy-oriented organizational culture. Rather than replacing established leadership theories, the proposed model complements them by explaining the professional knowledge that enables effective leadership practices. The principal contribution of this study is therefore a conceptual shift from examining leadership as behavioural practice toward understanding leadership as an integrated system of professional knowledge. By extending Leadership Content Knowledge into the context of Islamic education, the M-LCK Model offers a theoretically grounded framework for future research on knowledge-based educational leadership while providing a conceptual foundation for strengthening literacy-oriented leadership in madrasahs.

Congclusions

This study set out to develop a Leadership Content Knowledge model for madrasah principals in strengthening the Madrasah Literacy Movement through a qualitative multi-case study. The findings demonstrate that effective literacy leadership is not determined solely by leadership authority, managerial competence, or instructional supervision. Rather, sustainable literacy improvement depends on principals' capacity to integrate multiple domains of professional knowledge into coherent educational practices. Specifically, Leadership Content Knowledge was found to be constructed through the interaction of curriculum leadership, pedagogical leadership, teacher professional learning, organizational learning, assessment literacy, and stakeholder collaboration. These interconnected domains enable principals to translate literacy policies into sustainable institutional practices and to cultivate a literacy-oriented organizational culture within madrasahs.

The study further proposes the Madrasah Leadership Content Knowledge (M-LCK) Model, which conceptualizes Leadership Content Knowledge as an integrated, dynamic, and context-sensitive system of professional knowledge. Unlike previous conceptualizations that primarily positioned Leadership Content Knowledge within instructional leadership, the proposed model demonstrates that effective leadership in madrasahs requires continuous integration of educational knowledge, organizational learning, Islamic educational values, and collaborative institutional practices. The model therefore broadens the theoretical scope of Leadership

Content Knowledge by positioning it as the cognitive architecture that underpins literacy-oriented educational leadership in Islamic schools.

From a theoretical perspective, this study contributes to the advancement of educational leadership theory in three important ways. First, it extends Leadership Content Knowledge beyond instructional expertise into a multidimensional framework integrating leadership, curriculum, pedagogy, assessment, organizational learning, and stakeholder collaboration. Second, it identifies organizational learning as the dynamic mechanism through which Leadership Content Knowledge is continuously developed, shared, and transformed into sustainable educational improvement. Third, it contextualizes Leadership Content Knowledge within Islamic educational institutions, demonstrating that leadership knowledge is constructed through continuous interaction among educational policy, institutional culture, community engagement, and Islamic educational philosophy. Collectively, these contributions enrich the emerging discourse on knowledge-based educational leadership and provide a conceptual foundation for future investigations across diverse educational contexts.

The findings also offer practical implications for educational leadership development. Leadership preparation programs, principal professional development initiatives, and educational policy should move beyond emphasizing administrative competence and leadership behaviours toward strengthening principals' professional knowledge in curriculum leadership, literacy leadership, organizational learning, assessment, and collaborative school improvement. Integrating these knowledge domains into leadership development programs may enhance principals' capacity to sustain literacy initiatives and improve institutional learning cultures in madrasahs and other educational settings.

This study is not without limitations. The proposed model was developed from two madrasahs within a specific regional and institutional context, which may limit the transferability of the findings to other educational environments. Furthermore, the study adopted a qualitative multi-case approach that prioritizes in-depth contextual understanding rather than statistical generalization. Future studies are therefore encouraged to validate and refine the Madrasah Leadership Content Knowledge (M-LCK) Model across broader educational contexts using comparative case studies, mixed-methods research, or quantitative model-testing approaches. Such investigations will contribute to further theoretical refinement while expanding the applicability of Leadership Content Knowledge across different educational systems and leadership contexts.

Referensi/Reference

- Argyris, C., & Schön, D. A. (1978). *Organizational learning: A theory of action perspective*. Reading, MA: Addison-Wesley.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York: Free Press.
- Beswick, K. (2026). Principals' Leadership Content Knowledge in STEM Contexts. *British Educational Research Journal*. Advance online publication. <https://doi.org/10.1002/berj.70010>
- Burns, J. M. (1978). *Leadership*. New York: Harper & Row.
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). Thousand Oaks, CA: Sage.
- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Palo Alto, CA: Learning Policy Institute. <https://learningpolicyinstitute.org/product/effective-teacher-professional-development-report>
- Hallinger, P. (2003). Leading educational change: Reflections on the practice of instructional and transformational leadership. *Cambridge Journal of Education*, 33(3), 329–351. <https://doi.org/10.1080/0305764032000122005>
- Hallinger, P., & Wang, W. C. (2015). *Assessing instructional leadership with the Principal Instructional Management Rating Scale*. Cham: Springer. <https://link.springer.com/book/10.1007/978-3-319-15533-3>
- Hallinger, P., S. Liu, and L. Chen. (2025). "Principal Instructional Leadership and Teacher Attitudes: A Meta-Analytic Review, 1989–2024." *European Journal of Education* 60, no. 4: e70199. <https://doi.org/10.1111/ejed.70199>.
- Hallinger, P., S. Liu., Nee Aung, P., and Yan, M. (2025). "A systematic review of instructional leadership research conducted with the Principal Instructional Management Rating Scale (PIMRS), 1983–2024." *Educational Management Administration & Leadership Journal*. <https://doi.org/10.1177/17411432251358575>
- Leithwood, K., Harris, A., & Hopkins, D. (2020). Seven strong claims about successful school leadership revisited. *School Leadership & Management*, 40(1), 5–22. <https://doi.org/10.1080/13632434.2019.1596077>
- Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation* (4th ed.). San Francisco:

Jossey-Bass.

- Miles, M. B., Huberman, A. M., & Saldaña, J. (2020). *Qualitative data analysis: A methods sourcebook* (4th ed.). Thousand Oaks, CA: Sage.
- Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company*. New York: Oxford University Press.
- Robinson, V. M. J. (2011). *Student-centered leadership*. San Francisco: Jossey-Bass.
- Senge, P. M. (2006). *The fifth discipline: The art and practice of the learning organization* (Rev. ed.). New York: Doubleday.
- Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15(2), 4-14. <https://doi.org/10.3102/0013189X015002004>
- Shulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, 57(1), 1-22. <https://doi.org/10.17763/haer.57.1.j463w79r56455411>
- Spillane, J. P. (2006). *Distributed leadership*. San Francisco: Jossey-Bass.
- Stein, M. K., & Nelson, B. S. (2003). Leadership content knowledge. *Educational Evaluation and Policy Analysis*, 25(4), 423-448. <https://doi.org/10.3102/01623737025004423>
- Stake, R. E. (1995). *The art of case study research*. Thousand Oaks, CA: Sage.
- Yel, T., & Kazak, E. (2025). Examining the Relationship Between School Administrators' Instructional Leadership and Organizational Learning According to Teachers' Perceptions. *International Journal of Turkish Education Sciences*, 13(2), 1178-1218. <https://doi.org/10.46778/goputeb.1625406>
- Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). Thousand Oaks, CA: Sage..