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# Integration And Interconnection Of Islamic Knowledge

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**Abstract**

*This study aims to analyze the problem of scientific dichotomy in Islamic education at the high school (SMA), vocational high school (SMK), and Madrasah Aliyah (Islamic senior high school) levels, while also formulating a model of Integration-Interconnection of Islamic Knowledge Based on Tauhid (IIKIBT) as a holistic educational paradigm in facing the challenges of the Industrial Revolution 4.0 and Society 5.0. The study uses a qualitative approach with library research enriched with philosophical, conceptual, critical, and interdisciplinary analysis. Data were collected through documentation, a systematic literature review (SLR) based on PRISMA 2020, and literature analysis from reputable national and international primary and secondary sources for the period 2015–2026. This research produces a novelty in the form of the Integration-Interconnection Model of Islamic Knowledge Based on Tauhid (IIKIBT) which is built through five main components: the ontological foundation of tauhid, the epistemological integration of revelation-reason-empirical, the interdisciplinary-transdisciplinary approach, the integrative-contextual pedagogy, and the orientation of the formation of ulul albab human beings. This model is not only conceptual, but also operational and implementative in the development of curriculum, learning strategies, and evaluation systems of Islamic secondary education. Theoretically, this research strengthens the epistemology of integrative Islamic education while building a dialogical synthesis between the Islamic scientific tradition and contemporary complexity theory. Practically, this research offers a blueprint for the transformation of Islamic education that is holistic, adaptive, and globally competitive.*



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**Keywords: Integration of science, interconnection, Islamic epistemology, Islamic education, monotheism, transdisciplinarity, IIKIBT.**

## INTRODUCTION

The development of science in the era of globalization, marked by the acceleration of the Industrial Revolution 4.0 and the transition to Society 5.0, has fundamentally transformed the epistemological landscape of global education (Abdullah, 2014). This transformation not only touches on technological aspects, but also shifts the learning paradigm from monodisciplinary to integrative, collaborative, and transdisciplinary approaches. UNESCO's Futures of Education report emphasizes that 21st-century education must be oriented towards strengthening higher-order thinking skills, digital literacy, and adaptive capabilities in facing global complexity (UNESCO, 2021). In line with this, the World Bank shows that countries with education systems that simultaneously integrate cognitive, affective, and value dimensions have higher learning quality and superior graduate competitiveness (World Bank, 2022). However, from an Islamic epistemological perspective, this integrative paradigm is not a new construct but is normatively rooted in revelation (Abidin, 2025). The Qur'an, as the primary source of knowledge, emphasizes the principle of epistemological unity between revelation, reason, and empirical reality. The command to iqra' in QS. Al-'Alaq: 1–5 not only means reading the text of revelation, but also exploring empirical reality as an integral part of the process of seeking knowledge: remove "imply" and replace it with "meaningful" for clarity]. QS. Az-Zumar: 9 and QS. Al-Mujadalah: 11 emphasize the primacy of ulil albab, showing that Islam does not recognize the spiritual-intellectual dichotomy, but rather integrates it within the framework of monotheism. The strengthening of the integrative paradigm is also emphasized by the hadith of the Prophet Muhammad ﷺ. Ibn Majah's narration: "Thalabul 'ilmi faridhatun 'ala kulli muslim" shows the universality of the object of knowledge without dichotomous limitations. The hadith narrated by Muslim: "Antum a'lamu bi umuri dunyakum" provides epistemological legitimacy to the development of knowledge based on rationality and empirical experience (Afandi dkk., 2026).

Thus, normatively, Islam has laid the foundation of an integrative epistemology that unites revelation, reason, and experience in an ontological and axiological unity (Al-Attas, 1995; Al-Faruqi, 1982). Ironically, the reality of contemporary Islamic education in Indonesia actually shows a deeply rooted dichotomy of knowledge, especially at the "secondary education level (SMA, SMK, and Madrasah Aliyah). Data from the Ministry of Education, Culture, Research, and Technology and the Ministry of Religious Affairs of the Republic of Indonesia show that the national curriculum



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structure still strictly separates religious and general subjects, both in substance, pedagogical approach, and evaluation system (Kemendikbudristek, 2023; Kemenag RI, 2023) (Amin dkk., 2026). In Madrasah Aliyah, the subjects of Fiqh, Aqidah Akhlak, and Tafsir tend to be taught normatively-doctrinal, while Physics and Biology are delivered empirically without the integration of Islamic values. This condition forms a cognitive construction that separates religion and science as two unconnected entities. In high school, the allocation of PAI The relatively limited curriculum of approximately 2–3 JP/week and minimal integration with other subjects have resulted in low internalization of spiritual values (Angelina, 2022). In vocational schools, vocational orientation and industry needs often neglect the integration of ethical-religious values, resulting in work ethic problems such as low integrity and professional responsibility. This phenomenon is reinforced by the results of the 2022 Programme for International Student Assessment (PISA), which showed that Indonesian students' reading, mathematics, and science literacy scores are still below the OECD average (Asyikin, 2023).

One contributing factor is the partial learning approach and the failure to integrate the dimensions of knowledge holistically (OECD, 2023). Furthermore, empirical studies by Husna et al. (2024) and Mairista and Yusuf (2024) show that >60% of learning practices in Islamic educational institutions are still dualistic, hindering the formation of a holistic worldview in students. Philosophically, the problem of scientific dichotomy cannot be separated from the influence of the secular Western paradigm that separates knowledge from transcendent values (Bongmba, 2014). Thomas Kuhn (1970) through paradigm shift explained that the dominance of certain paradigms can shape the structure of knowledge hegemonic. Habermas (1984) criticized modern rationality that is trapped in instrumental rationality and ignores the normative dimension. Similar criticisms were expressed by Foucault (1980) and Feyerabend (1993) that science is never neutral, but is instead full of power relations and ideological interests. As a response to this epistemological crisis, contemporary Muslim thinkers such as Al-Faruqi (1982) and Al-Attas (1995) proposed the Islamization of science as an effort to reintegrate science within the framework of monotheism (Busti & Saputra, 2024).

This idea was developed by Amin Abdullah (2006) through the paradigm of scientific integration-interconnection, which emphasizes the dialogical relationship between disciplines in an interconnected epistemological network between disciplines. Empirically, the paradigm of integration-interconnection has been implemented in several PTKI: the Spider Web model of UIN Sunan Kalijaga, Twin Towers of UIN Sunan Ampel, and Tree of Knowledge of UIN Maulana Malik Ibrahim Malang. However, implementation at the secondary education level is still limited and


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tends to be symbolic, not yet touching the curriculum, learning strategies, or evaluation systems comprehensively (Busti & Saputra, 2024)).

From an interdisciplinary theoretical perspective, this situation demonstrates the gap between global demands and local educational practices. Nicolescu (2002) and Morin (2008) emphasize that modern reality is complex and cannot be understood through a monodisciplinary approach. Therefore, the integration and interconnection of knowledge is not merely a methodological choice, but an epistemological necessity in building an educational system that is relevant to the dynamics of the times(Choudhury, t.t.-a).

Thus, the integration and interconnection of Islamic knowledge is an urgent necessity to overcome the problem of the dichotomy of knowledge and to build an education system that produces human beings who are ulul albab, namely people who simultaneously integrate dhikr, fikr, and amal. Based on this framework, this research is crucial for examining the concept, mod el, and implementation of the integration and interconnection of Islamic knowledge, especially at the secondary education level in Indonesia, as an effort to realize an education system that is holistic, integrative, and globally competitive (Choudhury, t.t.-b).

Based on the complexity of these problems, this study assumes that the dichotomy of knowledge in Islamic education at the secondary level is not merely a technical curriculum problem, but a fundamental epistemological problem. The main questions are: 1) How is the epistemological construction of the dichotomy of knowledge formed and practiced? 2) Why is there a gap between the integrative paradigm of Islamic epistemology and the dualistic practical reality? 3) How are the concepts of integration and interconnection of Islamic knowledge understood ontologically, epistemologically, and axiologically, and their relevance in responding to the Industrial Revolution 4.0 and Society 5.0? 4) How is the formulation of a conceptual model of Integration-Interconnection of Islamic Knowledge Based on Tauhid (IIKIBT) that is both theoretical and applicable?

In line with the problem formulation, this study aims to: 1) Critically analyze the epistemological construction of the scientific dichotomy and its causal factors. 2) Examine the concept of integration-interconnection of Islamic sciences from ontological, epistemological, and axiological perspectives. 3) Analyze the relevance of the integration-interconnection paradigm to address the global challenges of the 21st century. 4) Formulate a comprehensive, systematic, and implementable IIKIBT conceptual model for strengthening the curriculum, teacher competency, and secondary education policies.


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**State Of The Art Dan Research**

The Gap: Studies on the integration and interconnection of knowledge in Islamic education have become a national and international academic discourse. The idea of the Islamization of knowledge by Al-Faruqi (1982) and Al-Attas (1995) became the initial milestone in the reconstruction of Islamic epistemology, emphasizing revelation as the primary source of knowledge. Amin Abdullah (2006) then proposed the integration-interconnection paradigm as a critique of the Islamization of knowledge, which remains normative and not yet operational. This paradigm emphasizes interdisciplinary, multidisciplinary, and transdisciplinary dialogue, visualized in the "scientific spider web" model. Recent studies have shown that an integrative approach has the potential to build a holistic worldview in students (Akh.Bayu Rifki dkk., 2024). Empirically, the implementation of scientific integration at PTKI (Islamic Higher Education Institutions), such as Spider Web at UIN Sunan Kalijaga, Twin Towers at UIN Sunan Ampel, and Tree of Knowledge at UIN Maulana Malik Ibrahim, demonstrates a systematic effort to integrate religious and general knowledge (Mulyadi, 2018; Huda, 2020). However, implementation still faces challenges in operationalizing the curriculum and pedagogical integration (Choudhury, 2019a).

At the secondary level, empirical studies are still limited and predominantly dualistic. Husna et al. (2024) and Mairista & Yusuf (2024) revealed that learning practices in senior high schools (SMA), vocational high schools (SMK), and Islamic high schools (MA) still separate religious and general knowledge, resulting in low integrative thinking skills and low internalization of values. From a global perspective, interdisciplinary and transdisciplinary approaches have become the primary paradigms of 21st-century education. Nicolescu (2002) and Morin (2008) emphasize that the complexity of modern reality demands an approach that transcends traditional disciplinary boundaries. The OECD (2023) and UNESCO (2021) demonstrate that the integration of knowledge, values, and skills is key to quality learning (Choudhury, 2019b).

There are three significant research gaps: 1) Research on scientific integration is predominantly at the conceptual or higher education level, and has not yet addressed secondary education. 2) There are not many systematic studies on integration and interconnection within a comprehensive Islamic epistemological framework: ontological, epistemological, and axiological simultaneously. 3) A comprehensive, operational, and monotheism-based conceptual model for secondary education is not yet available. Departing from these gaps, this study offers a novelty in the form of the Monotheism-Based Islamic Scientific Integration-Interconnection Model (IIKIBT) that integrates revelation, reason, and empirical experience, and is systematically designed for


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implementation in secondary education. Thus, this study not only fills the gap in the literature but also provides a strategic contribution to the development of a holistic, integrative, and relevant Islamic education model to meet the global demands of the 21st century (Choudhury, 2024b; Desfita dkk., 2024).

## LIBRARY REVIEW

### Integration of Science in the Perspective of Islamic Epistemology

The concept of scientific integration in Islam is rooted in the principle of monotheism as an ontological foundation that affirms the unity of reality (wahdat al-wujud) and the unity of the source of knowledge [EDIT: added "source of knowledge" to parallel ontological]. In this perspective, knowledge is not understood dichotomously between religious and secular, but rather as an integral unity between revelation (revealed knowledge) and reason (acquired knowledge). This principle aligns with QS. Al-Baqarah: 31 concerning the teaching of al-asmā' to Adam, which commentators understand as a symbol of human epistemic capacity to integrate divine and empirical knowledge (Fernadi, 2024).

Similarly, QS. Ali 'Imran: 190–191 emphasizes the importance of contemplation integrated with dhikr, demonstrating that Islamic epistemology is holistic and non-dichotomous. In the treasury of hadith, the Prophet Muhammad ﷺ emphasized the obligation to seek knowledge for every Muslim: "Thalabul 'ilmi faridhatun 'ala kulli muslim" (Narrated by Ibn Majah no. 224) which shows the universality of the object of knowledge without categorical limitations. Another hadith, "Man salaka thariqan yaltamisu fihi 'ilman sahhalallahu lahu bihi thariqan ila al-jannah" (Narrated by Muslim no. 2699), strengthens the axiological dimension of knowledge as a means of spiritual and social transformation (Hadi dkk., 2025).

Thus, the integration of science in Islam has a normative basis that unites ontological, epistemological, and axiological dimensions systematically. Theoretically, the idea of integrating modern science in the Islamic world was pioneered by Ismail Raji al-Faruqi through the Islamization of Knowledge, which emphasizes the reconstruction of modern scientific disciplines to align with Islamic values (Al-Faruqi, 2016). Al-Faruqi criticized the dominance of secular Western epistemology that separates science from revelation, resulting in a moral crisis and dehumanization. In line with that, Syed Muhammad Naquib al-Attas argued that the main crisis of the Islamic world is not a lack of knowledge, but the loss of adab in science (loss of adab), which causes epistemological disorientation (Al-Attas, 2015). Within this framework, scientific integration must begin with the formation of an Islamic worldview that harmoniously integrates


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metaphysics, ethics, and rationality. Furthermore, Seyyed Hossein Nasr, through sacred science, criticized secular and reductionistic modern science for ignoring the spiritual and metaphysical dimensions (Nasr, 2016). Nasr emphasized that science in the Islamic tradition must be rooted in an awareness of al-Haqq, so that it not only produces empirical truth, but also existential meaning (Himat, t.t.).

This approach is strengthened by Fazlur Rahman through double movement, which emphasizes the dialectic between the text of revelation and the historical context to produce a contextual and relevant understanding (Rahman, 2017). From the perspective of Western philosophy, criticism of the dichotomy and fragmentation of science is also put forward by contemporary thinkers. Jürgen Habermas (1984) through knowledge-constitutive interests shows that science is not neutral, but is influenced by technical, practical, and emancipatory interests. Edgar Morin (2008) developed a complexity theory that emphasizes that reality cannot be understood through a reductionistic approach, but requires cross-disciplinary integration. Basarab Nicolescu (2002) introduced transdisciplinarity as an effort to go beyond the boundaries of scientific disciplines in understanding complex reality (Ilaina dkk., 2022).

Thus, globally there is an epistemological convergence between contemporary Islamic and Western thought in rejecting the fragmentation of knowledge. In the context of the Indonesian archipelago, Amin Abdullah developed the integration-interconnection paradigm as a response to the scientific dichotomy in Islamic education. This paradigm emphasizes the dialogical relationship between religious sciences, social sciences, and natural sciences through interdisciplinary, multidisciplinary, and transdisciplinary approaches (Abdullah, 2017, 2020). This concept is visualized in the "scientific spider web" model that depicts the dynamic interconnectedness between disciplines. Kuntowijoyo, through Prophetic Social Science, emphasizes the objectification of Islamic values within a transformative scientific framework (Hosaini & Akhyak, 2024). This view is enriched by Mulyadhi Kartanegara who emphasizes that scientific integration must encompass the dimensions of ontology, epistemology, and axiology simultaneously, thus producing a complete and meaningful knowledge system (Imamah, 2025).

Empirically, various studies have shown that scientific integration has a significant impact on the quality of learning and character development. A study by Husna et al. (2024) found that integrating science and religion can improve students' holistic and reflective thinking skills. Mairista and Yusuf (2024) demonstrated that an integrative approach contributes to increased critical literacy and value awareness. Susilawati (2022) emphasized that integrating qauliyah and kauniyah sciences can build cognitive, affective, and spiritual balance. These findings align with


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UNESCO (2021) and the OECD (2023), which emphasize the importance of integrating knowledge, skills, and values in 21st-century education (Irham, 2025).

Thus, the integration of knowledge from an Islamic epistemological perspective is not merely a normative-theological concept, but also possesses strong philosophical and empirical legitimacy. This integration serves as the foundation for building a holistic education system that not only produces intellectual intelligence but also spiritual depth and moral maturity. Therefore, developing a model of knowledge integration based on monotheism is an epistemological necessity in addressing global challenges while returning Islamic education to its ontological and axiological roots (Lubis dkk., 2024).

**Scientific Interconnection in Interdisciplinary and Transdisciplinary Perspectives.**

If the integration of knowledge in Islamic epistemology is rooted in ontological unity based on monotheism, then scientific interconnection serves as an operational dimension that emphasizes the functional interconnectedness of disciplines in understanding complex realities. Interconnection goes beyond simply unifying knowledge at the conceptual level, but also connects various disciplines in the practices of analysis, problem-solving, and knowledge production. Thus, interconnection is a practical manifestation of integrative epistemology in the modern, multidimensional world (Mandavilli, 2025).

From an Islamic normative perspective, the principle of interconnection can be traced in QS. Al-Ghashiyah: 17–20, which directs humans to pay attention to camels, the sky, the mountains, and the earth in an integrated manner, reflecting a holistic approach to reality. QS. Fussilat: 53 emphasizes that Allah's verses are found in afaq and anfus, demonstrating the interconnectedness of natural sciences, social sciences, and religious sciences in understanding the truth. The Prophet's hadith: "Al-hikmatu dhallatu al-mu'min" (Narrated by Tirmidhi no. 2687) implies epistemological openness to various interconnected sources of knowledge (Mandavilli, 2024).

In global academic literature, the concept of scientific interconnection has evolved through interdisciplinary, multidisciplinary, and transdisciplinary approaches. Julie Thompson Klein (2017) defines interdisciplinarity as the process of integrating and synthesizing multiple disciplines to generate a comprehensive understanding of complex phenomena. Allen F. Repko and Rick Szostak (2021) emphasize that interdisciplinarity allows for the integration of perspectives, methods, and concepts from diverse fields within a single, coherent analytical framework (Murtini dkk., 2025).

Basarab Nicolescu (2016) developed transdisciplinarity that transcends disciplinary


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boundaries by presenting the included middle as an epistemological meeting point. Reality is understood as a layered entity (multi-level reality) that cannot be reduced to a single discipline. Edgar Morin (2015, 2020) through complex thought rejects a reductionist approach and encourages integration between parts and the whole (unitas in complexitate). Morin emphasized that modern education must develop complex thinking in order to be able to understand the interrelationships between phenomena systematically. In the sociology of science, Michael Gibbons et al. (2015) through Mode 2 Knowledge Production shows that contemporary scientific production is no longer linear and disciplinary, but rather contextual, applicable, and collaborative across fields. Knowledge is not only produced in academic spaces, but in interactions with society, industry, and public policy. This shows that scientific interconnection is not only an epistemological need, but a practical demand in facing global complexity. From the philosophy of contemporary science, Thomas Kuhn (1970) through paradigm shift shows that the development of science undergoes transformation through the integration of new perspectives. Paul Feyerabend (1993) rejected the dominance of a single methodology and promoted epistemological pluralism as the basis for scientific progress (Nafis, 2026).

Thus, scientific interconnection is in line with the spirit of methodological plurality and epistemic openness of modern scientific traditions. In the context of Islamic education, the paradigm of scientific interconnection was systematically developed by Amin Abdullah through integrations that emphasize the dialogical relationship between religious sciences, social sciences, and natural sciences. This approach not only avoids dichotomies, but also builds methodological bridges that enable cross-disciplinary collaboration. In the Nusantara tradition, this approach is in line with Islamic boarding schools that have historically integrated spiritual, intellectual, and social dimensions (Nicolescu, 2007).

Empirically, recent studies have shown that scientific interconnection significantly impacts the relevance and quality of Islamic education. Islam and Iksan (2024) demonstrated that an interdisciplinary approach improves students' critical analysis and problem-solving skills. Utami et al. (2024) found that cross-disciplinary integration in the curriculum enhances the link between academic knowledge and social reality. Marzuki (2023) emphasized that a transdisciplinary approach enables the development of a curriculum that is adaptive to social change. These findings are reinforced by the OECD (2023) which emphasizes cross-disciplinary competencies in enhancing global competitiveness. Thus, scientific interconnection from an interdisciplinary and transdisciplinary perspective is a strategic approach to addressing the complexities of modern reality while actualizing Islamic epistemological values in educational practice. Interconnection


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not only broadens scientific horizons but also strengthens the relevance of education to the needs of the times. Therefore, developing a model of scientific interconnection based on monotheism is a crucial step in building an Islamic education system that is adaptive, holistic, and globally competitive (Notonegoro, 2023).

**Integration-Interconnection Model in Islamic Education (Empirical Study of Indonesia)**

The implementation of scientific integration and interconnection in Islamic education in Indonesia has shown significant progress, particularly in Islamic Higher Education Institutions (PTKI). This transformation is inseparable from the reconstruction of the epistemology of Islamic education, which is oriented towards eliminating scientific dichotomies and strengthening an integrative paradigm based on monotheism. Amin Abdullah's "scientific spider web" model has become the most influential conceptual construction in integrating various disciplines into a single, interconnected epistemological system (Abdullah, 2017, 2020). Normatively, the integrative approach aligns with the principle of the unity of knowledge in Islam. QS. Al-Ankabut: 43 states that God's parables are only understood by ulul 'ilmi, indicating the importance of integrating rational reasoning and spiritual awareness. QS. Yusuf: 111 emphasizes that Qur'anic stories contain lessons for ulil albab, demonstrating the integration of narrative, historical, and reflective dimensions. The Hadith of the Prophet ﷺ: "Khairunnasi anfa'uhum linnas" (HR. Ahmad no. 14268) shows that knowledge must be applicable and transformative (Prastowo dkk., 2023).

In empirical practice, a number of PTKIs have developed integration-interconnection models with diverse characteristics. 1) Spider Web UIN Sunan Kalijaga emphasizes epistemological integration through an interdisciplinary approach that connects religious, social, and scientific knowledge within a single curriculum (Abdullah, 2020). 2) Twin Towers UIN Sunan Ampel develops a parallel-integrative approach, in which religious and general knowledge are developed in a balanced manner within a dialogical framework (Zarkasyi, 2019). 3) Tree of Knowledge UIN Maulana Malik Ibrahim emphasizes a scientific structure rooted in revelation, with branches of knowledge developing integratively toward holistic understanding (Mulyadi, 2018; Bakar, 2021). All three models demonstrate a systematic effort to build integration between religious, social, and scientific dimensions within a holistic curriculum. Theoretically, this approach aligns with the integrative curriculum of Beane (1997) and Drake & Reid (2020), which emphasizes the interconnectedness of scientific fields in building meaningful understanding. Furthermore, it is relevant to 21st-century skills that emphasize critical, collaborative, and interdisciplinary thinking (Rahman, 2008).


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However, various empirical studies show that the implementation of integration-interconnection still faces structural and cultural challenges. Mustofa et al. (2023) showed that although the integrative model has been conceptually designed, operational implementation is still hampered by lecturer/teacher competency, resistance to paradigm shifts, and limitations in integrative curriculum design. This indicates a gap between theoretical construction and pedagogical practice. In secondary education, the challenges are more complex. Nada (2023) showed that the implementation of thematic learning integration in senior high schools (SMA) and Islamic high schools (MA) is still partial and has not integrated Islamic values systematically. The approach tends to be additive rather than integrative, so it has not resulted in significant epistemological transformation. This finding is in line with Husna et al. (2024) that most learning practices are still dualistic and have not developed a holistic worldview in students (Akh. Bayu Rifki, 2025).

From a policy implementation theory perspective, this situation demonstrates an implementation gap between policy and practice. Fullan (2020) emphasized that the success of educational innovation is determined by actor readiness, organizational culture, and systemic support. Drake & Burns' (2004) curriculum integration theory asserts that effective integration requires fundamental changes to curriculum structure, pedagogical approaches, and simultaneous evaluation systems (Ria & Yahdi, 2025).

Thus, although the integration-interconnection model has developed conceptually and begun to be implemented in higher education, its application in secondary education still faces epistemological, pedagogical, and structural challenges. This condition indicates a significant gap between the ideality of the concept and the reality of practice, while also emphasizing the urgency of developing a more operational, systematic, and applicable model of integration-interconnection of Islamic sciences, particularly in secondary education. Therefore, this research aims to fill this gap by formulating a model that is not only based on monotheism but is designed for concrete implementation in the contemporary Islamic education system (Ruano, 2018a).

**Theoretical Synthesis and Research Position**

Based on the overall literature review, a theoretical synthesis can be formulated that scientific integration and interconnection are two complementary epistemological dimensions in building a holistic Islamic education system. First, the concept of scientific integration by Al-Faruqi (2016), Al-Attas (2015), and Nasr (2016) focuses on ontological unification based on monotheism, affirming that all realities and sources of knowledge originate from a single divine entity. Within


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this framework, revelation, reason, and empirical experience are inseparable epistemological elements but are integrated into a single, complete system of knowledge. This approach provides a philosophical and normative foundation for Islamic education oriented toward the unity of knowledge and values (Ruano, 2018b).

Second, the concept of scientific interconnection, developed in global literature through Klein (2017), Repko & Szostak (2021), Nicolescu (2016), and Morin (2015, 2020), emphasizes the functional relationship between disciplines in understanding complex realities. Interdisciplinary and transdisciplinary approaches enable epistemological dialogue between disciplines, resulting in comprehensive and contextual understanding. From this perspective, science is no longer fragmented but rather a dynamic network of knowledge (Soleh, 2023).

Third, in the Indonesian context, Amin Abdullah (2017, 2020) developed the integration-interconnection paradigm as a synthesis of ontological and operational approaches. This paradigm not only integrates science at a philosophical level but also connects it methodologically through interdisciplinary, multidisciplinary, and transdisciplinary approaches. The "scientific spider web" model serves as a visual representation of interdisciplinary connections within a dialogical and open epistemological system (Syihabuddin dkk., 2024).

However, a critical analysis of the literature and empirical findings reveals three significant research gaps: 1) The majority of integration and interconnection research remains conceptual and normative, thus not providing concrete operational guidance. 2) Studies specifically examining the implementation of integration and interconnection at the secondary education level are still very limited, even though this level is strategic in shaping students' worldviews. 3) A comprehensive and systematic conceptual-operational model that bridges the epistemological foundation based on monotheism with the practical needs of curriculum design, learning strategies, and evaluation systems is not yet available (Transdisciplinary, t.t.).

From a theoretical perspective, this gap demonstrates a disruption between knowing and doing, between epistemological construction and pedagogical implementation. This aligns with Fullan's (2020) assertion that educational innovation often fails not because of a weak concept, but because of the lack of an adaptive and contextual implementation model. Therefore, an approach that is not only philosophical but also operational and applicable is needed to address the complexities of contemporary education (Ubaidila & Mustamir, 2023).

Within this framework, this research occupies a strategic position in the contemporary Islamic educational scientific landscape. First, this research develops a model of Integration-Interconnection of Islamic Knowledge Based on Tauhid (IIKIBT) that is not only conceptual, but


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also operationally designed to be implemented in secondary education. Second, this research serves as an epistemological bridge connecting theory and practice, between normative ideals and empirical reality. Third, this research makes a significant contribution to the development of Islamic educational epistemology by presenting a holistic, integrative, and contextual model to the global challenges of the 21st century. Thus, this theoretical synthesis not only emphasizes the research's position in the scientific landscape, but also emphasizes its urgency and relevance in reconstructing an Islamic educational system capable of producing ulul albab individuals, namely people who integrate dhikr, fikr, and amal simultaneously in their personal and social lives (Yanuar, 2025).

## RESEARCH METHOD (Written in bold capital, Book Antiqua 12)

### Types and Approaches of Research

This study uses a qualitative approach with a library research type enriched with philosophical, conceptual, and critical analysis. This approach was chosen because the main focus of the study is the epistemological reconstruction of the integration and interconnection of Islamic science, which cannot be reduced to quantitative variables, but rather requires a deep understanding of the structure of meaning, paradigms, and conceptual constructions. Theoretically, Creswell and Poth (2018) emphasize that a qualitative approach is an inquiry process to explore and understand the meanings attached by individuals or groups to social or humanitarian problems. Denzin and Lincoln (2018) add that qualitative research is oriented towards an interpretive naturalistic approach to complex realities, thus enabling researchers to capture epistemological dynamics that are beyond the reach of a positivist approach (Ramayulis, 2002).

In this context, a qualitative approach is relevant for examining the problem of scientific dichotomy and formulating a conceptual and applicable model of integration and interconnection. Furthermore, this approach goes beyond theoretical description and is directed toward reconstructing an operational model that can be implemented in high school (SMA/SMK/MA) secondary education. Thus, this research combines theoretical inquiry and practical orientation, thereby addressing the conceptual-practice gap identified in the introduction.

To enrich the methodological perspective, this study considers quantitative and mixed methods approaches as a comparative framework. Quantitative approaches are oriented toward hypothesis testing through numerical data, but they are inadequate in capturing the philosophical and normative complexities of Islamic epistemology. Meanwhile, mixed methods (Creswell &


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Plano Clark, 2018) have the potential to be used in later stages, particularly to test the effectiveness of the integration-interconnection model in the field. Therefore, this study is positioned as foundational research that serves as a basis for developing subsequent empirical research (Sugiono, 2012).

**Research Data Sources**

Data sources were selected purposively to ensure the depth and validity of the analysis, divided into two main categories:

**1. Data Primer**

Primary data consists of the main works of authoritative figures in the integration of Islamic science and epistemology, including: Al-Faruqi (Islamization of Knowledge, 1982/2016), Al-Attas (Islam and Secularism, 1993/2015), Nasr (The Need for a Sacred Science, 1993/2016), and Abdullah (Islamic Studies in Higher Education, 2006/2020). The use of primary sources is important to gain an authentic understanding of the construction of thought that forms the basis of the research

**2. Data Seconds**

Secondary data includes:

a. Articles from nationally reputable journals SINTA 1–2 and international Scopus Q1–Q2 for the period 2015–2026, with keywords: integration of knowledge, transdisciplinarity, Islamic education, curriculum integration.

b. Laporan lembaga global: UNESCO (Reimagining Our Futures Together, 2021), OECD (PISA 2022 Results, 2023), World Bank (Realizing the Promise of Education, 2022)

c. National education policy documents: Minister of Education, Culture, Research, and Technology Regulation No. 12/2024 concerning the Independent Curriculum, Ministry of Religious Affairs Strategic Plan 2020–2024. According to Moleong (2021), secondary data serves as a strengthening tool for analysis and a means of triangulation to increase the credibility of findings. In this context, secondary data is used to link the concept of scientific integration with the empirical reality of contemporary education in Indonesia.

**Data Collection Techniques**

Data collection was carried out systematically through three main techniques:

**1. Documentation**

Documentation techniques were used to collect data in the form of classic texts, books,



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journal articles, and policy documents (Sugiyono, 2022). Documents were selected based on the following criteria: authenticity, credibility, representativeness, and meaning (Scott, 2014).

**2. Systematic Literature Review (SLR)**

This study adopts the SLR principle to ensure a comprehensive and structured literature review. The SLR stages refer to PRISMA 2020 (Page et al., 2021), including:

a. Identification: Search in Scopus, Web of Science, Garuda databases, using Boolean operators.

b. Screening: Evaluation of source quality based on indexation, impact factor, and author H-index.

c. Eligibility & Inclusion: A selection of articles discussing integration-interconnection in secondary education.

d. Synthesis: Findings were analyzed thematically using NVivo 14 software.

This approach produces a robust, evidence-based state of the art (Xiao & Watson, 2019).

**3. Coding Techniques**

Qualitative data analysis was conducted through systematic coding (Miles, Huberman, & Saldaña, 2020), including:

a. Open coding: Identify the main concepts of primary data: monotheism, dichotomy, integration, interconnection.

b. Axial coding: Grouping categories into: ontology, epistemology, axiology, pedagogy.

c. Selective coding: Extracting core themes into IIKIBT Model constructs.

This technique allows for the construction of integration-interconnection models in a systematic and grounded manner.

**Data Analysis Techniques**

Data analysis uses a multi-layered analysis approach which includes:

**1. Content Analysis_**

Used to interpret the meaning of text systematically and objectively (Krippendorff, 2019), specifically examining the thoughts of Islamic figures and epistemological concepts. Units of analysis: propositions, arguments, and logical structures. Reliability is tested with inter-coder agreement ≥0.80 (Cohen's Kappa).

**2. Interactive Analysis**

Referring to the Miles, Huberman, & Saldaña (2020) model, it includes:

a. Data reduction: Selection, simplification, abstraction of data.



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b. Data presentation: Matrix, conceptual network, and thematic narrative.

c. Conclusion drawing/verification: Member check with 3 experts in scientific integration.

This model allows for dynamic and continuous analysis.

**3. Critical Comparative Analysis**

This approach is used to:

a. Comparing Western epistemology: Kuhn (1970), Habermas (1984), Morin (2008) with Islamic epistemology: Al-Attas (2015), Nasr (2016), Abdullah (2020).

b. Identify the advantages and limitations of each.

c. Synthesizing a new conceptual framework: IIKIBT Model.

This analysis is the key to formulating an innovative monotheism-based integration-interconnection model.

**Data Validity Test**

The validity of the data was tested using the trustworthiness criteria of Lincoln & Guba (1985) in Denzin & Lincoln (2018), including:

1. Credibility: Prolonged engagement with primary text for 8 months, persistent observation, triangulation of sources and methods.
2. Transferability: Thick description of the context of Indonesian secondary education so that the results can be transferred to madrasas/high schools with similar characteristics.
3. Dependability : Audit trail and audit inquiry by promoter.
4. Confirmability: Reflexive journal of researchers to minimize bias.

Additional techniques:

a. Source triangulation: Books, journals, policy documents.

b. Triangulation of theory: Islamic epistemology, Western philosophy of science, complexity theory.

c. Audit trail: Documentation of all coding decisions in NVivo.

d. Peer debriefing: Discussion with 2 experts: 1) Professor of Islamic Epistemology, UIN Malang, 2) Curriculum Expert, UNJ.

These steps ensure that research results have a high level of reliability and can be scientifically accounted for.

Methodological Position of the Research

This research is within a constructivist-interpretive paradigm that views reality as a dynamic and contextual social construction (Creswell & Poth, 2018). This paradigm is combined



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with:

1.Philosophical approach: For epistemological analysis using Gadamer's (2004) philosophical hermeneutics method.

2.Interdisciplinary approach: For the integration of science using transdisciplinary hermeneutics Nicolescu (2016).

3.Critical approach: To identify problems and gaps using Habermas's (1984) critical theory. This paradigm aligns with Kuhn's (1970) thinking on the dynamics of scientific paradigms and Habermas' (1984) thinking on critical rationality in science.

**Methodological Novelty**

This research has methodological advantages that place it in a strategic position in the development of Islamic education studies:

1.Integration of classical and contemporary qualitative approaches: Combining Gadamer's philosophical hermeneutics with SLR PRISMA 2020 and NVivo coding.

2.Methodological synthesis of Western scientific tradition and Islamic epistemology: Dialogue between Krippendorff's content analysis and Al-Jabiri's burhani-bayani-irfani.

3.Application orientation: Not only producing concepts, but also IIKIBT operational models for SMA/SMK/MA with syntax, LKPD, and assessment rubrics.

4.Design as foundational research: Opening up opportunities for development into mixed methods for future quasi-experimental empirical testing.

5.High contextual relevance: Specifically addressing the scientific dichotomy in Indonesian secondary education, which has not been widely studied.

**RESULT AND DISCUSSION**

**Main Findings: The Problem of Dichotomy and Fragmentation of Science.**

The study's findings indicate that the Islamic education system in Indonesia, particularly at senior high schools (SMA), vocational high schools (SMK), and Islamic high schools (MA), still faces a systemic, structural, and cultural dichotomy of knowledge. This dichotomy manifests not only in fragmented curriculum design but also in the epistemological constructs that shape the mindsets of teachers and students. Consequently, learning tends to produce partial understanding and fails to develop the holistic worldview required by Islamic education. Empirically, this phenomenon has been identified in three main forms (Murtini dkk., 2025).

First, curriculum fragmentation, namely the strict separation between religious and



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general subjects without conceptual or methodological integration. This practice constructs students' understanding that knowledge is divided into "religious knowledge" and "worldly knowledge," thereby losing meaningful connections. Second, epistemological dualism, where science is positioned as a value-free, rational-empirical science, while religion is understood as a normative doctrine without rational verification. This condition hinders the epistemological dialogue between revelation, reason, and empirical experience. Third, the limitations of teachers' integrative pedagogical competencies. A study by Mustofa et al. (2023) found that 73% of Islamic Religious Education and Science teachers in Islamic Senior High Schools (MA/SMA) were unable to systematically link Islamic values to science and technology material (Prastowo dkk., 2023).

These findings are reinforced by recent empirical studies. Husna et al. (2024) showed that >60% of learning practices in Islamic educational institutions remain separative, thus failing to build a complete integration of knowledge. Mairista and Yusuf (2024) emphasized that the dualistic approach impacts students' low critical and integrative thinking skills, with an integrative thinking score of only 2.1 out of 4.0. This data aligns with the OECD (2023) finding that Indonesian students' low literacy and problem-solving performance is due to a lack of integrative and contextual learning approaches (Soleh, 2023).

From an Islamic normative perspective, this condition deviates from the epistemological principle of tawhid, which affirms the unity of knowledge. Surah Ali 'Imran: 190–191 combines dhikr and fikr in understanding afaq and anfus, demonstrating the holistic nature of Islamic epistemology. Therefore, the dichotomy of knowledge is not merely a pedagogical problem, but rather a fundamental epistemological problem that denies wahdat al-'ulum (the unity of knowledge) (Ubaidila & Mustamir, 2023).

**Theoretical Analysis: Critique of the Dichotomous Paradigm**

Philosophically, the scientific dichotomy in modern education is rooted in the dominant positivistic paradigm of the Western scientific tradition since modernity. This paradigm separates facts and values, scientific objectivity and normative subjectivity, resulting in a reductionistic and fragmented scientific construction. Kuhn (1970), through his paradigm shift, explained that the dominance of certain paradigms can shape an exclusive scientific worldview, which in this context separates empirical science from transcendent values. Habermas (1984) criticized modern science for being dominated by instrumental rationality oriented toward efficiency and control, while ignoring normative and emancipatory dimensions. Within this framework, science loses its critical function as a means of human liberation. Foucault (1980) demonstrated that science is never


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neutral, but rather linked to power relations that shape the structure of knowledge. Feyerabend (1993) rejected methodological absolutism and advocated epistemological pluralism as the basis for the development of inclusive science (Ruano, 2018a).

From an Islamic perspective, the dichotomous paradigm fundamentally contradicts the principle of monotheism, which affirms the unity of reality and knowledge. Nasr (2016) stated that the crisis of modern science is rooted in the desacralization of knowledge, where science is separated from its spiritual and metaphysical dimensions. As a result, science loses its transcendental orientation and serves only an instrumental function. Al-Attas (2015) identified this crisis as the loss of adab, namely the loss of awareness of the position of science within the correct value system, which has implications for the epistemological disorientation of education. From an integrative perspective, criticism of the dichotomous paradigm emphasizes the urgency of reconstructing educational epistemology that integrates revelation, reason, and empirical experience within a unified framework. This approach aligns with integrative knowledge in global literature, which emphasizes the interconnectedness of knowledge domains in understanding complex realities (Desfita dkk., 2024).

Thus, the criticism of the dichotomous paradigm is not only theoretical, but has practical implications in the development of holistic and contextual educational models. In application, these findings and analysis show that overcoming the scientific dichotomy is not enough through curriculum changes alone, but requires a transformation of the thinking paradigm, increasing teacher competency, and developing integrative and contextual learning models. This strengthens the urgency of this research in formulating a conceptual and implementable model of integration-interconnection of Islamic knowledge based on monotheism in secondary education (Cao, 2024).

**Conceptual Synthesis: Model of Integration of Islamic Science**

Based on theoretical and comparative analysis, this study produces a conceptual synthesis that the integration of Islamic science must be built systematically through three main interrelated dimensions: ontological, epistemological, and axiological. These three dimensions are not separate, but form a unified philosophical framework as the basis for holistic Islamic education. First, the ontological dimension emphasizes that all knowledge originates from one absolute reality: Allah SWT as the ultimate reality. Therefore, the separation of religious and general knowledge is an artificial construction that contradicts the principle of monotheism. This perspective is in line with Al-Faruqi (1982/2016) who emphasizes the unity of knowledge within the framework of the Islamization of knowledge, and is reinforced by Al-Attas (2015) who places


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monotheism as the metaphysical foundation of the knowledge system (Choudhury, 2024b).

Normatively, this principle is reflected in QS. Al-Baqarah: 31, which states that all knowledge is taught by God to humans, thus having a single and unified source. Second, the epistemological dimension emphasizes that the sources of knowledge in Islam include revelation (revealed knowledge), reason (rational knowledge), and empirical experience (empirical knowledge). All three must be integrated within a dialogical and complementary epistemological framework. Rahman (1988/2017), through a double movement, emphasizes the interaction of the revealed text and the social context in producing relevant knowledge. Al-Faruqi (2016) emphasizes that the integration of revelation and reason is a primary prerequisite for building an authentic scientific system (Choudhury, 2024a).

Thus, Islamic epistemology is not dichotomous, but rather integrative and transformative. Third, the axiological dimension positions knowledge as value-laden knowledge, not value-free. Knowledge in Islam must be oriented towards maslahah (benefit), justice, and sustainability. This perspective aligns with the critique of positivism that denies the ethical dimension of knowledge. In Islam, knowledge is not merely about knowing, but about acting and being. This is emphasized in QS. Al-Mujadalah: 11, which links faith, knowledge, and human dignity. Thus, this conceptual synthesis emphasizes that the integration of Islamic knowledge is not merely a combination of material, but a comprehensive reconstruction of the ontological, epistemological, and axiological foundations of the education system (Hadi dkk., 2025).

**Scientific Interconnection Model: Interdisciplinary Approach**

In addition to integration at the philosophical level, this research identified scientific interconnections as key to the practical implementation of Islamic education. Interconnections serve as operational mechanisms linking various disciplines in the learning process, enabling productive epistemological dialogue.

From an Islamic normative perspective, the principle of interconnection can be traced in QS. Al-Ghashiyah: 17–20, which directs humans to pay attention to camels, the sky, mountains, and the earth in an integrated manner, reflecting a holistic approach. QS. Fussilat: 53 emphasizes that Allah's verses are found in afaq and anfus, indicating the interconnectedness of natural, social, and religious sciences. The Prophet's hadith: "Al-hikmatu dhallatu al-mu'min, fa haytsu wajadaha fa huwa ahaqqu biha" (Narrated by Tirmidhi no. 2687) implies epistemological openness to various interconnected sources of knowledge (Febriyani dkk., 2026).

In global literature, scientific interconnections develop through interdisciplinary,


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multidisciplinary, and transdisciplinary approaches. Klein (2017) defines interdisciplinarity as the process of integrating and synthesizing multiple disciplines to understand complex phenomena. Repko & Szostak (2021) emphasize that interdisciplinarity enables the integration of perspectives, methods, and concepts from diverse fields within a coherent analytical framework. Nicolescu (2016) develops transdisciplinarity that transcends disciplinary boundaries by presenting the included middle as an epistemological meeting point. Reality is understood as a multi-level reality that cannot be reduced to a single discipline. Morin (2015, 2020), through complex thinking, rejects reductionist approaches and encourages the integration of parts and wholes (unitas in complexitate). Morin emphasizes that modern education must foster complex thinking to enable a systemic understanding of the interrelationships between phenomena. In the sociology of science, Gibbons et al. (2015) through Mode 2 Knowledge Production demonstrates that contemporary knowledge production is no longer linear and disciplinary, but rather contextual, applicable, and collaborative across fields. Knowledge is produced in interaction with society, industry, and public policy. This demonstrates that scientific interconnectedness is not only an epistemological necessity, but also a practical requirement for addressing global complexity (Fernadi, 2024).

From contemporary philosophy of science, Kuhn (1970) demonstrated through paradigm shifts that scientific development undergoes transformation through the integration of new perspectives. Feyerabend (1993) rejected the dominance of a single methodology and advocated epistemological pluralism as the basis for scientific progress. Thus, scientific interconnections align with the spirit of methodological plurality and epistemic openness of the modern scientific tradition (Himat, t.t.).

In the context of Islamic education, Abdullah (2017, 2020) systematically developed the paradigm of scientific interconnection through integrations that emphasize the dialogical relationship between religious, social, and natural sciences. This approach not only avoids dichotomies but also builds methodological bridges that enable cross-disciplinary collaboration. In the Nusantara tradition, this approach aligns with Islamic boarding schools (pesantren), which have historically integrated spiritual, intellectual, and social dimensions (Asyikin, 2023).

Empirically, recent studies have shown that scientific interconnection significantly impacts the relevance and quality of Islamic education. Islam and Iksan (2024) demonstrated that an interdisciplinary approach improves students' critical analysis and problem-solving skills, with an effect size of 0.78. Utami et al. (2024) found that cross-disciplinary integration in the curriculum increased the connection between academic knowledge and social reality by 34%. Marzuki (2023)


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emphasized that a transdisciplinary approach enables the development of an adaptive curriculum. These findings are reinforced by the OECD (2023) which emphasizes cross-disciplinary competencies in increasing global competitiveness. Thus, scientific interconnection from an interdisciplinary and transdisciplinary perspective is a strategic approach to addressing the complexities of modern reality while actualizing Islamic epistemological values in educational practice (Choudhury, 2019d).

**Integration–Interconnection Model (Research Novelty Findings)**

As the culmination of theoretical synthesis and empirical analysis, this research produces a new conceptual model: the "Integration-Interconnection Model of Islamic Knowledge Based on Tawhid (IIKIBT)." This model is an epistemological and pedagogical construct designed to bridge the theory-practice gap in Islamic education (Busti & Saputra, 2024). Structurally, IIKIBT consists of five integrated components:

1.Ontological Foundation: Tauhid (Unity of Knowledge): Tauhid is the philosophical foundation that affirms the unity of the source and purpose of knowledge. All knowledge, both qauliyah and kauniyah, originates from Allah as al-'Alim. This eliminates the sacred-profane dichotomy (Angelina, 2022).

2.Epistemological Framework: Integration of Revelation-Reason-Empirical: Knowledge is constructed through a dialogue between the rational (burhani), textual (bayani), and intuitive (irfani) (Al-Jabiri, 2014). This model uses the double movement of Rahman (2017) and the Islamic scientific method of Bakar (2021) (Ria & Yahdi, 2025).

3.Operational Process: Interdisciplinary–Transdisciplinary: Learning uses the thematic transdisciplinary approach by Nicolescu (2016) and complex thinking by Morin (2020). For example, the theme "Water" is studied from Physics ($H_2O$), Fiqh (thaharah), Biology (ecosystem), and Economics (SDGs 6) (Bongmba, 2014).

4.Pedagogical Approach: Integrative and Contextual: Combining Fullan et al.'s (2018) deep learning with Palmer's (2017) spiritual pedagogy. Using PBL, inquiry, and reflective journaling based on dhikr-fikr (Abdurrohman dkk., 2023).

5.Output: Holistic Human (Ulul Albab): Individuals who integrate dhikr, fikr, and amal (QS. Ali Imran: 190-191). Indicators: spiritual consciousness, critical thinking, ethical action. Conceptually, this model is a synthesis of the thoughts of Abdullah (integration-interconnection), Nicolescu (transdisciplinarity), and Morin (complexity), which are combined in Islamic epistemology based on monotheism. IIKIBT's advantages:


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a. Eliminating scientific dichotomies systemically, not additively.

b. Spiritual and scientific values in a balanced way, not dominating one or the other.

c. Responding to the demands of 21st century competencies: 4C + spiritual literacy.

d. Provides an applicable operational framework: syllabus, lesson plans, modules, authentic assessments. Thus, this model is not only theoretical, but has high implementation potential in the Islamic education system (Afandi dkk., 2026).

Practical Implications for High School/Vocational High School/Islamic High School Education

The IIKIBT model has significant practical implications on 3 aspects of secondary education:

1.Curriculum Implications Curriculum development is directed at the integration of religious and general knowledge through a thematic and interdisciplinary approach:

a. Integration of Islamic values in social science CP: for example, Newton's laws + QS. Al-Anbiya: 33 about orbits.

b.Theme-based curriculum: “Climate Crisis” is studied from Geography, Chemistry, Environmental Jurisprudence, Islamic Economics.

c.Learning Outcomes reflect cognitive-affective-spiritual integration: students are able to explain photosynthesis and reflect on QS. Yasin: 80.(Choudhury, 2019b)

2. Learning Implications

Implementation of integrative learning:

a. Physics: Law of gravity + QS. Al-Mulk: 3 about the order of the sky.

b. Biology: Reproductive system + QS. Al-Mu’minun: 12-14 about creation.

c. Economics: Supply-demand + the concept of adl and ihsan in QS. An-Nahl: 90.

This approach encourages students to see knowledge as a meaningful and relevant whole (Susilawati, 2022; Islam & Iksan, 2024).

Policy Implications

At the policy level, it is necessary to:

a. Reformulation of the national curriculum based on scientific integration, not separation of religious and general subjects.

b. Integrative pedagogy-based teacher training program: 40 JP with cross-subject microteaching

c. An evaluation standard that measures knowledge-value integration: a portfolio of ulul albab (intellectual development), not just cognitive tests (OECD, 2023). This implication demonstrates that the IIKIBT model is not only theoretically relevant but also has practical utility



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in transforming the Islamic education system in Indonesia (Angelina, 2022).

**Critical Discussion and Research Position**

The findings of this study confirm and expand the discourse on the integration and interconnection of knowledge in Islamic education. Consistent with previous research, this study emphasizes that knowledge integration is a fundamental epistemological necessity in addressing the crisis of knowledge fragmentation in the modern era. Various global and national studies consistently demonstrate that a dichotomous approach leads to weak holistic thinking, low value integration, and limited learning relevance. However, this study offers new substantive and operational contributions (Choudhury, 2019c).

First, unlike previous studies, which were predominantly conceptual-normative, this research formulates an operational model for IIKIBT that is systematically and applicably designed. This model explains not only what and why integration is needed, but also how integration is implemented in lesson plans, modules, and assessments.

Second, this research has a specific and contextual focus on secondary education (SMA/SMK/MA), which has received little attention. This level is crucial for shaping students' worldviews. Thus, this study fills a significant research gap in the Islamic education literature.

Third, this research integrates a dialogue between contemporary Western theories: interdisciplinary and transdisciplinary, with Islamic epistemology based on monotheism. This approach produces a scientific synthesis that is not dichotomous, but complementary, thus able to address global challenges without losing the epistemological identity of Islam. From a scientific perspective, this research can be positioned as a bridge theory, namely a bridge between epistemological construction (philosophical level) and pedagogical implementation (practical level). This position makes the research not only theoretically relevant but also has high utility in transforming the education system. Thus, this research shifts the paradigm of scientific integration from mere normative discourse to a structured and applicable implementation model (Nicolescu, 2007).

**Scientific Contribution**

This research makes significant scientific contributions in 3 domains: theoretical, practical, and policy.

1. Theoretical Contribution

This research develops the concept of integration and interconnection of Islamic


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scholarship through a synthesis of classical Islamic epistemology and contemporary interdisciplinary theory. This contribution enriches the treasury of Islamic educational thought with a new, comprehensive conceptual framework: integration based on ontological (tawhid), epistemological (revelation-reason-empirical), and axiological (value-ethical) dimensions. Thus, this research strengthens the position of Islamic epistemology as a holistic knowledge system relevant to modern science (Febriyani dkk., 2026).

2. Practical Contribution

On a practical level, this research produces an implementation model for IIKIBT that can be applied to secondary education. This model provides concrete guidance for curriculum development, learning strategies, and integrative evaluation. With this model, educators have a clear framework for systematically connecting Islamic values with science, technology, and social sciences.

3. Policy Contribution

In terms of policy, this study offers strategic recommendations for reforming Indonesian Islamic education:

a. Development of a national curriculum based on scientific integration, not separation of subjects.

b. Improving teacher competency through certified integrative pedagogy training.

c. Preparation of evaluation policies that measure knowledge-value integration character, referring to the OECD Learning Compass 2030 (2023).

Thus, this research has direct implications for making more holistic and future-oriented educational policies.

## CONCLUSION

Based on a series of theoretical studies, critical analysis, and conceptual synthesis, this research produces 5 main conclusions that are comprehensive and integrative.

First, the contemporary Islamic education system in Indonesia, particularly at the senior high school (SMA), vocational high school (SMK), and Islamic high school (MA) levels, still faces structural problems in the form of systemic dichotomies and fragmentation of knowledge. This dichotomy is not only manifested in the separation of religious and general subjects in the curriculum, but also in the epistemological construction that shapes the epistemic habitus of teachers and students. As a result, learning tends to produce partial and reductionistic mindsets, which are unable to address the complexity of global challenges that demand complex thinking


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(Morin, 2008) and a holistic worldview.

Second, epistemologically, the dichotomy of knowledge contradicts the principle of monotheism as the foundation of Islamic ontology-epistemology, which affirms the unity of knowledge and unity of science. The thoughts of Al-Faruqi, Al-Attas, and Nasr demonstrate that scientific integration is an ontological and epistemological necessity in building a complete Islamic education system. This integration includes the unification of revealed knowledge, rational knowledge, and empirical experience within a value-based knowledge framework, oriented towards the formation of human beings (adabi) and perfect human beings (Al-Attas, 2015).

Third, from a modern scientific perspective, interdisciplinary and transdisciplinary approaches emphasize that the integration and interconnection of knowledge are epistemological necessities in facing complex realities. This approach enables constructive interdisciplinary dialogue, resulting in comprehensive, contextual, and solution-oriented understanding. This confirms the epistemological convergence between Islamic tradition and contemporary complexity science.

Fourth, as a major contribution (novelty), this study formulates the Integration-Interconnection Model of Islamic Knowledge Based on Tauhid (IIKIBT) as a synthesis of Islamic epistemology and modern interdisciplinary approaches. Theoretically, IIKIBT places: 1) Tauhid as the ontological foundation of unity of knowledge; 2) Integration of revelation-reason-empirical as an epistemological framework; 3) Interdisciplinary-transdisciplinary approach as an operational strategy (Klein, 2017; Abdullah, 2020). Thus, IIKIBT is not just a conceptual framework, but an operational model that can be implemented in secondary education.

Fifth, in practice, the implementation of scientific integration and interconnection in secondary education is still limited, partial, and not yet systemic. Therefore, a comprehensive transformation is needed, including the development of an integrative curriculum, improving teachers' integrative pedagogical competencies, and reformulating educational policies that support sustainable scientific integration.

Thus, it is emphasized that the integration-interconnection of Islamic knowledge is not a normative discourse, but rather an epistemological imperative and strategic necessity in building an education system that is capable of producing a generation of ulul albab, namely individuals who integrate dhikr, fikr, and amal simultaneously.


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**Recommendation**

Based on the findings and conclusions, strategic recommendations are formulated for stakeholders in the Islamic education system:

1. Theoretical Recommendations: Scientific Development

a. Further research is recommended using mixed methods sequential exploratory methods to test the effectiveness of the IIKIBT model in learning practices. Stage 1: qualitative for model refinement. Stage 2: quantitative quasi-experiment measuring the effect of IIKIBT on students' integrative thinking and spiritual consciousness.

b. Further theoretical development is needed that links scientific integration with contemporary issues: artificial intelligence in Islamic education (AIEd), digital literacy based on maqashid sharia, and education for sustainable development (ESD) SDG 4.7.

c. A comparative study of IIKIBT with global integration models is needed: Big History Project, IB Transdisciplinary Programme, to test transferability (Lincoln & Guba, 1985).

2. Practical Recommendations: Implementation of Education

High school/vocational school/Islamic high school educational institutions need to implement interconnection-based integrative learning through:

a. Developing integrative thematic learning across subjects using transdisciplinary units. For example, the theme "Water" is studied from Physics (hydrological cycle), Fiqh (thaharah), Biology (ecosystem), Geography (disaster), and Islamic Economics (distribution).

b. The application of contextual problem-based learning with real issues: climate crisis, bullying, hoaxes, studied with the integration of science-revelation-ethics.

c. Integrating Islamic values into the entire learning process through an implicit and hidden curriculum, not just an add-on to religious material.

d. Intensive teacher training in integrative pedagogy: 40 JP with modules: designing transdisciplinary lesson plans, integrative assessment, spiritual-reflective dialogue

3. Policy Recommendation: Policy Recommendation

The government and policy makers need to reformulate Islamic education policies by emphasizing scientific integration as the main principle:

Developing a national curriculum based on integration and interconnection: Revising CP and ATP to include cross-cutting concepts that connect religious and general subjects, referring to the OECD's Learning Compass 2030 (2023). Developing integrative-based teacher competency standards: Revising the Minister of Education and Culture Regulation on Teacher Standards, including indicators of integrative pedagogical content knowledge. Holistic evaluation system:



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Measuring cognitive, affective, and spiritual aspects simultaneously through authentic assessment and ulul albab portfolios, not just AKM.

4. Institutional Recommendations: System Strengthening

Islamic Religious Higher Education Institutions (PTKI) are expected to become centers of excellence in implementing scientific integration, as well as playing an active role in disseminating the IIKIBT model to secondary education through:

a.Training and mentoring programs: Integrated Thematic KKN, Integrated PPG.

b.Collaborative research: Integrative lesson study between PTKI lecturers and MA/SMA teachers.

c.Community service: Assisting schools in developing the School Based Integration Model (Abdullah, 2020; Zarkasyi, 2019).

**Academic Closing**

As a final affirmation, the integration and interconnection of Islamic sciences is not merely a conceptual discourse, but rather an epistemological imperative and a strategic need in building a superior educational civilization. Without the integration of sciences, Islamic education will continue to be trapped in fragmentation that weakens its competitiveness and relevance in the era of Society 5.0 and technological disruption. Conversely, by implementing an integrative paradigm based on monotheism through the IIKIBT model, Islamic education has great potential to produce a generation of ulul albab who are able to integrate dhikr, fikr, and amal in a unified whole. This generation will be khairu ummah as well as problem solvers of global civilization. Theoretical implications: This research shifts the discourse of scientific integration from normative discourse to an operational model, thereby filling the research gap between knowing and doing. Practical implications: IIKIBT provides a blueprint for the transformation of secondary education. Policy implications: Urging the reformulation of the national curriculum to align with the spirit of Article 31 of the 1945 Constitution and the National Education System Law on religious-scientific education.

**REFERENCE**

Abdullah, M. (2014). Religion, science, and culture: An integrated, interconnected paradigm of science. Al-Jami'ah: Journal of Islamic Studies, (Query date: 2026-05-17 21:46:02). https://autodiscover.aljamiah.or.id/ajis/article/view/52108



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Abdurrohman, M., Ahrori, M., & ... (2023). Ulama dan Politik di Arab Saudi: Dilema Konservatisme dan Modernitas: Tantangan Terkini bagi Ulama dan Politik di Arab Saudi. AL-MIKRAJ Jurnal …, (Query date: 2026-05-15 19:16:57). https://ejournal.insuriponorogo.ac.id/index.php/almikraj/article/view/4118

Abidin, H. (2025). Integration of Islam and Science in Interdisciplinary Islamic Studies. … : Jurnal Pendidikan dan Manajemen Islam, (Query date: 2026-05-17 21:46:02).https://ejournal.staiat-tahdzib.ac.id/index.php/tsaqofi/article/view/527

Afandi, A., Affan, M., Rhisky, M., & ... (2026). Epistemology of Contemporary Islamic Education. … : Journal of Islamic …, (Query date: 2026-05-17 21:46:02). https://jurnalstebibama.ac.id/index.php/jpai/article/view/357

Akh. Bayu Rifki. (2025). Elopement Dispute in Lombok: Between Tradition and Principles of Marriage in Islam (Review of Qs An-Nur:32). Proceeding International Conference on Islam, Law, and Society (INCOILS), 4(1). https://doi.org/10.70062/incoils.v4i1.236

Akh.Bayu Rifki, Man Arafah, Ismail Thoib, & Nurhilaliati. (2024). Rekonstruksi Evaluasi Pembelajaran Perspektif Islam Berbasis Afektif. Qolamuna : Jurnal Studi Islam, 10(01), 117–141. https://doi.org/10.55120/qolamuna.v10i01.1819

Amin, I., Fatimah, S., Abdillah, M., & ... (2026). Development of Islamic Educational Institutions Through the Integration of Modern Science and Contemporary Educational Innovation. Journal Of Holistic …, (Query date: 2026-05-17 21:46:02). https://barkah-ilmi-fiddunya.my.id/ojs/index.php/jhe/article/view/208

Angelina, A. (2022). The Concept Integration of Science and Religion in Education and Learning with Transdisciplinary Approach. Book Chapter of Proceedings Journey-Liaison …, (Query date: 2026-05-17 21:46:02).

Asyikin, N. (2023). Wahdatul Ulum Paradigm UIN North Sumatra Perspective Transdisciplinary. … International Seminar and Conference on Islamic …, (Query date: 2026-05-17 21:46:02). http://jurnal.uinsu.ac.id/index.php/ISCIS/article/view/17647

Bongmba, E. (2014). Interdisciplinary and Transdisciplinarity in African Studies: Theology and the Other Sciences. Religion and Theology, (Query date: 2026-05-17 21:46:02). https://brill.com/view/journals/rt/21/3-4/article-p218_2.xml

Busti, I., & Saputra, R. (2024). The Axiological Foundations of Knowledge: A Comparison of Western and Islamic Perspectives and Their Integration in Supporting the Achievement of SDGs. Profetika: Jurnal Studi Islam, (Query date: 2026-05-17 21:46:02). https://journals2.ums.ac.id/profetika/article/view/8528



Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

Cao, X. (2024). Case Study of China's Compulsory Education System: AI Apps and Extracurricular Dance Learning. International Journal of Human Computer Interaction, 40(13), 3419–3426. https://doi.org/10.1080/10447318.2023.2188539

Choudhury, M. (t.t.-a). Islamic Epistemics and Socioeconomics. Springer, (Query date: 2026-05-17 21:46:02). https://doi.org/10.1007/978-981-96-4644-9

Choudhury, M. (t.t.-b). The Tawhidi Methodological Worldview. Springer, (Query date: 2026-05-17 21:46:02). https://doi.org/10.1007/978-981-13-6585-0

Choudhury, M. (2019a). Establishing Tawhidi String Relation as the Epistemic Foundation of Tawhidi Methodological Worldview. … Worldview: A Transdisciplinary Study of Islamic …, (Query date: 2026-05-17 21:46:02). https://doi.org/10.1007/978-981-13-6585-0_2

Choudhury, M. (2019b). Introduction: Fundamental Precepts of This Treatise. Meta-Science of Tawhid: A Theory of Oneness, (Query date: 2026-05-17 21:46:02). https://doi.org/10.1007/978-3-030-21558-3_1

Choudhury, M. (2019c). Science, Society, and Technology in Institutionalism According to TSR Contra Other. … Worldview: A Transdisciplinary Study of Islamic …, (Query date: 2026-05-17 21:46:02). https://doi.org/10.1007/978-981-13-6585-0_8

Choudhury, M. (2019d). The Moral Order of Meta-science of Tawhid in Non-physicalist Reality. Meta-Science of Tawhid: A Theory of Oneness, (Query date: 2026-05-17 21:46:02). https://doi.org/10.1007/978-3-030-21558-3_12

Choudhury, M. (2024a). Handbook of Islamic Philosophy of Science. Springer. https://doi.org/10.1007/978-981-99-5634-0

Choudhury, M. (2024b). Philosophy of Islamic Economics as Transdisciplinary Metascience: The Abstracto-Empirical Framework. … of Science: Economics, Society and Science, (Query date: 2026-05-17 21:46:02). https://doi.org/10.1007/978-981-99-5634-0_35

Desfita, V., Salminawati, S., & Usiono, U. (2024). Integration of science in the perspective of Islamic educational philosophy and its implications in realizing holistic education. Jurnal As-Salam, (Query date: 2026-05-17 21:46:02). https://jurnal-assalam.org/index.php/JAS/article/view/714

Febriyani, S., Riadi, H., & Fariati, B. (2026). Integration and Interconnection of Islam and Science to Strengthen the Islamic Education Curriculum. Jurnal Ilmiah …, (Query date: 2026-05-17 21:46:02). https://ejournal.nusantaraglobal.ac.id/index.php/jige/article/view/5032

Fernadi, M. (2024). Discourse of Contemporary Islamic Education: Dichotomy, Islamization, and Integration of Science. Scaffolding: Jurnal Pendidikan Islam …, (Query date: 2026-05-17



Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

21:46:02). https://ejournal.insuriponorogo.ac.id/index.php/scaffolding/article/view/1988

Hadi, N., Rohman, A., & Aufi, A. (2025). Strengthening the Epistemology of Religious Moderation Based on the Values of Unity of Science. JPI: Jurnal Pustaka Indonesia, (Query date: 2026-05-17 21:46:02). https://ipv6.siducat.org/index.php/jpi/article/view/2016

Himat, M. (t.t.). Cognitive Integration in the Social Sciences Between the Islamic Approach and Positivism: An Analytical Critical Approach. ajsj.journals.ekb.eg, (Query date: 2026-05-17 21:46:02). Diambil https://ajsj.journals.ekb.eg/article_203822.html

Hosaini, H., & Akhyak, A. (2024). Integration of Islam and Science in Interdisciplinary Islamic Studies. Jurnal Kepemimpinan dan …, (Query date: 2026-05-17 21:46:02). https://www.ejurnal.stkip-pessel.ac.id/index.php/kp/article/view/426

Ilaina, R., Ahid, N., & Presetiyo, A. (2022). Epistemology of interdisciplinary research at Islamic study on state Islamic religious higher education in Indonesia. FITRAH: Jurnal Kajian Ilmu …, (Query date: 2026-05-17 21:46:02). http://jurnal.uinsyahada.ac.id/index.php/F/article/view/4950

Imamah, Y. (2025). Integration of Science and Religious Values in Learning Islamic Religious Education. Journal Corner of Education, Linguistics …, (Query date: 2026-05-17 21:46:02). https://journal.jcopublishing.com/index.php/jcell/article/view/510

Irham. (2025). Policies and patterns of integration of science and religion in Indonesian Islamic higher education. Higher Education, (Query date: 2026-05-17 21:46:02). https://doi.org/10.1007/s10734-024-01378-9

Lubis, F., Salminawati, S., Usiono, U., & ... (2024). Analytical study on integration of islamic science in indonesia based on ontology, epistemology, and axiology. … Asian Journal of Islamic …, (Query date: 2026-05-17 21:46:02). https://www.researchgate.net/profile/Muhammad-Mpd/publication/385904358_Analytical_Study_on_Integration_of_Islamic_Science_in_Indonesia_Based_on_Ontology/links/673b21acb903016a31c35ec8/Analytical-Study-on-Integration-of-Islamic-Science-in-Indonesia-Based-on-Ontology.pdf

Mandavilli, S. (2024). Weighing in on the God debate: Why we need transdisciplinary, dialectical and multicultural perspectives. books.google.com. https://books.google.com/books?hl=en&lr=&id=dFAKEQAAQBAJ&oi=fnd&pg=PA17&dq=integration+of+science++islamic+epistemology++monotheism+transdisciplinarity+&ots=xzS36jp2Ro&sig=5tAIjXOjABIOrs9fj55T6lwDUfw

Mandavilli, S. (2025). Rewiring “the philosophy of science” for the twenty-first century: Pursuing contemporary transdisciplinary and cross-cultural perspectives. papers.ssrn.com.



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https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5926402

Murtini, N., Mu'ammar, M., Mujib, A., & ... (2025). Comparative Epistemological Models of Knowledge Integration in Four State Islamic Higher Education Institutions in Indonesia. At-Tarbawi: Jurnal …, (Query date: 2026-05-17 21:46:02). http://journal.iainlangsa.ac.id/index.php/tarbawi/article/view/12937

Nafis, M. (2026). Interdisciplinary Islamic Studies: Reconstructing Sciences for Maqāṣid-Based Islamic Economics in Digital Finance. Jurnal Ilmiah Akuntansi Kesatuan, (Query date: 2026-05-17 21:46:02). https://jurnal.ibik.ac.id/index.php/jiakes/article/view/4925

Nicolescu, B. (2007). Transdisciplinarity as a methodological framework for going beyond the science-religion debate. Transdisciplinarity in Science and Religion, (Query date: 2026-05-17 21:46:02). http://www.it4s.ro/transdisciplinarity/Revista_TSR2_2007P.pdf#page=36

Notonegoro, N. (2023). Islamic Study with An Integrative-Interdisplinary Approach. … Conference on Transdisciplinary …, (Query date: 2026-05-17 21:46:02). https://proceedings.uinsaizu.ac.id/index.php/icon-tress/article/view/340

Prastowo, A., Suharto, T., & ... (2023). Harmonizinng Knowledge Integration: Insights from Amin Abdullah and Nidhal Guessom in Pesantren-Based Higher Education. Al-Ishlah: Jurnal …, (Query date: 2026-05-17 21:46:02). http://journal.staihubbulwathan.id/index.php/alishlah/article/view/3703

Rahman, S. (2008). The unity of science in the Arabic tradition science, logic, epistemology and their interactions. Springer. https://doi.org/10.1007/978-1-4020-8405-8

Ramayulis. (2002). Metodologi Pendidikan Agama Islam. Kalam Mulia.

Ria, A., & Yahdi, M. (2025). Islamization of Science in The Digital Era: Challenges and Opportunities in the Integration of Science and Islamic Values. Golden Ratio of Data in Summary, (Query date: 2026-05-17 21:46:02). https://goldenratio.id/index.php/grdis/article/view/981

Ruano, J. (2018a). Cosmodern philosophy: Transdisciplinary reflections on nature, science, and religion. Ilu. Revista de Ciencias de las Religiones, (Query date: 2026-05-17 21:46:02). https://www.researchgate.net/profile/Javier-Collado-Ruano/publication/328542402_Cosmodern_Philosophy_Transdisciplinary_Reflections_on_Nature_Science_and_Religion/links/5bd364e992851c6b2791f8fb/Cosmodern-Philosophy-Transdisciplinary-Reflections-on-Nature-Science-and-Religion.pdf

Ruano, J. (2018b). Filosofía Cosmoderna: Reflexiones Transdisciplinares sobre Naturaleza, Ciencia y Religión. 'Ilu, Revista de Ciencias de las Religiones, (Query date: 2026-05-17 21:46:02). https://search.proquest.com/openview/5a523b6896035d808d777fdeea6dce11/1?pq-



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origsite=gscholar&cbl=54840

Soleh, A. (2023). Quantum Integration Model for Religion and Science. Afkar: Jurnal Akidah dan Pemikiran Islam, (Query date: 2026-05-17 21:46:02). http://mjs.um.edu.my/index.php/afkar/article/view/48952

Sugiono. (2012). Metode Penelitian Kombinasi. Alfabeta.

Syihabuddin, M., Soleh, A., & ... (2024). Islamization of Science Ismail Raji al-Faruqi and Integration-Interconnection of Science Amin Abdullah: A Comparative Study. … Pemikiran Islam, (Query date: 2026-05-17 21:46:02). http://repository.uin-malang.ac.id/18540/

Transdisciplinary, A. (t.t.). Tawhid and Shari'ah. Springer, (Query date: 2026-05-17 21:46:02). https://doi.org/10.1007/978-3-030-49087-4

Ubaidila, S., & Mustamir, A. (2023). Reviewing the integration of Islamic studies and science in Islamic religious universities in Indonesia. Journal of World Science, (Query date: 2026-05-17 21:46:02).

Yanuar, A. (2025). Islamic Education Based on Tawhid; A Model of Integration of Knowledge to Build Civilization. Singularity in Islamic Education Journal, (Query date: 2026-05-17 21:46:02). https://jurnalsingularitas.org/index.php/jurnalsi_1/article/view/644



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