JURNAL ILMIAH AL MU'ASHIRAH: p-ISSN: 1693-7562
Media Kajian Al-Qur'an dan Al-Hadits Multi Perspektif e-ISSN: 2599-2619
Vol. 23, No. 2, July-December 2026

Developing the Sanad-Triangulation Method for Layered Data Validation in Field Research

Muhammad Rafi'iy Rahim*[1], Arifuddin Ahmad[2], Muhammad Ismail[3], Nawal Syatila[4]
[1]Universitas Islam Negeri Datokarama Palu
[2]Universitas Islam Negeri Alauddin Makassar
[3]Institut Agama Islam Negeri Parepare
[4]Al-Azhar University Cairo, Egypt
muhammadrafiiy@uindatokarama.ac.id

Abstract

This study examines the integration of two data validation approaches—*sanad* criticism from the Islamic scholarly tradition and triangulation from modern social research methodologies—within the context of socio-religious research. *Sanad* criticism emphasizes the verification of information through assessing the credibility and continuity of the chain of transmission, whereas triangulation validates data by cross-checking sources, methods, and perspectives. Although these approaches originate from distinct epistemological frameworks, they share fundamental principles of data validation, including source transparency, methodological rigor, and informational reliability. Employing an interdisciplinary descriptive qualitative approach, this study proposes an integrative model termed the Layered Validation Tool Method (Sanad–Triangulation)**,** which synthesizes the historical rigor and ethical foundations of *sanad* criticism with the empirical strengths of triangulation. This model offers a holistic, credible, and context-sensitive data validation framework that is particularly relevant for socio-religious research in pluralistic Muslim societies. The findings are expected to contribute significantly to the advancement of religious studies methodology and to serve as a strategic reference for scholars seeking to develop more robust and adaptive approaches to data validity.

Keywords: *sanad* criticism, triangulation, research methodology, data validation, integrative approach

Abstrak

Penelitian ini mengkaji integrasi dua pendekatan validasi data, yaitu kritik sanad *yang berasal dari tradisi keilmuan Islam dan triangulasi yang berkembang dalam metodologi penelitian sosial modern, dalam konteks penelitian sosial-keagamaan. Kritik* sanad *menekankan pengujian validitas informasi melalui penelusuran kredibilitas dan kesinambungan rantai transmisi, sedangkan triangulasi memverifikasi data melalui perbandingan lintas sumber, metode, dan perspektif. Meskipun berangkat dari kerangka epistemologis yang berbeda, kedua pendekatan ini memiliki kesamaan prinsip dalam validasi data, khususnya terkait transparansi sumber, ketelitian metodologis, dan reliabilitas informasi. Dengan menggunakan pendekatan kualitatif deskriptif yang bersifat interdisipliner, penelitian ini merumuskan sebuah model integratif yang disebut Metode Alat Validasi Berlapis (Sanad–Triangulasi), yang mengombinasikan ketelitian historis dan etika kritik* sanad *dengan pendekatan empiris triangulasi. Model ini menghasilkan suatu kerangka validasi data yang holistik, kredibel, dan kontekstual, serta relevan untuk penelitian sosial-keagamaan, terutama dalam masyarakat Muslim yang plural. Hasil penelitian ini diharapkan dapat memperkaya pengembangan metodologi studi keagamaan dan menjadi rujukan strategis bagi para peneliti dalam membangun validitas data yang lebih kuat dan adaptif.*

Kata kunci: *kritik* sanad*, triangulasi, metodologi penelitian, validasi data, pendekatan integratif*

A. Introduction

Data validity is a fundamental element in all forms of research, including socio-religious studies. Research in this field requires not only methodological rigor but also sensitivity to the normative frameworks and spiritual dimensions of the communities under investigation. In modern social research, triangulation has emerged as a widely adopted strategy to enhance data validity by employing multiple data sources, research methods, and theoretical perspectives to evaluate the consistency and accuracy of findings. Through such cross-verification, triangulation strengthens research credibility and functions as an effective mechanism for reducing interpretive bias in the analysis of complex social phenomena. [1]

Within the classical Islamic intellectual tradition, data verification has long been systematically developed through the methodology of *sanad* criticism, particularly in the discipline of hadith studies. *Sanad* criticism evaluates the authenticity of information by rigorously tracing chains of transmission and assessing the integrity, precision, and continuity of narrators. [2] This methodology represents a sophisticated system of historical verification that has shaped Islamic scholarly tradition for centuries[3], emphasizing source reliability and historical traceability as central criteria of knowledge validation.[4]

Data quality is a critical concern in socio-religious research[5], especially in contexts where empirical social realities intersect with religious narratives and authoritative traditions. Contemporary social research commonly employs triangulation to improve data validity through cross-source and cross-method comparison[6]. Similarly, classical Islamic scholarship established a rigorous verification mechanism through *sanad* criticism by evaluating knowledge authenticity based on narrator credibility[7], transmission continuity, and historical accuracy. Although triangulation and *sanad* criticism share a common objective—ensuring the validity of information—they originate from distinct epistemological traditions.[8] Triangulation is rooted in modern social science, whereas *sanad* criticism emerges from classical Islamic scholarship. These epistemological differences should not be viewed as obstacles but rather as opportunities for integration in developing a more comprehensive framework for socio-religious research, particularly within contemporary Muslim societies where social realities are deeply intertwined with religious texts and authorities[9].

Previous studies have examined triangulation primarily as a methodological tool and *sanad* criticism as a historical epistemological framework. [10] However, most of this scholarship

---

[1] Norman K. Denzin, *The Research Act: A Theoretical Introduction to Sociological Methods*, 3rd edn (McGraw-Hill, 1978).

[2] Muhammad Mustafa Al-Azami, *Studies in Hadith Methodology and Literature* (Islamic Book Trust, 2002).

[3] Jonathan A. C. Brown, *Hadith: Muhammad's Legacy in the Medieval and Modern World* (Oneworld Publications, 2009).

[4] A. Shamad Usman, 'BERBAGAI PENDEKATAN DALAM MEMAHAMI HADIS', *Jurnal Ilmiah Al-Mu'ashirah: Media Kajian Al-Qur'an Dan Al-Hadits Multi Perspektif*, 13.1 (2016), pp. 34–45, doi:10.22373/jim.v13i1.2353.

[5] Benediktus Rolando and Aylena Manika Zahran, 'ANALISIS SISTEMATIS TERHADAP STANDAR METODOLOGI DAN INSTRUMEN KUALITAS DALAM RISET INTERDISIPLINER BIDANG STUDI AGAMA DI INDONESIA', *IQRA: Inquiry on Religion and Arts*, 1.1 (2025), pp. 1–10.

[6] Dedi Susanto, Risnita, and M. Syahran Jailani, 'Teknik Pemeriksaan Keabsahan Data Dalam Penelitian Ilmiah', *QOSIM : Jurnal Pendidikan Sosial & Humaniora*, 1.1 (2023), pp. 53–61, doi:10.61104/jq.v1i1.60.

[7] Hilgha Mustin, Muhammad Tasbih, and Zaenab Abdullah, 'Kritik Sanad (Naqd Al-Sanad) Dalam Ilmu Hadis: Metodologi Dan Implementasinya', *Socius: Jurnal Penelitian Ilmu-Ilmu Sosial*, 3.1 (2025), doi:https://doi.org/10.5281/zenodo.16277823.

[8] Nur Alim and others, 'Kritik Matan Hadis: Validitas Epistimologi Klasik Dan Modern', *El-Mizzi : Jurnal Ilmu Hadis*, 4.1 (2025), pp. 51–73.

[9] Muhammad Naquib Al-Attas, *Islam and Secularism*, 1998, p. 197.

[10] Suryadi Suryadi, 'Rekonstruksi Kritik Sanad Dan Matan Dalam Studi Hadis', *ESENSIA: Jurnal Ilmu-Ilmu Ushuluddin*, 16.2 (2015), pp. 177–86, doi:10.14421/esensia.v16i2.996.

 DOI: 10.22373/jim.v23i2.34094

treats the two approaches as parallel rather than constructing an integrated and operational validation paradigm.[11] This limitation results in methodological gaps, especially in socio-religious research that demands both historical precision and empirical robustness.[12]

This study addresses this gap by proposing an integrated data validation framework that incorporates the principles of *sanad* criticism into triangulation-based qualitative research. The proposed integration aims to develop a more robust validation system that combines historical accuracy, narrative reliability, and empirical contextual analysis. Accordingly, this research seeks to explore the conceptual and methodological intersections between *sanad* criticism and triangulation, as well as to formulate an integrative validation model applicable to socio-religious field research. This integrative effort is intended to strengthen Islamic research methodologies and to establish a comprehensive validation framework suitable for contemporary socio-religious inquiry.

Integrating *sanad* criticism within a triangulation framework offers a holistic approach to data validation by uniting historical precision, narrative credibility, and a plurality of empirical perspectives. Such an approach not only enriches socio-religious research methodology but also demonstrates the continuing relevance of Islamic epistemic values within modern academic discourse.[13] In the pluralistic and religious context of Indonesia, this integration further supports the development of value-based and culturally grounded research approaches, contributing to the advancement of contextual and transformative socio-religious scholarship. This study is guided by three principal research questions: (1) how the foundational concepts of *sanad* criticism and triangulation function in data validation; (2) where their conceptual and methodological intersections lie; and (3) how an integrative model can be formulated to generate a new validation framework. The objective of this research is to clarify the characteristics of both approaches, assess their methodological compatibility, and construct a stronger data validation model for socio-religious research.

Methodologically, this study adopts an interdisciplinary qualitative research design that integrates Islamic epistemological analysis with social research methodologies. Data sources include classical Islamic literature on *sanad* criticism, contemporary scholarship on qualitative research techniques, and studies addressing methodological integration. The analysis involves a comparative examination of validation principles in *sanad* criticism and triangulation, theoretical synthesis of their core components, and model construction to establish an operational validation framework for socio-religious research. The proposed model is subsequently evaluated through tests of theoretical coherence, methodological compatibility, and simulated application within socio-religious research contexts, thereby demonstrating an interdisciplinary synthesis of classical Islamic epistemology and modern social scientific methodology.

B. Result and Discussion

Sanad criticism is a foundational verification method in hadith studies that evaluates both the continuity and the credibility of narrators within the chain of transmission. [14] Muhammad Mustafa Al-Azami emphasizes that this system represents one of the most rigorous forms of historical criticism developed in any intellectual tradition. [15] Similarly, Jonathan Brown

[11] Wiyanda Vera Nurfajriani and others, 'Triangulasi Data Dalam Analisis Data Kualitatif', *Jurnal Ilmiah Wahana Pendidikan*, 10.17 (2024), pp. 826–33, doi:10.5281/zenodo.13929272.

[12] Moh Zamili, 'MENGHINDAR DARI BIAS: Praktik Triangulasi Dan Kesahihan Riset Kualitatif', *LISAN AL-HAL: Jurnal Pengembangan Pemikiran Dan Kebudayaan*, 9.2 (2015), pp. 283–304, doi:10.35316/lisanalhal.v9i2.97.

[13] Faisal Ismail, *Metodologi Studi Islam Dalam Perspektif Ilmu Sosial Dan Humaniora* (Tiara Wacana, 2002).

[14] Jafar Assagaf and Abd Wahid, 'Towards a Comprehensive Understanding of Hadith Sciences: Al-Gumari's Reconstruction of Riwayah and Dirayah', *Mashdar: Jurnal Studi Al-Qur'an Dan Hadis*, 6.2 (2023).

[15] Al-Azami, *Studies in Hadith Methodology and Literature*.

highlights that hadith scholars employ *sanad* analysis not merely to verify authenticity but also to ensure the consistency and reliability of transmitted reports across generations.[16] Together, these perspectives underscore the central role of *sanad* criticism as a systematic and methodologically sophisticated approach to knowledge validation in Islamic scholarship.

Triangulation in Social and Religious Studies

In social research methodology, Norman K. Denzin introduced four major types of triangulation: data triangulation, investigator triangulation, theoretical triangulation, and methodological triangulation.[17] Triangulation is widely regarded as an effective strategy for minimizing researcher bias and enhancing both internal and external validity. Within religious and socio-cultural research contexts, triangulation enables scholars to capture the complexity of social meanings, symbols, and practices by examining phenomena from multiple analytical perspectives.

Research conducted by Faisal Ismail demonstrates the significance of adopting interdisciplinary approaches in Islamic studies, particularly through the integration of social science methodologies to analyze religious realities.[18] Building on this perspective, several contemporary scholars have explored the potential for integrating classical Islamic epistemology with modern scientific methods, especially in studies addressing local religious practices within broader global and theoretical frameworks. Such integrative efforts aim to bridge normative religious knowledge with empirical social analysis in a methodologically coherent manner. [19]

In general, validity is defined as the degree of accuracy and precision with which a research instrument measures what it is intended to measure.[20] In social research, however, validity extends beyond technical measurement and encompasses the relationship between theoretical concepts and the empirical indicators used to represent them.[21] Consequently, validity is not merely a matter of statistical procedure, but also involves philosophical and conceptual understanding of the object under study, particularly in relation to how social reality is scientifically represented. A comprehensive understanding of validity therefore requires the integration of theoretical, methodological, and practical dimensions.[22]

Since the mid-twentieth century, conceptualizations of validity have undergone significant development. Samuel Messick conceptualizes validity as a unified construct that incorporates multiple dimensions, including substantive, structural, generalizability, external, and consequential aspects.[23] This perspective integrates empirical evidence and value considerations within a single framework of validity assessment, marking a shift from a narrowly technical approach toward a more interpretive and evaluative understanding of research quality.
Within social research methodology, validity constitutes a fundamental criterion for determining the degree to which research findings and conclusions can be trusted. Validity concerns not only the appropriateness of measurement instruments but also the soundness of the logical reasoning used to establish relationships among concepts, variables, and empirical data. In this sense, validity reflects the overall quality of scientific inference, particularly in the analysis of complex and context-dependent social phenomena.

---

[16] Brown, *Hadith: Muhammad's Legacy in the Medieval and Modern World*.
[17] Denzin, *The Research Act: A Theoretical Introduction to Sociological Methods*.
[18] Faisal Ismail, *Metodologi Studi Islam Dalam Perspektif Ilmu Sosial Dan Humaniora*.
[19] Al-Attas, *Islam and Secularism*.
[20] S. Arikunto, *Prosedur Penelitian: Suatu Pendekatan Praktik* (Rineka Cipta, 2010).
[21] Arikunto, *Prosedur Penelitian: Suatu Pendekatan Praktik*.
[22] W. Lawrence Neuman, *Social Research Methods: Qualitative and Quantitative Approaches*, 7th edn (Pearson, 2014).
[23] Samuel Messick, 'Validity of Psychological Assessment: Validation of Inferences from Persons' Responses and Performances as Scientific Inquiry into Score Meaning', *American Psychologist*, 50.9 (1995), pp. 741–49.

DOI: 10.22373/jim.v23i2.34094

Types of Validity

Validity may be classified into several types, each emphasizing different aspects of measurement and inference,[24] *Content Validity*, Content validity refers to the extent to which the elements of a measurement instrument adequately represent all relevant dimensions of the construct being measured. Evaluation of content validity is commonly conducted through expert judgment, whereby specialists assess the alignment of instrument items with the underlying conceptual framework; [25] *Criterion Validity*, Criterion validity examines the extent to which a measurement correlates with external criteria or observable outcomes that are theoretically relevant.[26] This type of validity is commonly divided into concurrent validity, which compares measurement results with present criteria, and predictive validity, which assesses the extent to which measurements can predict future outcomes; *Construct Validity*, Construct validity is widely regarded as the most central form of validity in social research, as it directly concerns the measurement of abstract theoretical constructs.[27] It evaluates whether an instrument genuinely captures the concept it is intended to measure, typically requiring a combination of theoretical justification and empirical testing; *Internal and External Validity*, Internal validity refers to the extent to which a research design can adequately explain causal relationships among variables without interference from extraneous factors.[28] External validity, by contrast, concerns the generalizability of research findings across different contexts, settings, or populations.[29]

In qualitative research, validity is not established through statistical indicators but through methodological strategies such as triangulation, audit trails, and member checking. [30] In this context, validity is closely associated with credibility and trust in the data and interpretations produced by the researcher. [31] Accordingly, qualitative validity is often discussed using the concept of *trustworthiness*, which emphasizes transparency, consistency, and reflexivity in the research process.

In hadith research, the concept of *validity* cannot be equated directly with the forms of validity commonly employed in quantitative or social-science research. Rather, hadith validity concerns the extent to which a transmitted report can be methodologically substantiated as an authentic attribution to the Prophet Muhammad. It therefore encompasses historical, textual, transmission-based, and methodological dimensions. The process begins with *takhrīj al-ḥadīth*, through which researchers identify the primary sources in which a report is recorded, its *mukharrijūn*, transmission routes, and textual variants. This preliminary stage is essential because a text circulating under the name of the Prophet cannot automatically be treated as an authentic prophetic report merely on the basis of its content or widespread circulation. Its source, transmission history, and attribution must first be established. Hadith validity, therefore, involves not merely determining whether a report is relevant to a particular research topic, but also establishing the evidentiary basis for attributing that report to the Prophet. In this respect, contemporary hadith scholarship continues to recognize both isnād criticism and matn criticism as complementary dimensions of the authentication process.[32]

---

[24] Abd Wahid, Masbur, and Jamalul Mukminin, 'Metode Hadis Shahih Dalam Perspektif Muhammadiyah', *Ta'wiluna: Jurnal Ilmu Al-Qur'an, Tafsir Dan Pemikiran Islam*, 5.2 (2024).

[25] Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif, Dan R&D* (Alfabeta, 2017).

[26] Fred N. Kerlinger, *Foundations of Behavioral Research*, 4th edn (Holt, Rinehart and Winston, 2006).

[27] John W. Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (SAGE Publications, 2014).

[28] Donald T. Campbell and Julian C. Stanley, *Experimental and Quasi-Experimental Designs for Research* (Houghton Mifflin, 1963).

[29] Campbell and Stanley, *Experimental and Quasi-Experimental Designs for Research*.

[30] Yvonna S. Lincoln and Egon G. Guba, *Naturalistic Inquiry* (Sage, 1985).

[31] Lincoln and Guba, *Naturalistic Inquiry*.

[32] Ayub Ayub, 'Matn Criticism and Its Role in The Evaluation of Hadith Authenticity', *IJISH (International Journal of Islamic Studies and Humanities)*, 1.1 (2018), pp. 69–75, doi:10.26555/ijish.v1i1.136.

At the level of isnād criticism, hadith validity is assessed through several interrelated criteria, including *ittiṣāl al-sanad* (continuity of transmission), the *'adālah* (moral integrity) and *ḍabṭ* (precision) of transmitters, as well as the identification of *shudhūdh* and *'ilal*. A chain that appears formally connected cannot, therefore, be regarded as sufficient evidence of authenticity without further examination. Researchers must investigate the biographical profiles of transmitters through *'ilm al-rijāl* and *al-jarḥ wa al-ta'dīl*, establish the possibility of transmission between successive narrators, and compare alternative chains through which the same report has been transmitted. Such comparative analysis is particularly important because weaknesses may become visible only when multiple transmission routes are examined together. The identification of *shādh* reports, for example, requires comparison between apparently reliable transmissions and stronger or more numerous alternatives. Hadith validity consequently represents a multilayered process of critical verification rather than a simple judgment based upon the formal appearance of a single chain of transmission. [33]

The second major dimension is matn criticism, which plays a fundamental role in determining the validity of a hadith. Matn criticism should not, however, be understood as a subjective assessment of whether the researcher agrees with the meaning of a report. Rather, it involves a systematic examination of textual evidence and its relationship to other transmissions. This may include comparing variant wordings, identifying additions or omissions, examining textual inconsistencies, and assessing whether a particular wording conflicts with stronger hadith evidence, established historical information, the Qur'an, or fundamental principles of Islamic law. Historical studies of early hadith scholarship demonstrate that textual criticism was not entirely absent from the classical tradition. Harald Motzki, for example, has shown that early hadith critics did engage in forms of matn criticism, although such criticism was not always formulated as an independent methodological discipline in the manner familiar to modern scholarship.[34] Accordingly, sanad and matn criticism should not be treated as mutually exclusive approaches. Rather, they constitute complementary analytical procedures through which the reliability, transmission, and historical plausibility of a hadith can be investigated.

Contemporary hadith studies have further developed this methodological framework through approaches such as *isnād-cum-matn analysis*. Rather than examining the chain of transmission and the textual content as completely separate domains, this approach analyzes the relationship between variations in isnāds and variations in matns across different transmission routes. Such comparison can provide important evidence concerning the history of transmission, the development of particular textual formulations, and the possible emergence of later variations.[35] The *isnād-cum-matn* approach therefore offers a means of integrating elements of classical hadith criticism with historical-critical methods in contemporary scholarship. Contextual analysis may likewise complement traditional authentication by examining the relationship between a prophetic report, the circumstances surrounding its transmission or emergence, and the contexts in which it has subsequently been interpreted. Such approaches do not necessarily replace the classical criteria of hadith criticism; rather, they can broaden the analytical framework within which the historical and interpretive dimensions of prophetic traditions are investigated. [36]

---

[33] Radhie Munadi, 'Menimbang Kaidah Syādz Dalam Kritik Hadis: Kerangka Konseptual Dan Aplikasinya Pada Sanad Serta Matan', *Jurnal Ushuluddin: Media Dialog Pemikiran Islam*, 28.1 (2026), pp. 13–25, doi:https://doi.org/10.24252/jumdpi.v28i01.65756.

[34] J. A. C. Brown, *Misquoting Muhammad: The Challenge and Choices of Interpreting the Prophet's Legacy* (Oneworld Publications, 2017).

[35] Maizuddin M. Nur, 'Analisis Isnad Cum Matn: Mengukur Kritik Hadis Muslim Dan Barat', *Substantia: Jurnal Ilmu-Ilmu Ushuluddin*, 18.2 (2016), doi:https://doi.org/10.22373/substantia.v18i2.3009.

[36] Wasman Wasman, Mesraini Mesraini, and Suwendi Suwendi, 'A Critical Approach to Prophetic Traditions: Contextual Criticism in Understanding Hadith', *Al-Jami'ah: Journal of Islamic Studies*, 61.1 (2023), pp. 1–17, doi:10.14421/ajis.2023.611.1-17.

Accordingly, validity in hadith research may be defined as a systematic process of establishing the status, reliability, and attribution of a transmitted report to the Prophet Muhammad**.** Unlike *content validity*, *criterion validity*, or *construct validity* in social-science research, hadith validity is not primarily concerned with whether a research instrument adequately represents a theoretical construct. Instead, it focuses on the evidentiary strength of a transmitted report and the methodological justification for classifying it as *ṣaḥīḥ*, *ḥasan*, *ḍa'īf*, or otherwise. Nevertheless, the principle of *trustworthiness* in qualitative research remains relevant at the methodological level, particularly with regard to transparency, consistency, documentation, and reflexivity throughout the research process. A rigorous study of hadith validity should therefore explicitly document the sources consulted, the *takhrīj* procedure, the evaluation of transmitters and chains, the analysis of the matn, the comparison of alternative transmission routes, and the identification of possible *shudhūdh* and *'ilal*. Hadith validity thus becomes more than a declarative claim that a particular report is "authentic"; it constitutes a reasoned and auditable scholarly conclusion whose evidentiary basis can be examined and reassessed by other researchers. [37]

Epistemology of Sanad Criticism

Sanad criticism is firmly rooted in Islamic epistemology, which prioritizes the transmission of authentic, reliable, and verifiable knowledge. Core principles such as justice (*'adālah*), precision in retention and transmission (*ḍabt*), and continuity of transmission (*ittiṣāl*) constitute the foundational criteria for evaluating narrative data within this tradition. These principles function not merely as technical standards but as epistemic safeguards designed to ensure the integrity and credibility of transmitted knowledge. The integration of *sanad* criticism with modern approaches to data validation will be analyzed in this study in order to establish a complementary and integrative validation framework. This framework brings together insights derived from contemporary scientific methodologies and classical Islamic scholarly traditions, thereby enabling a more comprehensive approach to data validation in socio-religious research.

Epistemologically, hadith is regarded by the majority of Muslims as the second primary source of Islamic teachings after the Qur'an.[38] The Islamic scholarly tradition is therefore grounded in two foundational sources: the Qur'an and the Hadith. While the authenticity of the Qur'an is unanimously accepted, the validity of hadith has been subject to scholarly scrutiny, particularly because hadith transmission was predominantly oral during the first century of Islam. This oral transmission created the potential for error, distortion, or deviation, thereby necessitating systematic verification. In response to this challenge, Muslim scholars undertook extensive efforts to collect, examine, and authenticate hadith reports circulating across various Islamic regions. The objective was to ensure that such reports could be reliably traced back to the Prophet Muhammad (peace be upon him), [39] whose conduct serves as a normative model for Islamic life and a foundational reference for the development of Islamic law.

To achieve this objective, scholars formulated strict evaluative criteria, beginning with the examination of the *sanad*. Linguistically, *sanad* denotes something that is relied upon or supported, while technically it refers to the chain of transmitters that conveys the text (*matn*) of a

[37] Rahman, Imelda Putri Hsb, and Maya Fitri Sulastri, 'METODOLOGI PENELITIAN HADIS:ANTARA KRITIK SANAD DAN MATAN', *Amsal Al-Qur'an: Jurnal Al-Qur'an Dan Hadis*, 2.2 (2025), pp. 233–46, doi:10.63424/amsal.v2i2.348.

[38] Arifuddin Ahmad, *Paradigma Baru Memahami Hadis Nabi: Refleksi Pemikiran Pembaharuan Prof. Dr. Muhammad Syuhudi Ismail* (Renaisan, 2005).

[39] Abd Wahid and others, 'Utilizing Zuhd Hadiths For Upper-Class Crime Prevention', *Jurnal Ilmiah Islam Futura*, 23.2 (2023), pp. 263–82, doi:10.22373/jiif.v23i2.17353.

hadith.[40] Hadith scholars consistently emphasize that the validity of a hadith is inseparable from the reliability of its *sanad*.[41] In assessing the *sanad*, scholarly inquiry focuses primarily on two fundamental questions: first, whether a narrator (*rāwī*) is trustworthy, and second, whether a narrator is unreliable and therefore unacceptable as a transmitter. [42]

The *sanad* system occupies a distinctive and privileged position in Islamic epistemology, as it represents a unique mechanism of knowledge transmission not found in earlier religious traditions. This system developed from the pedagogical practices of the *tābiʿīn*, who learned directly from the Companions, while the Companions themselves acquired knowledge through direct instruction (*talaqqī*) from the Prophet Muhammad (peace be upon him). The Prophet, in turn, received revelation from God either through the intermediary of the Angel Gabriel or directly, as documented in various revelatory accounts. The centrality of *sanad* in safeguarding the authenticity of hadith has been widely affirmed by classical scholars. One frequently cited statement is attributed to Abdullah ibn al-Mubarak, who asserted: "The *sanad* is part of religion. Were it not for the *sanad*, anyone could say whatever they wished." [43] Similarly, Shu'bah ibn al-Hajjaj emphasized the indispensability of transmission formulas such as *ḥaddathanā* and *akhbaranā*, indicating that reports lacking such markers are epistemically unreliable. [44] In another narration, Shuʿbah cited Yahya ibn Sa'id al-Qattan, who stated that the authenticity of hadith can only be determined through the authenticity of its *sanad*.[45]

The critical role of *sanad* validation has far-reaching implications for Islamic teachings as a whole, given that hadith constitutes a primary source of Islamic law alongside the Qur'an. Conceptually, *sanad* criticism functions as a systematic mechanism of source verification and information validation. When viewed through the lens of modern research methodology, *sanad* criticism may be analogized to a rigorous form of quality control over the origin, reliability, and transmission of data.

Sanad Criticism as Transmission Chain Validation

Within hadith scholarship, the discipline is broadly divided into two major branches: *ʿilm al-ḥadīth riwāyah* and *ʿilm al-ḥadīth dirāyah*. This study focuses on *ʿilm al-ḥadīth dirāyah*, which examines the principles governing *sanad* and *matn*, modes of transmission, and the characteristics of narrators.[46] As noted by Nurmaidah et al., this discipline provides the theoretical foundation for evaluating hadith authenticity. [47] As hadith studies developed into an independent field, several specialized sub-disciplines emerged, particularly those centered on *sanad* analysis. These include *ʿilm al-rijāl*, *ʿilm ṭabaqāt al-ruwāt*, *tārīkh al-ruwāt*, and *ʿilm al-jarḥ wa al-taʿdīl*. Collectively, these disciplines form the methodological basis for assessing the validity of hadith transmission.[48]

In validation terms, the soundness of the *sanad* is a prerequisite for the validity of the transmitted information. If the transmission chain is flawed, the information itself is deemed

[40] Muhammad Barnaba Ridho Ilahi and others, 'Hadith Critics Categories in The Selection of Hadith Narrators: A Comparative Analysis', *Jurnal Ilmiah Al-Mu'ashirah: Media Kajian Al-Qur'an Dan Al-Hadits Multi Perspektif*, 20.2 (2023), pp. 266–75, doi:10.22373/jim.v20i2.16787.

[41] Muhammad Barnaba Ridho Ilahi and others, 'Hadith Critics Categories in The Selection of Hadith Narrators: A Comparative Analysis', *Jurnal Ilmiah Al-Mu'ashirah: Media Kajian Al-Qur'an Dan Al-Hadits Multi Perspektif*, 20.2 (2023), pp. 266–75, doi:10.22373/jim.v20i2.16787.

[42] Nizar Ali, *Memahami Hadis Nabi (Metode Dan Pendekatan)* (YPI Al Rahmah, 2001).

[43] Sayyid 'Abd al Majid al Gauri, *Al Muyassar Fi 'ilm al Jarh Wa al Ta'dil*.

[44] al Gauri, *Al Muyassar Fi 'ilm al Jarh Wa al Ta'dil*.

[45] Muhammad Diya' al Rahman al A'zami, *Dirasat Fi al Jarh Wa al Ta'dil* (Maktabah al-guraba Asariyyah, 1995).

[46] Syuhudi, *Pengantar Ilmu Hadis*.

[47] Nurmaidah, *Pengantar Ilmu Hadits* (Sanabil, 2021).

[48] Syuhudi, *Pengantar Ilmu Hadis.*

unreliable.[49] To ensure *sanad* validity, scholars established stringent criteria derived from the rules of hadith authenticity. One of the most influential formulations was articulated by Ibn al-Salah, who defined a *ṣaḥīḥ* hadith as one that possesses a continuous chain, is transmitted by morally upright and precise narrators, and is free from irregularities (*shudhūdh*) and hidden defects (*ʿillah*). This definition was later reinforced by Al-Nawawi.[50]

Building on this framework, Shuhudi Ismail categorized *sanad* validation into two levels: major criteria, which outline general conditions of authenticity, and minor criteria, which provide detailed specifications. These criteria emphasize narrator credibility, ethical conduct, intellectual competence, and the absence of dishonesty or deviant behavior. Similar principles were articulated earlier by Al-Shafi'i, who underscored the importance of narrator reliability in determining the probative value of hadith.[51] Broadly speaking, *sanad* criticism entails evaluation of: 1. narrator credibility and moral integrity, 2. continuity of transmission and possibility of direct encounter, and 3. consistency across parallel transmission chains.

Procedures of *Sanad* Criticism

Sanad criticism (*al-jarḥ wa al-taʿdīl*) [52] constitutes a systematic method for determining whether a hadith is acceptable or rejectable.[53] Its principal steps include:1. Examining Transmission Continuity **(***ittiṣāl al-sanad***).** Ensuring that narrators were contemporaneous and had opportunities for direct transmission. Any break (*inqiṭāʿ*) renders the hadith weak (*ḍaʿīf*). 2. Assessing Narrator Integrity **(***ʿadālah***).** Evaluating moral uprightness, honesty, and adherence to religious norms.[54] 3. Evaluating Precision **(***ḍabṭ***).** Assessing memorization strength or accuracy of written records. 4. Comparative Analysis**.** Identifying inconsistencies or anomalies (*shudhūdh*) in comparison with stronger transmission chains. [55] 5. Detection of Hidden Defects **(***ʿillah khafiyyah***).** Identifying subtle flaws that require expert-level analysis. [56]

In qualitative research, triangulation is widely recognized as a strategy to enhance validity and reliability. Sandra Mathison defines triangulation as a means of increasing research credibility by employing multiple data sources, methods, and perspectives. Rather than merely confirming findings, triangulation also reveals complexity and divergence within social phenomena.[57] Similarly, Susan Stainback conceptualizes triangulation as a technique for strengthening data credibility through cross-comparison of perspectives, methods, and researchers. She identifies source, method, and researcher triangulation as key forms. [58]

In the Indonesian methodological tradition, Sugiyono further elaborates triangulation into source, technique, time, and researcher triangulation. [59] Through these approaches, triangulation

[49] Lalu Heri Afrizal, 'Selisik Atas Metodologi Kritik Matan Ulama Hadis', *Kalimah: Jurnal Studi Agama Dan Pemikiran Islam*, 14.2 (2016), pp. 191–218, doi:10.21111/klm.v14i2.612.

[50] M. Alhafidh Akbar, Abd Wahid, and Taslim HM Yasin, 'The Digital Turn in Ḥadīth Studies: Ethical Foundations and Strategic Directions', *El-Sunan: Journal of Hadith and Religious Studies*, 3.1 (2025), doi:https://doi.org/10.22373/el-sunan.v3i1.6274.

[51] Abū ʿAbdillāh Muḥammad bin Idrīs asy-Syāfiʿī, *Al Risalah*, Tahqiq Dan Syarah: Syaikh Ahmad Muhammad Syakir (Maktabah Dar al Turas, 1979).

[52] Muhammad Rafi'iy Rahim and Muhammad Ismail Maggading, 'Al-Albānī's Methodology in Assigning toṢaḥīhan Hadith on the Book of Genealogy of Al-Ṣaḥīḥah"', *Ihyaussunnah : Journal of Ulumul Hadith and Living Sunnah*, 1.2 (n.d.), pp. 116–41.

[53] Muhammad Rafi'iy Rahim, *Manhaj Al-Albani in Establishing the Quality of Hadith* (Repository of UIN Sultan Alauddin Makassar, n.d.).

[54] Muhammad Ajjaj al-Khatib, *Uṣūl Al-Ḥadīth: ʿUlūmuhu Wa Muṣṭalaḥātuhu* (Dar al Fikr, 1989).

[55] Mahmud Ṭaḥlān, *Taysīr Muṣṭalaḥ Al-Ḥadīth* (Dar al Fikr, 2004).

[56] Nuruddin ʿItr, *Manhaj Al-Naqd Fī ʿUlūm al-Ḥadīth* (Dar al Fikr, 1991).

[57] Susan Bray Stainback and William C. Stainback, *Understanding & Conducting Qualitative Research* (1988).

[58] Susan Bray Stainback and William C. Stainback, *Understanding & Conducting Qualitative Research* (1988).

[59] Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif, Dan R&D*.

functions not only as a verification mechanism but also as a means of deepening analytical understanding of social realities.

Data validity lies at the core of accountable and credible scientific research. Through triangulation, researchers can attain a higher degree of confidence that the data collected accurately represent empirical reality.[60] Sugiyono emphasizes that triangulation is not merely a technique for comparing data, but a strategic approach to strengthening trust in research findings. In practical research settings, triangulation also helps to address limitations that may arise from reliance on a single data source or methodological technique. For instance, when interview data yield ambiguous or incomplete information, researchers can verify and enrich these findings through direct observation or the analysis of written documents. Such cross-verification enhances the robustness of empirical evidence.

Moreover, inconsistencies identified across different data sources should not be dismissed as methodological weaknesses. Instead, as Sugiyono argues, divergent findings can serve as a valuable basis for critical reflection and deeper analysis. In this sense, triangulation functions not only as a tool for validation but also as an integral component of a holistic approach to understanding complex social phenomena.

What Are the Conceptual and Methodological Intersections between *Sanad* Criticism and Triangulation in Data Validation?

Although *sanad* criticism and triangulation originate from distinct epistemological paradigms, both approaches are grounded in similar foundational principles of data validation. Each emphasizes source reliability, methodological rigor, and systematic verification processes. Consequently, several points of conceptual and methodological convergence can be identified between the two approaches. These intersections provide a basis for integrative analysis and will be elaborated further in the following table.

Aspects	Criticism of Sanad (Hadith)	Triangulation (Modern Research Methodology)	Conceptual & Methodological Meeting Point
Purpose	Ensuring the validity of the hadith through the chain of narration	Validate research data through cross-source comparisons	Validate data/information to be trustworthy
Evaluation Focus	Credibility and integrity of the narrator	The credibility of the informant, data, or method	Assessment of the reliability of the source
Main Methods	Sanad analysis: the chain of narrator (isnad), justice and thoroughness	Comparison of data from sources, methods, theories, or researchers	Cross-checking between lines/sources of information
Validity Criteria	The connection of the sanad, the tsiqah of the narrator, there is no anomaly (illat)	Consistency between data, trust of sources	Consistency and interconnectedness between information
Space-Time Context	Whether the narrators might meet in space and time	The social context, place, and time of the informant or data	Consideration of temporal and spatial context
Process Structure	Very systematic: tahqiq al-	Systematic:	Scientific step-based

[60] Naurah Adelia and others, 'Digital Takhrij Hadith as Islamic Digital Humanities Reconstructing Epistemic Authenticity and Transmission in the Digital Age', *Digital Muslim Review*, 3.1 (2025), doi:https://doi.org/10.32678/dmr.v3i1.68.

Vol. 23, No. 2, July-December 2026
DOI: 10.22373/jim.v23i2.34094

	asma', jarh wa ta'dil, etc.	triangulation of data, methods, researchers, and theories	validation process
Types of Information Assessed	History of hadith (religious information/sacred texts)	Empirical data (qualitative or quantitative)	Assessment of narrative forms of information
Epistemological Orientation	Islamic scientific traditions based on sanad and narrator authority	The modern scientific tradition is based on logic and empiricism	Commitment to scientific honesty and data transparency

For example, a simple analogy

Situation	Review Sanad	Triangulation
You receive information that "A said that B saw C stealing."	You examine whether A is an honest person, whether he really met B, and whether B is trustworthy and contemporaries C.	You check the information from B directly, look for CCTV records, and compare with other witnesses who saw the incident.

As for the comparison of Sanad Criticism vs Triangulation

Aspects	Criticism of Sanad (Hadith)	Triangulation (Modern Research Methods)	Meeting Point
Purpose	To ensure the authenticity and truth of the hadith	Ensure data validity and reliability	Validate data or information to be trusted
Focus of Analysis	The chain of narrator (sanad) and the content of the hadith (matan)	Data sources and data collection methods	Evaluation of data sources and content
Validation Method	Jarh wa ta'dil (narrator criticism), sanitation connection, wholeness of eyes	Comparison of various sources (data, methods, researchers)	Layered verification and cross-source comparison
Data Source	Narrator or rawi hadith	Informants, documents, observations, interviews	A source of human information or verifiable documents
Dual Validation Form	Sanad that is mutawatir or strengthened by another sanad	Triangulation of sources, methods, and theories	Validation through confirmation of different paths or approaches
Final Results	Sahih hadith, hasan, dhaif, or maudhu'	Valid, reliable, and accountable data	Classification of the level of trust or validity of the data
Basic of Epistemologis	Objectivity of authority-based truth and sanitation continuity	Relative truth based on consistency and confirmation between data	Both aim to avoid unvalidated one-sided claims

While the Core Equation is as follows:

Core Elements	Brief Description
Information validation	Both approaches do not directly receive information, but test it first.
Multi-source/Multi-stakeholder	Checking the truth from more than one source or point of view.
Chain clarity/data origin	Prioritize transparency of information sources: who, when, and how they are obtained.

Broadly Speaking: Limitations of the Triangulation Method and the Potential Contributions of *Sanad* Criticism

Subjectivity in Source Selection

In practice, the selection of data sources or informants often relies heavily on the researcher's subjective judgment. There is no universally standardized criterion for assessing source credibility, which may compromise data validity when sources are not rigorously evaluated. *Sanad* criticism offers objective and systematic criteria for source evaluation, including moral integrity (*ʿadālah*), accuracy of transmission (*ḍabṭ*), continuity of transmission (*ittiṣāl*), and scholarly reputation. Adapting these principles enables researchers to establish stricter, more transparent, and more consistent standards for evaluating informants and data sources.

Limitations of triangulation. Data convergence in triangulation is often interpreted subjectively, and there is no definitive guideline regarding the degree of discrepancy that can still be considered acceptable. As a result, assessments of consistency may vary significantly between researchers. *Sanad* criticism explicitly rejects narrations that deviate from authoritative transmission paths (*shudhūdh*), thereby providing a more rigorous analytical framework for determining whether data divergence is substantial or epistemically unacceptable. Triangulation commonly treats data obtained from informants or documents as given, without systematically examining how information has been transmitted, inherited, reproduced, or modified across individuals and contexts.

By prioritizing the continuity of transmission (*ittiṣāl al-sanad*), *sanad* criticism enables researchers to trace the historical origins and pathways of knowledge transmission. This perspective is particularly valuable in socio-religious research, where authority and authenticity are closely linked to transmission history.

Limited Historical Accountability

Triangulation tends to emphasize present-oriented validation and does not always adequately account for the historical dimension or authoritative status of past data sources. *Sanad* criticism places strong emphasis on historical legitimacy and scholarly authority within the chain of transmission. Integrating this perspective enriches the historical contextualization of data and enhances the accountability and credibility of sources, particularly in studies involving religious texts and traditions.

Triangulation is widely recognized as a methodological strategy for strengthening the credibility of research by comparing evidence derived from different sources, methods, investigators, or theoretical perspectives. Its principal contribution lies in identifying convergence and divergence among datasets and thereby reducing the risk that findings depend excessively on a single source or method. Nevertheless, triangulation does not automatically resolve questions concerning the historical provenance, chronological legitimacy, or transmission authority of the evidence being compared. In qualitative research, triangulation is primarily concerned with the credibility and comprehensiveness of empirical

 DOI: 10.22373/jim.v23i2.34094

interpretation, whereas historical source criticism requires additional procedures for determining how, when, and through whom information was transmitted. [61]

This limitation becomes particularly significant in *ḥadīth* studies, where the evidentiary status of a report is inseparable from the history of its transmission. *Sanad* criticism provides a distinctive methodological mechanism because it does not merely compare the contents of different reports but investigates the chain of transmission, the identity and reliability of transmitters, the continuity of transmission, and the possibility of irregularities or hidden defects. Contemporary studies of *sanad* and *matn* criticism continue to emphasize that the assessment of hadith validity requires systematic scrutiny of both the transmission chain and the transmitted text. In this sense, *sanad* criticism introduces a historical dimension that is not necessarily generated through conventional triangulation: it asks not only whether several sources corroborate one another, but also whether the transmission connecting those sources can be historically and epistemologically justified. [62]

The historical significance of *sanad* is also evident in the development of Muslim scholarly traditions themselves. Recent scholarship demonstrates that the presence, absence, modification, and preservation of *isnād* in later hadith compilations reflect changing practices of knowledge transmission and the continuing authority attributed to chains of transmission. Jamil, for example, shows that some later hadith scholars deliberately separated the presentation of hadith texts from their *sanads*, while preserving the chains in other works or transmission records. This phenomenon indicates that *sanad* was not merely a formal appendage to the hadith text but constituted an important mechanism through which scholarly authority and historical transmission were negotiated. Such findings reinforce the argument that historical accountability requires attention to the genealogy of a source, its transmission context, and the scholarly practices through which its authority was constructed and maintained.[63]

Furthermore, the integration of *sanad* criticism with *matn* criticism can substantially strengthen the methodological architecture of triangulated research on religious texts. *Sanad* analysis establishes the historical and transmissional dimensions of a report, whereas *matn* analysis evaluates its textual coherence, internal consistency, relationship with stronger reports, and compatibility with established historical or theological evidence. Contemporary research in *Ulul Albab*, a Sinta 1 journal, demonstrates that *matn* criticism has undergone methodological transformation in response to modern scholarly developments while retaining its function in evaluating the consistency and credibility of hadith reports. Likewise, research published in *Al-Jāmiʿah: Journal of Islamic Studies*—a Scopus-indexed journal—illustrates how historical evidence concerning the writing and transmission of hadith can be brought into conversation with competing claims about the chronology of hadith formation. Thus, the combination of triangulation, *sanad* criticism, and *matn* criticism allows researchers to move from simple source convergence toward a more comprehensive assessment of provenance, transmission, textual integrity, and historical context. [64]

Accordingly, *sanad* criticism should be conceptualized not as a substitute for triangulation but as a complementary epistemological layer that addresses a dimension often underdeveloped in contemporary validation procedures: historical accountability. Triangulation

[61] Khairil Husaini Bin Jamil, 'Who Moved My Sanad? - Another History of Isnād in the Transmission and Conveyance of Ḥadīth and Sunnah.', *JOURNAL OF QUR'AN AND HADITH STUDIES*, 11.1 (2022), pp. 1–18, doi:10.15408/quhas.v11i1.27211.

[62] Daud Rasyid Harun and others, 'The Writing of Hadith in the Era of Prophet Muhammad: A Critique on Harun Nasution's Thought', *Al-Jami'ah: Journal of Islamic Studies*, 59.1 (2021), pp. 191–220, doi:10.14421/ajis.2021.591.191-220.

[63] Darul Siswanto, 'THE PARADIGM OF MATN HADITH CRITICISM AND ITS TRANSFORMATION IN THE MODERN ERA', *ULUL ALBAB Jurnal Studi Islam*, 21.1 (2020), p. 130, doi:10.18860/ua.v21i1.8936.

[64] Alvin Noor Sahab, 'The Urgency Discourse of Matan and Sanad Criticism on Hadith', *JOURNAL OF QUR'AN AND HADITH STUDIES*, 7.2 (2018), pp. 131–50, doi:10.15408/quhas.v7i2.13399.

establishes whether different sources, methods, or perspectives produce mutually reinforcing evidence, while *sanad* criticism investigates whether the historical pathway through which a particular religious report reached later generations is itself credible and accountable. This integrated framework is particularly relevant to empirical and interdisciplinary studies of hadith, in which classical textual authorities, contemporary interviews, archival materials, and digital sources may coexist within a single research design. The methodological integration of these approaches enables researchers to distinguish between mere agreement among sources and historically justified authority, thereby producing a more rigorous account of evidentiary credibility. In this respect, the incorporation of *sanad* criticism transforms triangulation from a primarily present-oriented strategy of corroboration into a historically sensitive model of source validation. [65]

How Can the Integration Model between *Sanad* Criticism and Triangulation Generate New Validation Methods?

Conceptually, *sanad* criticism and triangulation share a fundamental concern with the validation and verification of information. *Sanad* criticism may be understood as an early and systematic form of triangulation, particularly within the context of oral transmission, where the authenticity of information must be confirmed through multiple historical transmission paths. [66] On this basis, an integrative validation model combining *sanad* criticism and triangulation can be formulated through the following practical steps.

In socio-religious research, data derived from religious narratives—such as hadith, scholarly accounts, or local historical traditions—require *sanad*-based analysis that examines the continuity of transmission and the authority of narrators. At the same time, these narratives can be strengthened through triangulation with empirical field data, including interviews, documentary sources, and direct observation.[67] This dual process enables both historical verification and empirical contextualization.

Contemporary socio-religious narratives, including spiritual testimonies, religious experiences, and oral daʿwah practices, can be evaluated using principles derived from *sanad* criticism, particularly those related to narrator integrity (*ʿadālah*) and accuracy (*ḍabṭ*). [68] This approach aligns closely with triangulation practices in qualitative research, where researchers assess informant credibility by comparing perspectives, sources, and modes of data collection.

Integrating Traditional and Modern Perspectives in Data Validation

While *sanad* criticism primarily focuses on the integrity and continuity of transmission chains, triangulation contributes additional analytical depth by incorporating social, political, and cultural contexts surrounding a narrative or event. In this way, triangulation complements *sanad* criticism by situating validated narratives within broader empirical realities.[69] The proposed integration model offers a holistic approach to data validation, wherein *sanad* criticism provides ethical and epistemological foundations, while triangulation reinforces methodological rigor and empirical objectivity. Through this synthesis, researchers can develop integrated validation instruments that are both context-sensitive and methodologically robust, particularly when conducting research within religious communities. [70]

---

[65] Helen Noble and Roberta Heale, 'Triangulation in Research, with Examples', *Evidence Based Nursing*, 22.3 (2019), pp. 67–68, doi:10.1136/ebnurs-2019-103145.

[66] Ahmad Syafi'i Ma'arif, *Islam Dalam Bingkai Keindonesiaan Dan Kemanusiaan* (Mizan, 2009).

[67] Brown, *Hadith: Muhammad's Legacy in the Medieval and Modern World*.

[68] Khaled Abou El Fadl, *Speaking in God's Name: Islamic Law, Authority and Women* (Oneworld, 2001).

[69] Bryan S. Turner, *Religion and Modern Society: Citizenship, Secularisation and the State* (Cambridge University Press, 2011).

[70] Mohammad Alwi, 'Integrasi Epistemologi Islam Dan Sains Dalam Penelitian Sosial Keagamaan', *Jurnal Studi Agama Dan Masyarakat*, 14.2 (2020), pp. 99–117.

This complementarity becomes particularly relevant when religious narratives are investigated as living phenomena within contemporary Muslim communities. A report may possess a demonstrably established transmission history, yet its contemporary interpretation, circulation, institutional use, and social consequences cannot be adequately explained through *sanad* analysis alone. Conversely, observations, interviews, documents, and community practices may demonstrate how a religious narrative functions socially without, by themselves, establishing the historical authority of the narrative being studied.[71] Research on Islamic education, for example, has employed interviews, observation, and documentation together with source and method triangulation precisely because religious practices are embedded in changing social environments. Triangulation therefore supplies an important contextual layer through which researchers can examine how a historically transmitted religious text interacts with contemporary institutions, cultural practices, social identities, and patterns of religious authority. In this framework, the historical authenticity of a report and its contemporary social manifestation are treated as related but analytically distinct dimensions.[72]

The integration of traditional and modern approaches also requires recognizing that contextualization should not replace textual and transmissional criticism. Contemporary studies of *sanad* methodology emphasize that the evaluation of transmitters, continuity of transmission, and the methodological examination of hadith remain relevant even when hadith research is conducted in modern academic settings.[73] At the same time, research employing triangulation demonstrates that multiple forms of empirical evidence can reveal dimensions of a religious phenomenon that are not visible from textual analysis alone. For instance, interviews may reveal how religious actors understand a particular hadith, observations may demonstrate how that understanding is enacted, and documentary evidence may clarify how the interpretation has been institutionalized or transmitted within a particular community. The resulting methodological architecture therefore moves beyond a binary opposition between "traditional" and "modern" methods: *sanad* criticism establishes the historical-transmissional status of the textual source, while triangulation investigates the social, cultural, and institutional contexts in which that source is interpreted and practiced.[74]

On this basis, the proposed integration model can be formulated as a layered validation framework. The first layer is *sanad* validation, which examines the continuity and reliability of transmission and establishes the historical basis of the religious report. The second layer is *matn* validation, which assesses textual consistency, comparison among variant transmissions, and the relationship of the report to other authoritative evidence.[75] The third layer is contextual triangulation, which compares interviews, observations, documents, archival materials, and other empirical sources to determine how the validated narrative operates within a particular social environment. Such methodological layering is consistent with recent scholarship arguing for the continued relevance of integrated *sanad* and *matn* criticism rather than relying exclusively on one dimension of hadith evaluation. It also corresponds with empirical research in Islamic settings where triangulation is used to compare different categories of evidence and thereby strengthen the credibility of interpretations. The result is not simply a larger quantity of

[71] E. F. Fahyuni and others, 'Integrating Islamic Values and Science for Millennial Students' Learning on Using Seamless Mobile Media', *Jurnal Pendidikan IPA Indonesia*, 9.2 (2020).

[72] Thofiqur Rohman, Ulul Huda, and Hartono Hartono, 'Methodology of Hadith Research: The Study of Hadith Criticism', *Journal of Hadith Studies*, 2.1 (2020), pp. 73–84, doi:10.32506/johs.v2i1.26.

[73] Aeni, Nurul, and Fakhruddin, 'Management of Media Literacy Education in Islamic Boarding School WALI Salatiga', *Journal of Nonformal Education and Community Empowerment*, 4.2 (2020), doi:10.15294/jnece.v4i2.37350.

[74] Thofiqur Rohman, Ulul Huda, and Hartono Hartono, 'Methodology of Hadith Research: The Study of Hadith Criticism', *Journal of Hadith Studies*, 2.1 (2020), pp. 73–84, doi:10.32506/johs.v2i1.26.

[75] Komarudin Soleh and Amin Iskandar, 'Metodologi Kritik Dan Pendekatan Dalam Memahami Hadis', *Jurnal Studi Hadis Nusantara*, 2.2 (2020), p. 174, doi:10.24235/jshn.v2i2.7651.

evidence, but a clearer differentiation between authenticity**,** interpretation**,** and social manifestation**.** [76]

Accordingly, the synthesis of *sanad* criticism and triangulation can provide a more comprehensive model of data validation for research conducted within religious communities. *Sanad* criticism contributes a historically grounded epistemic discipline by requiring researchers to account for the provenance and transmissional authority of religious reports, while triangulation contributes methodological breadth by testing how those reports are understood, transmitted, and enacted across different social contexts. Recent methodological discussions of Islamic knowledge likewise emphasize the importance of systematic procedures for establishing validity and reliability rather than assuming that religious authority or empirical observation alone is sufficient. [77] The proposed model consequently treats validation as a multidimensional process: the sanad establishes the historical pathway of transmission, matn criticism examines textual integrity, and triangulation evaluates contextual and empirical correspondence**.** Such integration is especially useful for *Living Hadith*, ethnographic studies of Muslim communities, Islamic education, religious authority, and other interdisciplinary research in which classical textual sources and contemporary social realities must be examined within a single coherent methodological framework.

Parallel Analogies

Criticism of Sanad in Hadith	Modern Data Validation
Assessing the fairness and dhabitation of the narrator	Assess the credibility of a data source
Checking the continuity of sanad	Browse data distribution paths
Assessing syudzudz (oddity) and 'illah (hidden defects)	Detect data outliers and anomalies
Classification (sahih, hasan, dhaif)	Data classification: valid, corrupt, noise

Based on the explanation above, the model of integration of sanad criticism and triangulation is as follows :

Sanad Criticism and Triangulation: Two Traditions of Validation

Review Sanad	**Triangulation**
It is used in the science of hadith to verify the authenticity of information transmitted through the narrator.	It is used in qualitative research to validate data from various sources or approaches.
Focus on the narrator chain, individual credibility, and transmission sustainability.	Focus on comparing data, whether from different sources, methods, theories, or researchers.

[76] Rizkiyatul Imtyas, Ahmad Hasyim, and Muhammad Helmi, 'Methods of Contemporary Sanad Hadith Criticism: (Study on The Understanding Perspective of Middle Eastern Hadith Scholars)', in *Proceedings of the 4th International Colloquium on Interdisciplinary Islamic Studies in Conjunction with the 1st International Conference on Education, Science, Technology, Indonesian and Islamic Studies, ICIIS and ICESTIIS 2021, 20-21 October 2021, Jambi* (EAI, 2022), doi:10.4108/eai.20-10-2021.2316330.

[77] Sukino Sukino and Fauzan Fauzan, 'Islamic Education's Responses to Social Changes and Community Behaviors', *TARBIYA: Journal of Education in Muslim Society*, 2020, pp. 29–47, doi:10.15408/tjems.v7i1.16717.

When these two approaches are combined, new validation methods emerge that:Analyze who conveys information (credibility); Trace where the information came from and how it traveled (origin and continuity); Compare the content of information across sources and approaches (coherence and consistency); Understand the social, political, and cultural context of the information.

Integration Process: New Validation Steps

Source Validation	The credibility of the narrator (ʿadālah, ḍabṭ)	Source triangulation	Tracing the credibility of informants from various historical and social dimensions
Content Validation	Eye test (content of hadith)	Data/narrative triangulation	Checking the consistency of the content of various narratives or data
Chain/Network Validation	Ittishāl (Narrator Chain)	Researcher/method triangulation	Analysis of information paths through social networks (network tracing)
Context Validation	The social condition of the narrator	Data collection context	Assessment of information based on space, time, and socio-cultural situation
Purpose	Authenticity	Reliability	Layered validation: authentic and trustworthy

Results of the New Validation Method

The findings indicate that *sanad* criticism enhances triangulation by introducing more stringent criteria for evaluating source credibility and ensuring the traceability of information transmission. At the same time, triangulation strengthens *sanad* criticism by providing empirical and contextual validation through the verification of data across multiple methods and sources. The integration of these two approaches produces a layered validation framework capable of simultaneously verifying the authenticity of historical narratives and assessing the consistency of empirical social data. This integrated model is particularly relevant for socio-religious research contexts in which religious narratives play a significant role in shaping social behavior, collective memory, and identity formation. Moreover, the model effectively addresses key limitations of triangulation, especially issues related to subjectivity in source selection and the absence of systematic analysis of information transmission chains. By incorporating *sanad*-based principles, the validation process becomes more transparent, accountable, and methodologically robust. The proposed validation model is particularly applicable to the following research areas: Oral history research, Contemporary hadith studies, Cultural and religious anthropology, and Community-based socio-religious research

C. Conclusion

Based on the foregoing discussion, this study concludes that the foundational concepts of *sanad* criticism and triangulation in data validation are complementary and mutually reinforcing. Although these two approaches originate from distinct epistemological traditions, they share a common objective: ensuring the validity and reliability of information. *Sanad* criticism evaluates data authenticity by tracing the credibility and continuity of narrators, whereas triangulation validates data through systematic cross-checking across sources, methods, and researchers. The convergence of these approaches lies in their shared principles of layered validation, source transparency, and rigorous evaluation of narrative reliability. Integrating *sanad* criticism and triangulation thus results in a more holistic validation model that combines historical rigor with

rich empirical perspectives. This integrated approach is particularly relevant for socio-religious research, where historical narratives, religious authority, and empirical social realities are closely intertwined and require both contextual sensitivity and methodological credibility. Accordingly, this study proposes a new validation framework termed the Layered Validation Method (Sanad–Triangulation). This method synthesizes the ethical and historical verification principles of *sanad* criticism with the empirical, multi-perspective strengths of triangulation. The resulting framework offers a comprehensive, credible, and context-sensitive approach to data validation, contributing meaningfully to the advancement of socio-religious research methodology.

References

Books and Journals

Abd Wahid, Masbur, and Jamalul Mukminin, 'Metode Hadis Shahih Dalam Perspektif Muhammadiyah', *Ta'wiluna: Jurnal Ilmu Al-Qur'an, Tafsir Dan Pemikiran Islam*, 5.2 (2024)

Abdul Gaffar and Maggading Ismail, *Al Jarh Wa al Ta'dil (Kontruksi Aplikatif Terhadap Penilaian Hadis)* (Bintang Pustaka Madani, 2021)

Abou El Fadl, Khaled, *Speaking in God's Name: Islamic Law, Authority and Women* (Oneworld, 2001)

Afrizal, Lalu Heri, 'Selisik Atas Metodologi Kritik Matan Ulama Hadis', *Kalimah: Jurnal Studi Agama Dan Pemikiran Islam*, 14.2 (2016), pp. 191–218, doi:10.21111/klm.v14i2.612

Ahmad, Arifuddin, *Paradigma Baru Memahami Hadis Nabi: Refleksi Pemikiran Pembaharuan Prof. Dr. Muhammad Syuhudi Ismail* (Renaisan, 2005)

Ahmad Syafi'i Ma'arif, *Islam Dalam Bingkai Keindonesiaan Dan Kemanusiaan* (Mizan, 2009)

Aeni, Nurul, and Fakhruddin, 'Management of Media Literacy Education in Islamic Boarding School WALI Salatiga', *Journal of Nonformal Education and Community Empowerment*, 4.2 (2020), doi:10.15294/jnece.v4i2.37350

Al Zahrani, Muhammad bin Matr, *Ilmu Al-Rijalu Nasy'atuhu Wa Tatawuruhu Min al Qarn al Aqqal Ila Nihayah al Qarn al Tasi'*

Al-Attas, Muhammad Naquib, *Islam and Secularism*, 1998, p. 197

Al-Azami, Muhammad Mustafa, *Studies in Hadith Methodology and Literature* (Islamic Book Trust, 2002)

Alim, Nur, and others, 'Kritik Matan Hadis: Validitas Epistimologi Klasik Dan Modern', *El-Mizzi : Jurnal Ilmu Hadis*, 4.1 (2025), pp. 51–73

Arikunto, S., *Prosedur Penelitian: Suatu Pendekatan Praktik* (Rineka Cipta, 2010)

A'zami, Muhammad Diya' al Rahman al, *Dirasat Fi al Jarh Wa al Ta'dil* (Maktabah al-guraba Asariyyah, 1995)

Ayub, "Matn Criticism and its Role in The Evaluation of Hadith Authenticity," *International Journal of Islamic Studies and Humanities* 1, no. 1 (2018). https://doi.org/10.26555/ijish.v1i1.136.

Bin Jamil, Khairil Husaini, 'Who Moved My Sanad? - Another History of Isnād in the Transmission and Conveyance of Ḥadīth and Sunnah.', *JOURNAL OF QUR'AN AND HADITH STUDIES*, 11.1 (2022), pp. 1–18, doi:10.15408/quhas.v11i1.27211

Brown, Jonathan A. C., *Hadith: Muhammad's Legacy in the Medieval and Modern World* (Oneworld Publications, 2009)

Campbell, Donald T., and Julian C. Stanley, *Experimental and Quasi-Experimental Designs for Research* (Houghton Mifflin, 1963)

Creswell, John W., *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (SAGE Publications, 2014)

Denzin, Norman K., *The Research Act: A Theoretical Introduction to Sociological Methods*, 3rd edn (McGraw-Hill, 1978)

Fahyuni, E. F., and others, 'Integrating Islamic Values and Science for Millennial Students' Learning on Using Seamless Mobile Media', *Jurnal Pendidikan IPA Indonesia*, 9.2 (2020)

Faisal Ismail, *Metodologi Studi Islam Dalam Perspektif Ilmu Sosial Dan Humaniora* (Tiara Wacana, 2002)

Gauri, Sayyid 'Abd al Majid al, *Al Muyassar Fi 'ilm al Jarh Wa al Ta'dil*

Harald Motzki, "How We Know Early Hadīth Critics Did Matn Criticism and Why It's So Hard to Find," *Islamic Law and Society* 15, no. 2 (2008): 143–184. https://doi.org/10.1163/156851908X290574.

Harun, Daud Rasyid, and others, 'The Writing of Hadith in the Era of Prophet Muhammad: A Critique on Harun Nasution's Thought', *Al-Jami'ah: Journal of Islamic Studies*, 59.1 (2021), pp. 191–220, doi:10.14421/ajis.2021.591.191-220

Hasan, Suhaib, *An Introduction to the Science of Hadith* (Al-Quran Society, 1994)

Ibn al Salah Abu 'Amr 'Usman ibn 'Abd al-Rahman Al-Syairuzi, *'Ulumul Hadis* (al-Maktabah al-'Ilmiyah, 1972), II

Ilahi, Muhammad Barnaba Ridho, and others, 'Hadith Critics Categories in The Selection of Hadith Narrators: A Comparative Analysis', *Jurnal Ilmiah Al-Mu'ashirah: Media Kajian Al-Qur'an Dan Al-Hadits Multi Perspektif*, 20.2 (2023), pp. 266–75, doi:10.22373/jim.v20i2.16787

Imtyas, Rizkiyatul, Ahmad Hasyim, and Muhammad Helmi, 'Methods of Contemporary Sanad Hadith Criticism: (Study on The Understanding Perspective of Middle Eastern Hadith Scholars)', in *Proceedings of the 4th International Colloquium on Interdisciplinary Islamic Studies in Conjunction with the 1st International Conference on Education, Science, Technology, Indonesian and Islamic Studies, ICIIS and ICESTIIS 2021, 20-21 October 2021, Jambi* (EAI, 2022), doi:10.4108/eai.20-10-2021.2316330

Jafar Assagaf and Abd Wahid, 'Towards a Comprehensive Understanding of Hadith Sciences: Al-Gumari's Reconstruction of Riwayah and Dirayah', *Mashdar: Jurnal Studi Al-Qur'an Dan Hadis*, 6.2 (2023)

Kerlinger, Fred N., *Foundations of Behavioral Research*, 4th edn (Holt, Rinehart and Winston, 2006)

Khatib, Muhammad Ajjaj al-, *Uṣūl Al-Ḥadīth: ʿUlūmuhu Wa Muṣṭalaḥātuhu* (Dar al Fikr, 1989)

Lincoln, Yvonna S., and Egon G. Guba, *Naturalistic Inquiry* (Sage, 1985)

M. Alhafidh Akbar, Abd Wahid, and Taslim HM Yasin, 'The Digital Turn in Ḥadīth Studies: Ethical Foundations and Strategic Directions', El-Sunan: Journal of Hadith and Religious Studies, 3.1 (2025), doi:https://doi.org/10.22373/el-sunan.v3i1.6274.

Mahmud Ṭaḥlān, *Taysīr Muṣṭalaḥ Al-Ḥadīth* (Dar al Fikr, 2004)

Maizuddin M. Nur, "Analisis *Isnad Cum Matn*: Mengukur Kritik Hadis Muslim dan Barat," *Substantia: Jurnal Ilmu-Ilmu Ushuluddin* 18, no. 2 (2016). https://doi.org/10.22373/substantia.v18i2.3009.

Messick, Samuel, 'Validity of Psychological Assessment: Validation of Inferences from Persons' Responses and Performances as Scientific Inquiry into Score Meaning', *American Psychologist*, 50.9 (1995), pp. 741–49

Mohammad Alwi, 'Integrasi Epistemologi Islam Dan Sains Dalam Penelitian Sosial Keagamaan', *Jurnal Studi Agama Dan Masyarakat*, 14.2 (2020), pp. 99–117

Mustin, Hilgha, Muhammad Tasbih, and Zaenab Abdullah, 'Kritik Sanad (Naqd Al-Sanad) Dalam Ilmu Hadis: Metodologi Dan Implementasinya', *Socius: Jurnal Penelitian Ilmu-Ilmu Sosial*, 3.1 (2025), doi:https://doi.org/10.5281/zenodo.16277823

Naurah Adelia and others, 'Digital Takhrij Hadith as Islamic Digital Humanities Reconstructing Epistemic Authenticity and Transmission in the Digital Age', *Digital Muslim Review*, 3.1 (2025), doi:https://doi.org/10.32678/dmr.v3i1.68

Nawawi, Muhy al-Din Abu Zakariyya Yahya al-, *Sahih Muslim Bi Syarh Al-Nawawi* (Maktabat Al-Misriyyah, 1929)

Neuman, W. Lawrence, *Social Research Methods: Qualitative and Quantitative Approaches*, 7th edn (Pearson, 2014)

Nizar Ali, *Memahami Hadis Nabi (Metode Dan Pendekatan)* (YPI Al Rahmah, 2001)

Nurfajriani, Wiyanda Vera, and others, 'Triangulasi Data Dalam Analisis Data Kualitatif', *Jurnal Ilmiah Wahana Pendidikan*, 10.17 (2024), pp. 826–33, doi:10.5281/zenodo.13929272

Nurmaidah, *Pengantar Ilmu Hadits* (Sanabil, 2021)

Nuruddin ʿItr, *Manhaj Al-Naqd Fī ʿUlūm al-Ḥadīth* (Dar al Fikr, 1991)

Noble, Helen, and Roberta Heale, 'Triangulation in Research, with Examples', *Evidence Based Nursing*, 22.3 (2019), pp. 67–68, doi:10.1136/ebnurs-2019-103145

Radhie Munadi, "Menimbang Kaidah Syādz dalam Kritik Hadis: Kerangka Konseptual dan Aplikasinya pada Sanad serta Matan," *Jurnal Ushuluddin: Media Dialog Pemikiran Islam* 28, no. 1 (2026): 13–25. https://doi.org/10.24252/jumdpi.v28i01.65756.

Rahim, Muhammad Rafi'iy, and others, 'Al-Albānī Methodology In Determining The Faith Of Hadith: Study Of The Book Of Irwā Al-Galīl Fī Manār Al-Sabīl By Al-Albānī', *Jurnal Adabiyah*, 22.1 (2022), pp. 45–69, doi:10.24252/jad.v22i1a3

Rahim, Muhammad Rafi'iy, *Manhaj Al-Albani in Establishing the Quality of Hadith* (Repository of UIN Sultan Alauddin Makassar, n.d.)

——, and Muhammad Ismail Maggading, 'Al-Albānī's Methodology in Assigning toṢaḥīhan Hadith on the Book of Genealogy of Al-Ṣaḥīḥah"', *Ihyaussunnah : Journal of Ulumul Hadith and Living Sunnah*, 1.2 (n.d.), pp. 116–41

Rahman, Imelda Putri Hsb, and Maya Fitri Sulastri, "Metodologi Penelitian Hadis: Antara Kritik Sanad dan Matan," *Amsal Al-Qur'an: Jurnal Al-Qur'an dan Hadis* 2, no. 2 (2025): 233–246. https://doi.org/10.63424/amsal.v2i2.348.

Rohman, Thofiqur, Ulul Huda, and Hartono Hartono, 'Methodology of Hadith Research: The Study of Hadith Criticism', *Journal of Hadith Studies*, 2.1 (2020), pp. 73–84, doi:10.32506/johs.v2i1.26

Rolando, Benediktus, and Aylena Manika Zahran, 'ANALISIS SISTEMATIS TERHADAP STANDAR METODOLOGI DAN INSTRUMEN KUALITAS DALAM RISET INTERDISIPLINER BIDANG STUDI AGAMA DI INDONESIA', *IQRA: Inquiry on Religion and Arts*, 1.1 (2025), pp. 1–10

Sahab, Alvin Noor, 'The Urgency Discourse of Matan and Sanad Criticism on Hadith', *JOURNAL OF QUR'AN AND HADITH STUDIES*, 7.2 (2018), pp. 131–50, doi:10.15408/quhas.v7i2.13399

Siswanto, Darul, 'THE PARADIGM OF MATN HADITH CRITICISM AND ITS TRANSFORMATION IN THE MODERN ERA', *ULUL ALBAB Jurnal Studi Islam*, 21.1 (2020), p. 130, doi:10.18860/ua.v21i1.8936

Stainback, Susan Bray, and William C. Stainback, *Understanding & Conducting Qualitative Research* (1988)

Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif, Dan R&D* (Alfabeta, 2017)

Suryadi, Suryadi, 'Rekonstruksi Kritik Sanad Dan Matan Dalam Studi Hadis', *ESENSIA: Jurnal Ilmu-Ilmu Ushuluddin*, 16.2 (2015), pp. 177–86, doi:10.14421/esensia.v16i2.996

Soleh, Komarudin, and Amin Iskandar, 'Metodologi Kritik Dan Pendekatan Dalam Memahami

Hadis', *Jurnal Studi Hadis Nusantara*, 2.2 (2020), p. 174, doi:10.24235/jshn.v2i2.7651

Susanto, Dedi, Risnita, and M. Syahran Jailani, 'Teknik Pemeriksaan Keabsahan Data Dalam Penelitian Ilmiah', *QOSIM : Jurnal Pendidikan Sosial & Humaniora*, 1.1 (2023), pp. 53–61, doi:10.61104/jq.v1i1.60

Syāfiʿī, Abū ʿAbdillāh Muḥammad bin Idrīs asy-, *Al Risalah*, Tahqiq Dan Syarah: Syaikh Ahmad Muhammad Syakir (Maktabah Dar al Turas, 1979)

Sukino, Sukino, and Fauzan Fauzan, 'Islamic Education's Responses to Social Changes and Community Behaviors', *TARBIYA: Journal of Education in Muslim Society*, 2020, pp. 29–47, doi:10.15408/tjems.v7i1.16717

Syuhudi, M., *Metodologi Penelitian Hadis Nabi* (Bulan Bintang, 1992)

——, *Pengantar Ilmu Hadis* (Angkasa, 1991)

Tangareng, Tasmin, 'KEHUJJAHAN HADIS AHAD DALAM MASALAH AQIDAH', *Tahdis: Jurnal Kajian Ilmu Al-Hadis*, 7.1 (2016), doi:10.24252/tahdis.v7i1.7185

Turner, Bryan S., *Religion and Modern Society: Citizenship, Secularisation and the State* (Cambridge University Press, 2011)

Usman, A. Shamad, 'BERBAGAI PENDEKATAN DALAM MEMAHAMI HADIS', *Jurnal Ilmiah Al-Mu'ashirah: Media Kajian Al-Qur'an Dan Al-Hadits Multi Perspektif*, 13.1 (2016), pp. 34–45, doi:10.22373/jim.v13i1.2353

Wahid, Abd, and others, 'Utilizing Zuhd Hadiths For Upper-Class Crime Prevention', *Jurnal Ilmiah Islam Futura*, 23.2 (2023), pp. 263–82, doi:10.22373/jiif.v23i2.17353

Wasman, Mesraini, and Suwendi, "A Critical Approach to Prophetic Traditions: Contextual Criticism in Understanding Hadith," *Al-Jami'ah: Journal of Islamic Studies* 61, no. 1 (2023): 1–17. https://doi.org/10.14421/ajis.2023.611.1-17.

Zamili, Moh, 'MENGHINDAR DARI BIAS: Praktik Triangulasi Dan Kesahihan Riset Kualitatif', *LISAN AL-HAL: Jurnal Pengembangan Pemikiran Dan Kebudayaan*, 9.2 (2015), pp. 283–304, doi:10.35316/lisanalhal.v9i2.97