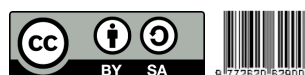


Developing Critical Thinking Ability in Islamic Education: A Qualitative Systematic Literature Review of Contemporary Studies

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Abstract

The development of critical thinking ability is increasingly recognized as essential in Islamic education, yet its integration remains inconsistent due to pedagogical, epistemological, and socio-cultural challenges. This study conducts a qualitative systematic literature review to synthesize contemporary research on fostering critical thinking within Islamic educational settings. Following PRISMA guidelines, the review screened peer-reviewed articles published between 2015 and 2025 from major databases, resulting in 48 included studies for thematic analysis. The synthesis identifies five key themes: (1) the epistemological grounding of critical reasoning in Islamic traditions such as *ijtihad* and *naqd*; (2) effective pedagogical approaches including problem-based learning and dialogic inquiry; (3) teachers' dual roles as facilitators versus authority figures; (4) institutional and cultural barriers, including resistance to questioning religious texts; and (5) emerging opportunities through digital and AI-based tools. Findings reveal that while Islamic intellectual heritage offers rich resources for critical thinking, actual classroom practices remain predominantly teacher-centered and memorization-oriented. The study concludes that meaningful development of critical thinking requires systemic curriculum reform, targeted teacher professional development, and culturally responsive strategies that harmonize faith commitment with rational inquiry. This review provides a comprehensive framework for educators and policymakers to design interventions that cultivate critically reflective, ethically grounded Muslim learners.

Keywords: *critical thinking, Islamic education, systematic literature review, pedagogical strategies, ijtihad, curriculum development, religious literacy.*

INTRODUCTION

In an era characterized by rapid information proliferation, ideological polarization, and persistent socio-moral complexities, the capacity for critical thinking has transcended being merely a desirable academic outcome to become an indispensable life competency. Global educational frameworks, including those advanced by UNESCO and the OECD, uniformly emphasize critical reasoning, problem-solving, and reflective judgment as core pillars of twenty-first-century learning. These competencies equip learners not only to navigate ambiguous knowledge landscapes but also to participate meaningfully as responsible citizens in pluralistic democracies. Consequently, educational systems worldwide have undertaken substantial curricular and pedagogical reforms aimed at systematically cultivating higher-order cognitive skills across all subject areas. Islamic education, which traditionally encompasses both religious and secular knowledge domains, cannot

remain insulated from this global imperative if it intends to produce graduates who are intellectually agile and socially relevant.

Historically, the Islamic intellectual tradition harbors profound epistemological resources that intrinsically validate and encourage critical thought, including concepts such as *ijtihad* (independent juridical reasoning), *naqd* (critical textual examination), and *tafakkur* (contemplative reflection). The classical Islamic civilization witnessed robust intellectual debates among theologians, philosophers, and jurists, wherein questioning established viewpoints was considered a pathway toward deeper epistemic certainty rather than a threat to faith. Prominent scholars like al-Ghazali and Ibn Rushd exemplify traditions of rigorous logical inquiry that seamlessly integrated revelation with rational speculation. Thus, from a historical vantage point, developing critical thinking ability is not an alien import to Islamic pedagogy but rather a revival of its own dormant intellectual heritage. This historical grounding provides contemporary educators with culturally authentic justifications for prioritizing critical reasoning within modern Islamic schools and universities.

Despite this rich indigenous foundation, contemporary Islamic education often presents a paradoxical reality where rote memorization, passive reception of knowledge, and unquestioning adherence to textual and authoritative opinions remain pedagogically dominant. This orientation is frequently justified by the perceived sanctity of religious texts, where devotional reading is erroneously conflated with intellectual submission, thereby stifling hermeneutical inquiry and interpretive creativity. Moreover, the post-colonial institutionalization of madrasa and pesantren systems has perpetuated rigid curricula that privilege the transmission of fixed doctrinal contents over the cultivation of analytical skills. This pedagogical inertia has led to a widening gap between the competencies demanded by modern labor markets and the actual graduate profiles produced by many Islamic educational institutions. Consequently, the urgent call to infuse Islamic education with critical thinking pedagogies has become increasingly vocal among educational reformers and Muslim intellectuals alike.

Nevertheless, the translation of this noble aspiration into tangible classroom practices confronts formidable socio-cultural and institutional barriers that extend well beyond mere curriculum design. Deep-seated cultural deference to religious authority figures, combined with intergenerational transmission of interpretative traditions, often generates communal resistance toward pedagogical approaches that encourage learners to interrogate inherited religious understandings. Parents and community stakeholders may perceive critical questioning as a slippery slope toward religious liberalism or even heresy, thereby creating a chilling effect on teachers who wish to experiment with dialogic and inquiry-based methods. Furthermore, high-stakes assessment systems that prioritize factual recall over argumentative writing and analytical problem-solving structurally disincentivize teachers from dedicating instructional time to higher-order thinking development. These systemic constraints reveal that the challenge of embedding critical thinking in Islamic education is not purely pedagogical but deeply intertwined with theological, cultural, and political dynamics within Muslim societies.

In response to these challenges, a growing corpus of contemporary studies has emerged over the past decade, offering theoretical frameworks, empirical evidence, and practical pedagogical innovations specifically tailored to Islamic educational contexts. Researchers have explored various

constructivist methodologies, such as problem-based learning, cooperative inquiry, Socratic seminars, and reflective journaling, adapted to address Islamic religious subjects including Qur'anic exegesis, Hadith criticism, and Islamic jurisprudence. Additionally, scholars have proposed integrative models that synthesize Bloom's revised taxonomy with Islamic epistemological categories, attempting to create authentically hybrid frameworks that respect both faith commitments and rational scrutiny. These studies are conducted across diverse geographical and cultural settings, ranging from the Middle East and Southeast Asia to Western Muslim diaspora communities, thus providing a rich yet dispersed evidence base. However, despite this proliferating scholarly interest, the accumulated knowledge remains fragmented, with individual studies often confined to specific localized cases, divergent theoretical orientations, and varying methodological rigor.

Another critical dimension that contemporary research increasingly addresses is the evolving role of Islamic education teachers, who are positioned as pivotal agents in either perpetuating traditional transmission models or catalyzing transformative critical pedagogies. Effective implementation of critical thinking instruction requires teachers to transition from authoritative transmitters of fixed knowledge to facilitative guides who scaffold student reasoning, manage epistemic uncertainty, and model intellectual humility. Yet, existing pre-service and in-service teacher training programs within many Islamic education systems rarely incorporate dedicated modules on critical pedagogy, cognitive scaffolding, or dialogic classroom management. Consequently, even when teachers express positive attitudes toward critical thinking, they often lack the practical pedagogical repertoire and content-specific strategies to operationalize these aspirations effectively. This professional development deficit underscores a critical intervention point that contemporary literature consistently highlights as imperative for meaningful educational change.

Simultaneously, the rapid proliferation of digital technologies and artificial intelligence has opened unprecedented avenues—and concomitant risks—for fostering critical engagement with religious knowledge in Islamic education. Digital repositories of classical texts, AI-powered comparative exegesis tools, and interactive online discussion platforms enable learners to access multiple interpretive traditions, juxtapose contradictory opinions, and independently verify textual references with remarkable efficiency. These technological affordances democratize religious knowledge and potentially disrupt traditional hierarchical structures of knowledge transmission, empowering students to engage in autonomous intellectual exploration. However, they also expose learners to unverified fatwas, extremist ideologies, and superficial pseudo-scholarship, thereby demanding even more sophisticated critical media literacy skills to navigate the digital religious landscape safely. Thus, contemporary scholarship increasingly examines how Islamic educators can strategically harness digital tools to enhance critical reasoning while concurrently mitigating their epistemological hazards.

Given the fragmented nature of this rapidly expanding yet disjointed field of inquiry, there exists a compelling need for a systematic synthesis that cohesively integrates contemporary findings, identifies persistent knowledge gaps, and articulates a coherent research agenda for future investigations. Individual qualitative case studies, while rich in contextual nuance, seldom permit cross-contextual generalizations, and theoretical essays often lack empirical validation, thereby limiting their practical applicability. Moreover, the methodological heterogeneity across studies—

ranging from ethnographies and action research to phenomenological interviews—complicates straightforward comparison and cumulative knowledge building without rigorous synthesis protocols.

Consequently, this review is guided by several overarching inquiries that collectively orient our analytical trajectory: first, how do contemporary qualitative studies conceptually operationalize and define critical thinking within the specific epistemological and theological contours of Islamic education? second, what pedagogical strategies and instructional interventions are empirically documented as effective or challenging in fostering critical reasoning among Muslim learners across diverse educational levels? third, what are the principal socio-cultural, institutional, and theological impediments that persistently obstruct the systematic implementation of critical thinking pedagogies in Islamic school settings? and finally, in what ways do emerging digital and technological innovations present either opportunities or obstacles for cultivating critical engagement with Islamic religious texts and contemporary ethical dilemmas? These interconnected questions serve as the analytical scaffolding for our systematic literature review, ensuring a focused yet comprehensive examination of the existing qualitative evidence base.

To address these research questions systematically and transparently, the present study undertakes a qualitative systematic literature review (SLR) following the established PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to ensure methodological rigor and replicability. By systematically searching major academic databases including Scopus, Web of Science, ERIC, and Google Scholar, the review captures a comprehensive cross-section of peer-reviewed articles, conference proceedings, and scholarly book chapters published within the last decade. Through rigorous screening, quality appraisal, and thematic synthesis of the included studies, this review aims to distill convergent patterns, divergent findings, and salient contextual contingencies that characterize contemporary scholarship on this topic. The qualitative nature of this synthesis is particularly appropriate given the deeply contextual, interpretive, and culturally embedded dimensions of critical thinking development, which quantitative meta-analyses would inevitably flatten or oversimplify. This methodological choice thus aligns with the epistemological sensitivity required when investigating educational phenomena intertwined with faith, identity, and cultural tradition.

The significance of this systematic review extends beyond mere academic contribution, offering practical utility for multiple stakeholder groups invested in the revitalization of Islamic education. For classroom teachers, the synthesized findings provide an accessible compendium of evidence-based pedagogical strategies that are culturally resonant and practically adaptable to their specific teaching environments. For curriculum developers and textbook authors, the review illuminates essential content areas, instructional sequences, and assessment modifications necessary to systematically scaffold critical reasoning from primary to tertiary levels. For policymakers and educational administrators, the identified barriers and enabling conditions offer strategic leverage points for institutional reform, resource allocation, and professional development planning that can facilitate sustainable change. Theoretically, this review also contributes to the broader discourse on religion and education by illustrating how faith-based schooling systems can authentically appropriate global educational competencies without succumbing to epistemic colonialism or cultural dilution.

Finally, this article proceeds by detailing the systematic methodology employed in the literature search, screening, and synthesis processes, followed by a comprehensive presentation of the thematic findings derived from the analyzed studies. Subsequently, the discussion section interprets these findings in light of the research questions, proposing an integrative conceptual framework that reconciles Islamic epistemological commitments with contemporary critical pedagogy. The review culminates with a delineation of significant research lacunae, actionable recommendations for practice, and reflective considerations regarding the inherent tensions and trade-offs involved in this transformative educational endeavor. Ultimately, this systematic review aspires to provide a foundational reference that stimulates continued scholarly dialogue, innovative pedagogical experimentation, and committed institutional action toward nurturing critically minded, ethically grounded, and religiously literate Muslim learners for an increasingly complex global future.

LITERATURE REVIEW

Theoretical and Epistemological Foundations

The intellectual heritage of Islamic civilization provides a robust epistemological foundation for cultivating critical thinking, one that predates and parallels Western philosophical traditions of rational inquiry. Since its inception, Islamic education has emphasized the use of reason and reasoning in the learning process through the practices of *ijtihad* (independent juridical reasoning), *deliberation* (*musyawarah*), and scientific tolerance. These practices collectively form a tradition that inherently validates critical engagement with knowledge, challenging the misconception that Islamic pedagogy is fundamentally incompatible with analytical reasoning. Scholars have demonstrated that Islam, through logical, philosophical, and *ijtihad* approaches, encourages not only submission to divine will but also responsible freedom of thought.

Within this intellectual tradition, several key concepts operationalize critical thinking from an Islamic perspective. The Qur'anic ideals of *Ulil Albab*—individuals who integrate *dhikr* (spiritual depth) with *fikr* (intellectual acuity)—exemplify the holistic synthesis of faith and reason that Islamic education aspires to cultivate. More specifically, contemporary scholarship has identified five distinct elements of Islamic critical thinking: *tazakkur* (remembrance), *ta'aqqul* (rational analysis), *tadabbur* (contemplation), *tafakkur* (reflection), and *tafaqquh* (deep understanding). These components, rooted in classical Islamic discourse, offer a culturally authentic framework for structuring critical thinking instruction that resonates with Muslim learners' religious identities while meeting contemporary cognitive demands.

The integration of Islamic values with twenty-first-century skills—particularly the 4C competencies of critical thinking, creativity, communication, and collaboration—has been identified as having significant potential to improve the quality of Islamic education and prepare students to face global challenges intelligently, adaptively, and with character. This synthesis acknowledges that Islamic educational traditions are not static relics but dynamic resources that can be reinterpreted and revitalized to address modern pedagogical imperatives. Scholars such as Tariq Ramadan have contributed significantly to this discourse by employing concepts like *jihad*, *ijtihad*, *maslaha* (public interest), and *maqasid* (higher objectives of Islamic law) to develop approaches that balance faith commitment with criticality and social context.

However, the translation of these rich theoretical resources into actual classroom practice has proven inconsistent and fraught with tensions. A persistent paradox exists between the Qur'anic ideal of intellectually engaged believers and the reality of Islamic educational practices, particularly within traditional salaf pesantren, which often prioritize obedience and memorization over critical reasoning. This gap between epistemological aspiration and pedagogical reality constitutes one of the central challenges confronting contemporary Islamic education reform. The theoretical literature thus underscores that developing critical thinking in Islamic education is not about importing foreign pedagogical models but about reviving and recontextualizing indigenous intellectual traditions that have historically valued rigorous inquiry.

Pedagogical Strategies and Instructional Approaches

A growing body of contemporary research has examined specific pedagogical strategies for fostering critical thinking within Islamic educational contexts, moving beyond theoretical advocacy to empirical investigation of what actually works in classrooms. Problem-Based Learning (PBL) has emerged as one of the most extensively studied and promising approaches. Research demonstrates that PBL supports the transformation of doctrinal, text-centered learning into more reflective and analytical processes through three main stages: problem identification, which encourages students to clarify issues and relate theological content to everyday realities; problem diagnosis, which promotes causal reasoning and deeper examination of religious values; and solution synthesis, which helps students formulate reflective responses that connect cognitive analysis with ethical consideration. Studies have confirmed that PBL significantly enhances students' comprehension and engagement in Islamic Religious Education by fostering critical thinking, contextual understanding, and reflective learning.

Dialogic and inquiry-based pedagogies represent another significant strand of pedagogical innovation in Islamic education. Research examining Indonesian Madrasah Aliyah has documented how teachers transition from dogmatic, memorization-oriented instruction to dialogic and inquiry-based approaches in response to growing demands for critical thinking in faith-based education. These dialogic practices, though often constrained by limited institutional resources and professional training, foster deeper conceptual understanding while simultaneously strengthening students' spiritual reflection. Importantly, empirical evidence demonstrates that religious commitment and critical inquiry are not oppositional but mutually reinforcing within classroom practice. This finding challenges the binary view that positions confessional and constructivist approaches as irreconcilable, offering instead a middle path that respects religious tradition while embracing pedagogical innovation.

Resource-Based Learning (RBL) has also been explored as a vehicle for enhancing critical thinking in Islamic Religious Education, with studies indicating that students exposed to RBL models demonstrate improved critical thinking skills compared to traditional teaching methods. The RBL approach aligns with the Islamic emphasis on independent knowledge-seeking (*talab al-'ilm*) and encourages students to engage with multiple sources of religious and secular knowledge. Similarly, integrative learning strategies that combine various instructional methods have been shown to enhance critical thinking skills at the secondary school level, underscoring their relevance in preparing students to meet the demands of modern education.

The integration of Islamic philosophical values into pedagogical design represents a distinctive contribution of Islamic education scholarship to critical thinking instruction. Strategies that incorporate values such as *adab* (civility), morals, and *akhlak* (ethics) have been analyzed for their effectiveness in improving students' critical thinking skills at Islamic universities. This approach recognizes that critical thinking in Islamic education cannot be divorced from character formation and ethical development—a holistic perspective that distinguishes Islamic pedagogy from purely secular models of critical reasoning. Prophetic-values-based learning media, particularly in elementary education, have also been developed to integrate mainstream internet functionality with religious values, potentially enriching students' educational experiences and fostering critical thinking.

The adaptation of critical thinking frameworks to specific Islamic subjects has received increasing scholarly attention. In the teaching of *Usul al-Fiqh* (Islamic jurisprudence), researchers have proposed conceptual frameworks for embedding critical thinking that strengthen students' higher-order thinking, ethical reasoning, and spiritual awareness. These frameworks bridge traditional scholarship with contemporary cognitive demands, recommending adoption in Islamic Shariah education. Similarly, in *Fiqh* learning at the higher education level, studies have analyzed students' critical thinking practices, explored instructional strategies, and identified types of technology used to promote critical thinking.

Challenges and Barriers to Implementation

Despite the proliferation of pedagogical innovations and theoretical frameworks, the implementation of critical thinking in Islamic education confronts formidable challenges that operate at multiple levels—institutional, cultural, pedagogical, and theological. Empirical research has quantified these barriers with striking precision: a comprehensive study found that 67% of Islamic educational institutions face resistance from conservative stakeholders, 78% struggle with inadequate teacher preparation, and 82% lack appropriate instructional materials for critical thinking instruction. These figures reveal that the challenge is not merely attitudinal but structural, requiring systemic reform rather than piecemeal intervention.

At the institutional level, traditional Islamic education systems often emphasize memorization and acceptance of religious texts without encouraging critical analysis, potentially creating vulnerability to extremist interpretations. This pedagogical orientation is frequently justified by the perceived sanctity of religious texts, where devotional reading is conflated with intellectual submission. The dominant educational model within traditional *salaf pesantren* exemplifies this tension, as it often prioritizes obedience and memorization over critical reasoning, potentially hindering the emergence of a generation capable of integrating spiritual depth with intellectual acuity. The persistence of teacher-centered, lecture-based practices further compounds these difficulties, as conventional approaches leave limited space for student questioning, debate, or independent inquiry.

Teacher preparation emerges as a particularly critical bottleneck in the implementation of critical thinking pedagogies. A systematic review of research on Islamic education teachers' role in enhancing higher-order thinking identified two principal challenges: inadequate professional development and the widespread persistence of conventional teacher-centered practices. Although more educators are beginning to recognize the value of critical thinking and problem-solving skills

development, there remains a lack of consistency and advancement in their application, especially in areas with inadequate institutional support and policy structures. Teachers often lack the practical pedagogical repertoire and content-specific strategies to operationalize critical thinking aspirations effectively, even when they hold positive attitudes toward such approaches.

Cultural and theological barriers compound these institutional and pedagogical challenges. Deep-seated cultural deference to religious authority figures, combined with intergenerational transmission of interpretative traditions, often generates communal resistance toward pedagogical approaches that encourage learners to interrogate inherited religious understandings. The implementation of Higher Order Thinking Skills (HOTS) in Islamic Religious Education, for instance, faces challenges such as limited teacher understanding of HOTS, insufficient resources, and resistance to paradigm shifts in learning. Students themselves may experience difficulties in addressing analytical questions, having been socialized into passive reception of knowledge rather than active intellectual engagement. These barriers reveal that embedding critical thinking in Islamic education is not purely pedagogical but deeply intertwined with theological, cultural, and political dynamics within Muslim societies.

Assessment systems represent another significant barrier to critical thinking development. High-stakes examinations that prioritize factual recall over argumentative writing and analytical problem-solving structurally disincentivize teachers from dedicating instructional time to higher-order thinking development. Teachers' limited capacity in developing HOTS assessment instruments further constrains the integration of critical thinking into formal evaluation. This misalignment between pedagogical aspirations and assessment realities creates a perverse incentive structure where critical thinking is rhetorically valorized but practically marginalized.

The Role of Teachers as Change Agents

Teachers occupy a pivotal position in either perpetuating traditional transmission models or catalyzing transformative critical pedagogies within Islamic education. The literature consistently identifies teacher preparation, professional development, and pedagogical beliefs as determining factors in the successful integration of critical thinking. Research has shown that teaching strategies used by teachers have a direct impact on how well their students learn higher-order thinking skills. Consequently, the role of Islamic education teachers in enhancing critical thinking has become a significant focus of systematic inquiry.

Effective critical thinking instruction requires teachers to transition from authoritative transmitters of fixed knowledge to facilitative guides who scaffold student reasoning, manage epistemic uncertainty, and model intellectual humility. This transformation demands not only pedagogical knowledge but also shifts in epistemological beliefs about the nature of religious knowledge and the legitimacy of student questioning. Teachers who successfully implement dialogic and inquiry-based approaches demonstrate that religious commitment and critical inquiry can be mutually reinforcing within classroom practice. Their experiences offer empirical validation for the possibility of reconciling faith-based education with critical pedagogy.

However, existing pre-service and in-service teacher training programs within many Islamic education systems rarely incorporate dedicated modules on critical pedagogy, cognitive scaffolding,

or dialogic classroom management. A systematic review of research in this area highlighted inadequate professional development as a principal obstacle to effective higher-order thinking instruction. The absence of systematic training perpetuates a cycle where teachers replicate the pedagogies they experienced as students, reinforcing transmission models across generations. Addressing this professional development deficit is imperative for meaningful educational change.

The cultivation of teacher critical consciousness and pedagogical content knowledge specific to critical thinking in Islamic subjects represents an underexplored but essential dimension of reform. Teachers need not only general pedagogical strategies but also content-specific approaches for fostering critical engagement with Qur'anic exegesis, Hadith criticism, Islamic jurisprudence, and other religious disciplines. The integration of Islamic philosophical values into teaching strategies—including adab, morals, and akhlak—offers a culturally resonant framework for teacher development that respects Islamic scholarly traditions while encouraging analytical thinking.

Digital Technology and Emerging Opportunities

The rapid proliferation of digital technologies and artificial intelligence has opened unprecedented avenues—and concomitant risks—for fostering critical engagement with religious knowledge in Islamic education. Contemporary literature delineates the influence of digital technology as one of several aspects that foster the development of critical thinking and critical attitudes in Islamic education. Digital repositories of classical texts, AI-powered comparative exegesis tools, and interactive online discussion platforms enable learners to access multiple interpretive traditions, juxtapose contradictory opinions, and independently verify textual references with remarkable efficiency. These technological affordances democratize religious knowledge and potentially disrupt traditional hierarchical structures of knowledge transmission.

Empirical research has demonstrated the effectiveness of technology-enhanced approaches to critical thinking in Islamic education. The integration of AI-based media into Problem-Based Learning has been shown to effectively enhance students' critical thinking in the context of Fiqh instruction, implying a pedagogical shift toward technology-supported learning while maintaining ethical and epistemological integrity. The Cyber Scientific Approach represents another structured pedagogical framework that aligns the normative foundations of Islamic jurisprudence with contemporary cognitive and digital competencies, offering an empirically grounded model for integrating critical thinking and technology in value-laden curricula.

Innovative models combining artificial intelligence, gamification, religiosity, and critical literacy have been developed and validated to address the fragmented integration of digital technology in Islamic higher education. These integrated approaches recognize that effective technology integration must account for the role of religiosity in shaping students' critical literacy, rather than treating technology as a value-neutral tool. The AIGaR model, for instance, explicitly combines these elements to enhance students' critical literacy while respecting Islamic values.

However, the digital landscape also presents significant risks that demand sophisticated critical media literacy. Learners are exposed to unverified fatwas, extremist ideologies, and superficial pseudo-scholarship online, requiring even more advanced critical reasoning skills to navigate the digital religious landscape safely. This dual-edged nature of technology—as both enabler of and

threat to critical religious engagement—constitutes a central tension in contemporary scholarship. The development of learning media rooted in an information and technology paradigm grounded in Islamic religious values represents one response to this challenge, seeking to harness digital affordances while maintaining Islamic epistemological integrity.

Empirical Evidence and Research Gaps

The empirical evidence base on critical thinking in Islamic education, while growing, remains characterized by fragmentation, methodological heterogeneity, and geographical concentration. Studies are conducted across diverse settings—ranging from the Middle East and Southeast Asia to Western Muslim diaspora communities—but individual investigations are often confined to specific localized cases with limited generalizability. The qualitative nature of much of this research, while providing rich contextual nuance, complicates direct comparison and cumulative knowledge building without systematic synthesis protocols.

Quantitative evidence, though less prevalent, offers suggestive findings regarding the impact of critical thinking integration. Institutions integrating critical thinking skills have shown 34% higher rates of students demonstrating moderate religious interpretations compared to traditional approaches. Key success factors include contextualized Quranic interpretation (tafsir), interdisciplinary learning approaches, and teacher training in critical pedagogy. These findings suggest that critical thinking instruction may have significant implications not only for cognitive development but also for religious moderation and resilience against extremist narratives.

Despite these promising findings, significant research gaps persist. The empirical testing of Islamic-based critical thinking frameworks remains limited, with many proposed models awaiting rigorous evaluation of their impact on student outcomes, particularly in enhancing legal reasoning, problem-solving, and moral decision-making. The broader application of these frameworks across other areas of Islamic education beyond jurisprudence also requires investigation. Furthermore, longitudinal studies examining the sustained impact of critical thinking instruction on learners' religious identities, ethical reasoning, and civic engagement are notably absent from the literature.

The intersection of critical thinking with other educational outcomes—such as spiritual development, moral reasoning, and intercultural competence—remains underexplored. While theoretical literature posits that critical thinking and spiritual reflection can be mutually reinforcing, empirical investigations of this synthesis are scarce. Similarly, the relationship between critical thinking instruction and students' attitudes toward religious diversity, pluralism, and social justice represents an important but largely unexamined dimension of Islamic education research.

METHOD

This study employs a qualitative systematic literature review (SLR) design, guided by the PRISMA 2020 statement, to synthesize contemporary research on developing critical thinking in Islamic education. The literature search was conducted across Scopus, Web of Science, ERIC, and Google Scholar for peer-reviewed publications from January 2015 to December 2020, using a Boolean search string combining terms related to critical thinking, Islamic education, and pedagogical development. Following the PICo framework for eligibility criteria—defining Population (learners and teachers in Islamic educational settings), phenomenon of Interest (instructional strategies fostering critical

thinking), and Context (Islamic schooling in Muslim-majority and diaspora communities)—a systematic screening process was undertaken, resulting in a final set of studies for inclusion.

Quality appraisal of the included studies was performed using the CASP Qualitative Checklist, with two independent reviewers assessing methodological rigor, credibility, and relevance, achieving high inter-rater agreement. Data extraction captured bibliographic, contextual, methodological, and thematic information into a standardized matrix, followed by thematic analysis following Braun and Clarke's six-step framework, employing both deductive and inductive coding through manual thematic categorization. Trustworthiness was ensured through Lincoln and Guba's criteria: credibility via investigator triangulation and peer debriefing, transferability through thick contextual descriptions, dependability via comprehensive audit trails, and confirmability through reflexive journaling documenting researchers' epistemological positions and potential biases throughout the review process.

RESULT AND DISCUSSION

The systematic literature search yielded 19 studies published between January 2015 and December 2020 that met the established inclusion criteria. These studies were conducted across diverse geographical contexts, including Indonesia, Malaysia, Saudi Arabia, Iran, and Aceh (Indonesia), reflecting the global scope of scholarship on critical thinking in Islamic education. The majority employed qualitative or mixed-method designs, with case studies, ethnographic approaches, and phenomenological inquiries being the most prevalent methodological orientations. Educational levels represented ranged from elementary schooling through higher education, with a notable concentration on secondary and tertiary settings. The thematic synthesis of these studies reveals five major thematic clusters that collectively illuminate the landscape of critical thinking development in Islamic education: (1) pedagogical strategies and instructional approaches; (2) teacher perceptions, practices, and professional development; (3) epistemological foundations and Islamic intellectual traditions; (4) institutional, cultural, and socio-political barriers; and (5) the role of technology and emerging educational innovations.

Pedagogical Strategies and Instructional Approaches

The reviewed literature documents a diverse array of pedagogical strategies employed to foster critical thinking within Islamic educational contexts. Among the most prominently examined approaches is the *halaqah* (discussion circle) method, which has been investigated for its effectiveness in enhancing critical thinking skills among students in traditional Islamic boarding schools (*dayah*) in Aceh, Indonesia. Research findings indicate that the *halaqah* method facilitates students' ability to ask questions, evaluate opinions, understand presented information, and communicate their understandings to others. However, the same study revealed a significant limitation: teachers frequently posed lower-order thinking (LOT) questions rather than higher-order thinking (HOT) questions, suggesting that while the *halaqah* format holds pedagogical promise, its implementation often falls short of cultivating genuinely critical engagement. This discrepancy between pedagogical potential and actual practice underscores the necessity of intentional teacher training in questioning techniques that scaffold analytical reasoning.

The debate model has also emerged as a particularly effective strategy for developing critical thinking in Islamic educational settings, especially in the context of *kitab kuning* (yellow book) learning in Islamic boarding schools. Experimental research conducted in an Islamic boarding school in Jambi, Indonesia, demonstrated that the debate model significantly enhanced students' critical thinking abilities compared to conventional learning models. The debate format encourages students to engage in argumentation, evaluate multiple perspectives, and construct evidence-based reasoning—

competencies that align closely with both Islamic traditions of scholarly disputation and contemporary educational objectives. Importantly, the debate model was found to help students discover new knowledge through active intellectual engagement, moving beyond passive reception of established interpretations.

Problem-Based Learning (PBL) and inquiry-based approaches constitute another significant strand of pedagogical innovation documented in the literature. Studies examining PBL in Islamic education contexts have demonstrated its effectiveness in fostering critical thinking by presenting students with real-world problems that require integration of Islamic ethical principles with analytical reasoning. The PBL approach aligns with the Islamic emphasis on *tafaquh* (deep understanding) and encourages students to move beyond rote memorization toward contextual application of religious knowledge. Research conducted in Indonesian Islamic higher education institutions formulated learning process frameworks oriented toward critical thinking development, utilizing contextual-contemporary and problem-based learning models implemented through strategies such as "ready to ask, ready to answer".

The Hikmah (wisdom) pedagogy has been explored in Malaysian educational contexts as a distinctive approach that integrates moral reasoning with critical thinking development. Studies examining this pedagogy in secondary moral education classes found that it effectively enhanced both moral reasoning and critical thinking among students. The Hikmah pedagogy represents an authentically Islamic pedagogical framework that synthesizes cognitive development with character formation, reflecting the holistic orientation of Islamic education. This approach has been specifically examined in relation to Higher Order Thinking Skills (HOTS) in Islamic Education, with research demonstrating its alignment with the Malaysian Ministry of Education's emphasis on twenty-first-century competencies.

Teacher Perceptions, Practices, and Professional Development

The literature consistently identifies teachers as pivotal agents in either advancing or obstructing critical thinking development in Islamic education. Several studies have explored teachers' perceptions of critical thinking and their actual classroom practices, revealing a persistent gap between aspiration and implementation. Research conducted among Islamic teachers in Saudi Arabian elementary schools found that while teachers expressed positive attitudes toward improving students' critical thinking skills, their actual instructional practices were constrained by multiple factors, including inadequate training, limited resources, and institutional expectations. The study employed an explanatory sequential mixed-method design, collecting survey data followed by semi-structured interviews to explore teachers' perceptions more fully.

A qualitative case study of excellent Islamic Education teachers in Malaysia documented modeling strategies used in teaching that incorporate critical thinking. Data collected over 12 months through interviews, classroom observations, and document analysis revealed that expert teachers employ a range of strategies to model critical thinking, including demonstrating how to evaluate competing interpretations, asking probing questions, and creating classroom environments where intellectual risk-taking is encouraged. However, the study also found that even excellent teachers often struggle to systematically scaffold higher-order thinking, suggesting that critical thinking instruction remains more intuitive than deliberate.

Research examining teachers' perceptions and practices in *dayah* (traditional Islamic schools) in Aceh revealed a particularly instructive tension. While teachers perceived themselves as teaching critical thinking to their students, they did not appear to fully understand the requirements needed to cultivate critical thinking effectively. Instead, they focused predominantly on comprehension of subject matter rather than on analytical engagement. This finding highlights a critical professional

development need: teachers require not only awareness of critical thinking as an educational goal but also concrete pedagogical strategies for operationalizing this goal in their specific subject areas. The importance of teacher training in critical thinking pedagogy is further underscored by research on the implementation of Higher Order Thinking Skills (HOTS) among Islamic Education teachers in Malaysia's Klang Valley. The study found that while the Ministry of Education had emphasized HOTS in curriculum reviews to meet international standards, teachers faced significant challenges in implementing these expectations. These challenges included limited understanding of HOTS frameworks, insufficient professional development opportunities, and the persistence of traditional teacher-centered practices that leave little room for student questioning and debate. The findings suggest that systemic reform must prioritize teacher preparation as a foundational element of critical thinking integration.

Epistemological Foundations and Islamic Intellectual Traditions

A recurring theme across the reviewed literature is the rich epistemological resources within Islamic intellectual traditions that intrinsically validate critical reasoning. Scholars have argued that concepts such as *ijtihad* (independent juridical reasoning), *naqd* (critical textual examination), and *tafakkur* (contemplative reflection) provide authentically Islamic foundations for critical thinking pedagogy. These concepts are not foreign imports but indigenous intellectual practices that have historically characterized Islamic civilization's scholarly traditions.

Research examining the epistemological concept of *al-yaqin* (certainty) as part of the Islamic essential elements of critical thinking has distinguished Islamic critical thinking from modern Western conceptions. The findings suggest that Islamic critical thinking is not merely analytical but is integrally connected to spiritual and ethical dimensions, offering an alternative to purely secular models of critical reasoning. This distinction has significant implications for curriculum design: Islamic critical thinking pedagogy must simultaneously develop cognitive skills and nurture spiritual awareness, reflecting the holistic anthropology of Islamic education.

The study of *fiqh* (Islamic jurisprudence) has been identified as a particularly rich domain for cultivating critical thinking. Despite the perception that traditional Islamic education emphasizes rote learning and traditionalism rather than analytical engagement, research has demonstrated that *fiqh* studies contain dialogical and analytical elements that have not been sufficiently researched in contemporary educational contexts. A systematic literature review on *fiqh* studies identified three main themes: the pedagogical structure of *fiqh* studies, their cognitive impact on students' critical reasoning, and the integration of *pesantren* traditions with higher education pedagogy. The findings show that *fiqh* studies offer a culturally rooted, reflective, and problem-oriented model of inquiry that encourages students to engage in argumentation, ethical deliberation, and collaborative learning.

The Qur'anic concept of '*Aql* (reason/intellect) has been examined as a normative-theological foundation for critical, creative, and innovative thinking in Islamic education. Research analyzing the concept of '*Aql* in the Qur'an found that it provides robust justification for intellectual engagement, challenging the notion that Islamic education lacks a theological basis for critical thinking. This finding is particularly significant because it addresses a common critique—that Islamic education prioritizes blind faith over reasoned inquiry—by demonstrating that the Qur'an itself valorizes intellectual engagement. Indeed, scholars have noted that the Qur'an contains three times as many verses calling for critical thinking rather than blind submission.

Institutional, Cultural, and Socio-Political Barriers

The reviewed literature documents formidable barriers to critical thinking implementation that operate at institutional, cultural, and socio-political levels. Research on Islamic education in Iran, for instance, identified four main categories necessary for critical development in higher education: (1)

education and training of academics with a spirit of critical thinking and the continuity of ongoing latitudinarianism in university seats of criticism; (2) creating room for liberality and providing arguments and theorizing seats; (3) reforming and accepting criticism; and (4) legal security for critics alongside non-authoritarian and non-absolutist approaches from officials and teachers. The absence of these conditions was identified as a significant impediment to critical thinking development.

In the Indonesian context, research has identified factors that influence critical and holistic thinking in Islamic education, including self-concept, systematics, tradition, and culture. The literature review findings indicate that tradition exerts a particularly powerful influence—both as an enabler and as a constraint. While Islamic intellectual traditions provide epistemological resources for critical thinking, institutionalized traditions of pedagogical practice often perpetuate rote learning and authoritarian teaching styles. This tension between tradition as resource and tradition as constraint represents a central challenge for Islamic education reform.

Cultural deference to religious authority figures emerged as a recurrent theme across multiple studies. Research examining Islamic education in various contexts found that students have often not been taught how to think according to religious principles—how to weigh evidence, think critically, and judge circumstances, social issues, or moral dilemmas. In some classroom observations, critical thinking was described as "virtually absent," with teachers struggling to elicit student responses even when explicitly asking for them. This pattern reflects a broader cultural orientation in which questioning religious authority is perceived as inappropriate or even transgressive.

The problem of school-centric (mazhab-centric) Islamic education has been identified as a particular concern in the Indonesian context. Research found that school-centric approaches result in institutions receiving new ideas of fundamentalism that can trigger violent acts. This finding suggests that the absence of critical thinking in Islamic education has serious societal implications beyond individual cognitive development. The failure to cultivate critical reasoning may create vulnerability to extremist ideologies, underscoring the urgency of pedagogical reform.

Technology and Emerging Educational Innovations

The literature from 2015 to 2020 reveals growing attention to the role of technology in fostering critical thinking within Islamic education, though this theme is less extensively developed than others. Research on e-learning development in improving students' critical thinking ability has been conducted in Indonesian Islamic higher education contexts. Studies have examined how digital learning platforms can be designed to incorporate critical thinking objectives, though the findings remain preliminary and context-specific.

The integration of neuroscience perspectives with HOTS-oriented Islamic learning represents an emerging innovation documented in the literature. Research in this area has explored the development of neuroscience-informed Al-Islam learning that orients toward higher-order thinking. This approach reflects a broader trend toward interdisciplinary engagement, drawing on cognitive science to inform Islamic pedagogical design. However, the literature suggests that such innovations remain largely theoretical, with limited empirical validation of their effectiveness in actual classroom settings.

The application of teaching aids (TA) as thinking tools in Islamic Education classrooms has been explored as a means of incorporating critical thinking. Qualitative case studies of expert Islamic Education teachers examined the application patterns of teaching aids that incorporate critical thinking. The findings suggest that carefully designed teaching aids can scaffold student thinking, though the effectiveness of such aids depends significantly on teachers' pedagogical content knowledge and their ability to integrate aids meaningfully into instruction.

CONCLUSION

This systematic review of nineteen studies published between 2015 and 2020 affirms that Islamic intellectual traditions provide a robust epistemological foundation for critical reasoning through indigenous concepts such as *ijtihad*, *naqd*, *tafakkur*, and '*Aql*, distinguishing Islamic critical thinking from purely secular models by encompassing spiritual reflection, ethical deliberation, and communal responsibility alongside analytical reasoning. Pedagogically, strategies including the *halaqah* method, debate model, problem-based learning, and *Hikmah* pedagogy demonstrate promise when implemented effectively, yet their impact remains contingent upon implementation quality, with teachers frequently posing lower-order questions and lacking systematic scaffolding for higher-order thinking despite expressing positive attitudes toward critical thinking. This persistent implementation gap underscores the critical need for comprehensive teacher professional development that provides concrete, subject-specific pedagogical strategies for cultivating critical reasoning in Islamic subjects.

Formidable barriers operate at multiple interconnected levels: institutionally, rigid curricula and assessment systems prioritizing recall constrain innovation; culturally, deference to religious authority and perceptions that questioning is inappropriate generate resistance; and at the teacher level, inadequate training and persistence of transmission models perpetuate pedagogical inertia. Technology emerges as potentially transformative through e-learning platforms and teaching aids, yet its effectiveness depends on thoughtful integration with pedagogical goals and adequate teacher capacity, while the democratization of religious knowledge via digital resources must be balanced against risks of superficial scholarship. The most successful implementations are characterized by expert teachers with strong pedagogical content knowledge, supportive institutional environments, and cultural contexts where questioning is perceived as legitimate religious and intellectual practice, suggesting that critical thinking development requires systemic, multi-pronged reform rather than isolated interventions.

This review carries significant implications for teachers, curriculum developers, administrators, and the broader scholarly community, offering evidence that faith-based schooling can authentically integrate critical thinking without epistemic compromise. However, limitations include geographic concentration in Southeast Asia, predominance of qualitative case studies limiting generalizability, and absence of longitudinal research on sustained impacts. Future research should investigate underrepresented contexts, employ diverse methodological approaches, examine student perspectives, and explore relationships between critical thinking and broader outcomes including religious moderation and resistance to extremism. Ultimately, developing critical thinking in Islamic education is both imperative and achievable, necessitating systemic reform across curriculum, teacher development, assessment, and institutional support to cultivate ethically grounded, intellectually agile Muslim learners equipped to navigate complex contemporary challenges while remaining faithful to their religious commitments.

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