AN-NUR
INTERNATIONAL JOURNAL OF QURAN & HADITH

The Orthographic Identity of *Rasm 'Uthmānī* in the Qur'an: Tracing Substitution, Hamzah, and Word Structure

Tsania Qothrun Nada[1]*, Siti Nur Faizah[2], Sinta Nuriyah Azzahra[3]

[1,2,3]UIN Sunan Ampel Surabaya, Indonesia

qothrunnada115@gmail.com
stnurfaizzah901@gmail.com
sintaleee8@gmail.com
* Corresponding Author.

Abstract: This study explores the orthographic characteristics of *Rasm Uthmānī*, the codified Qur'anic script established during the caliphate of 'Uthmān ibn 'Affān, focusing on three core features: *al-Badl* (letter substitution), *Ahkām al-Hamzāt* (rules governing the glottal stop), and *al-Faṣl wa al-Waṣl* (word separation and conjunction). Using a descriptive-linguistic and historical-contextual approach, the research analyzes how these features differ from modern Arabic orthography and how they accommodate phonetic diversity, syntactic fluidity, and theological nuance. The findings reveal that the Uthmānī script's allowance for phonological variation and orthographic flexibility facilitates the preservation of multiple *qirāʾāt* without compromising semantic clarity. This integrative system enables the faithful transmission of the Qur'an's oral and written dimensions across generations. The study concludes that *Rasm Uthmānī* serves not only as a static textual representation but also as a dynamic tool for interpreting the linguistic and theological foundations of the Qur'anic message. Its continued relevance in pedagogical and scholarly contexts underscores the enduring significance of early Islamic textual engineering.

Keywords: *Rasm 'Uthmānī, Qur'anic orthography, Word connection, Letter substitution*

INTRODUCTION

The standardization of the Qur'anic manuscript during the caliphate of Uthman ibn Affan represents one of the most pivotal moments in Islamic history. In the period immediately following the Prophet Muhammad's death, the Qur'an existed in both written fragments and the memories of his companions. As Islam rapidly expanded beyond the Arabian Peninsula, differences in Qur'anic recitations and regional dialects began to emerge. These variations, if left unchecked, posed a risk to the unity of the Muslim ummah and the

integrity of the Qur'anic text itself. In response, Uthman ibn Affan initiated a comprehensive effort to unify the Qur'anic script by commissioning a select committee of companions, led by Zaid ibn Thabit, a close scribe of the Prophet. This committee meticulously reviewed and compiled the Qur'anic material to produce a standardized codex known as the *Mushaf Uthmani*, ensuring the preservation of the divine text in a uniform manner (Inayatullah & Safruroh, 2024; Shabana et al., 2023).

The resulting orthographic system—later known as *Rasm Uthmani*—was distinct not only in its historical context but also in its linguistic methodology. This script avoided the use of diacritical marks and vowel notations (harakat), relying instead on the context and oral transmission to convey correct pronunciation and meaning. Unlike the later-developed *Rasm Imla'i*, which introduced full vowelization for phonetic clarity, especially for non-native Arabic speakers, the Uthmani script retained a minimalist form. It preserved the raw consonantal structure of the Qur'an and thus required readers to have a deep familiarity with Qur'anic recitation and interpretive tradition. The contrast between these two orthographic systems illustrates not just a technical divergence but a philosophical one: *Rasm Uthmani* was rooted in memorization and sacred trust, while *Rasm Imla'i* responded to practical pedagogical needs (Ismail, 2019; (al-Tawḥīdī, 2021).

Embedded in this orthographic framework is a theological significance that elevates *Rasm Uthmani* beyond its technical function. For many traditionalist scholars, this script is regarded as *taufiqi*—that is, divinely sanctioned rather than a product of mere human consensus. This belief implies that the manner in which the Qur'an was codified reflects divine guidance, not just historical circumstance. As a result, the *Mushaf Uthmani* is seen not merely as a physical manuscript but as a tangible link to the Prophet's revelation, preserved through divine providence. This sacredness attached to the Uthmani codex reinforces Muslim conceptions of the Qur'an's inerrancy and absolute authenticity (Shabana et al., 2023; Anwar, 2003).

The preservation of *Rasm Uthmani* has proven crucial in maintaining consistency in the Qur'anic text across time and geography. Despite the lack of vocal markings, the Mushaf has remained intact due to strong traditions of memorization and community-based recitation. These oral traditions, safeguarded by institutions such as *madrasas*, local scholars, and transmission chains (*isnad*), have ensured the fidelity of Qur'anic pronunciation over generations. The continued use of *Rasm Uthmani* in regions such as Southeast Asia (Nusantara), where Arabic is not the native tongue, attests to its resilience and adaptability. The adoption of this script in Qur'anic publications across diverse linguistic communities strengthens shared practices and bridges cultural divides among Muslims (Zaini & Jusoh, 2022; Rosa et al., 2023).

Central to the standardization of the Qur'an was the role played by Zaid ibn Thabit and his fellow Quraysh scribes. Their selection was not incidental. As members of the Prophet's tribe, the Quraysh possessed an intimate knowledge of the Arabic dialect in which the Qur'an was revealed. Their linguistic expertise ensured that the standard script conformed to classical norms while honoring the phonetic characteristics of the original revelation. Zaid, who had earlier compiled the Qur'an during the caliphate of Abu Bakr following the Battle of Yamama, brought both familiarity and methodological rigor to the task. The involvement of Quraysh scribes further legitimized the script's authority and provided a dialectical continuity to the Qur'anic text (Rohmah, 2018; Putra et al., 2023).

Nonetheless, scholarly opinions differ on the classification of *Rasm Uthmani* within the broader field of Qur'anic studies. The prevailing *taufiqi* view maintains that the script is

immutable and should not be altered, reflecting the sanctity of divine preservation. This perspective is widely accepted in traditional circles, emphasizing the Qur'an's divine origin and unchanging nature. On the other hand, a minority of scholars adopt an *ijtihadi* (interpretive) stance, suggesting that while *Rasm Uthmani* has immense historical and theological value, certain adaptations in orthographic practice may be permissible to meet contemporary needs. This includes the possibility of accommodating modern readers or contexts without compromising the text's meaning or sanctity. Such debates reveal the dynamic tension between fidelity to tradition and interpretative flexibility in Qur'anic scholarship (Rohmah et al., 2024; Putra et al., 2023; Sari et al., 2025).

In light of this complexity, this study aims to examine three specific characteristics of the *Rasm Uthmani* system: al-Badl (letter substitution), Ahkam al-Hamzat (rules of glottal stop representation), and al-Fasl wa al-Wasl (word separation and connection). These features illustrate the intricate linguistic and phonological design of the Qur'anic text as transmitted in the Uthmani codex. The novelty of this study lies in its focused exploration of these elements within the theological framework of *taufiqi* authority. By engaging with both classical texts and modern scholarship, this study seeks to offer a comprehensive understanding of how *Rasm Uthmani* functions as both a linguistic system and a theological artifact.

Furthermore, the scope of this study is limited to orthographic analysis without delving into variant readings (*qira'at*), allowing for a concentrated examination of script-based phenomena. The article aims to contribute to the field of Qur'anic sciences by reaffirming the unique value of *Rasm Uthmani* as a preserved model of divine articulation, illustrating its role in sustaining a unified Islamic identity through textual cohesion.

METHOD

This study employs a multi-method approach grounded in classical and contemporary scholarship to analyze the orthographic features of *Rasm Uthmānī*. Foundational references such as *Al-Muyassar fī ʿIlm Rasm al-Muṣḥaf* by Ghanim Qaddury and *Manāhil al-ʿIrfān* by al-Zarqānī offer detailed explanations of core conventions including *al-Badl*, *Ahkām al-Hamzāt*, and *al-Faṣl wa al-Waṣl*, while the *Mushaf Uthmānī* itself serves as the primary textual object for direct observation. These are supported by modern comparative studies on *Rasm Uthmānī* and *Rasm Imlāʾī*, which contextualize the orthographic system both linguistically and theologically (Nirwana et al., 2024; Madzkur, 2012; Zaini & Jusoh, 2022).

The analysis follows a descriptive linguistic approach to identify and classify orthographic forms, especially letter substitution, hamzah placement, and structural peculiarities, without enforcing modern normative judgments. This is supplemented by comparative inquiry, which contrasts how *Rasm Uthmānī* privileges oral tradition and unity of recitation, while *Rasm Imlāʾī* emphasizes pedagogical clarity, especially for non-native learners (Rozi & Hasanah, 2023; Ismail, 2019). These contrasts reveal how each script responds to pedagogical, regional, and theological concerns (Putra et al., 2023).

A historical-contextual lens helps trace how sociolinguistic and political factors during the early Islamic period influenced orthographic choices. The standardization under Caliph ʿUthmān, led by Zayd ibn Thābit, reflects strategic efforts to unify the Muslim community through a consistent, yet flexible, written Qur'anic form (Rohmah, 2018; Rosa et al., 2023). Finally, while this study remains rooted in classical textual analysis, it acknowledges the emerging role of computational philology in enhancing large-scale manuscript analysis.

Although not applied directly here, such digital methods offer promising tools for future research (Boudraa et al., 2024).

FINDING AND DISCUSSION

Orthographic Substitution (*al-Badl*)

Orthographic substitution, or *al-Badl*, stands as one of the defining features of the Uthmani script, reflecting the intricate relationship between phonological variance, dialectal influence, and theological preservation in Qur'anic orthography. As employed in the *Mushaf Uthmani*, *al-Badl* involves the systematic replacement of certain letters with others based on phonetic, morphological, or traditional considerations. Unlike modern *Rasm Imla'i*, which standardizes spelling and pronunciation, *Rasm Uthmani* preserves a more fluid and context-sensitive representation of the Qur'an's linguistic landscape.

The primary forms of *al-Badl* observed in Uthmani script include the substitution of ya' or waw with alif, and vice versa, reflecting phonetic elongation or morphological origins. For instance, the replacement of ya' with alif is prevalent in instances where the original root may indicate a ya' consonant but is rendered in script as alif for aesthetic or phonetic considerations. Words such as هُدَىٰ (*hudā*) and عَمَىٰ (*'amā*) demonstrate how the alif is written in place of ya', suggesting a specific morphological root while guiding the reader toward a preferred recitation style. In other cases, as in هُوَٰهُ (*huwāhu*), the presence of alif conveys an elongated vowel effect that aligns with the oral tradition (Bursi, 2018).

Another prominent example of substitution is the replacement of ṣād with sīn in specific phonological environments. Words like صراط (*ṣirāṭ*) appear in the Uthmani script with a sīn-based orthography in some recitations, such as سراط, especially within the Warsh and Qālūn traditions. Such substitution is not merely arbitrary but reflects accepted variations in *qira'at* and dialectical pronunciation patterns that were preserved during the codification process. This phenomenon highlights the Uthmani script's dual role: preserving oral diversity while maintaining visual consistency that unifies the Muslim ummah through a shared text.

Further examples of *al-Badl* include the substitution of tanwin or nunation with alif, which often occurs in accusative grammatical cases (*mansub*) lacking the feminine ta' (*ta' marbūṭah*). This feature is most notably seen in expressions such as غَفُورًا رَحِيمًا (*ghafūran raḥīman*), where the tanwin is represented by a final alif. This orthographic choice indicates the word's grammatical role while also aiding rhythm and meter in recitation, consistent with Qur'anic phonology (Abbas et al., 2023).

The Uthmani script also exhibits substitution involving *ha' ta'nits* replaced by *ta' maftuhah,* such as in the words رَحْمَت (*raḥmat*) and نِعْمَت (*ni'mat*), which typically end with an open ta' in the Uthmani script instead of a closed ha'. This form serves a dual function: it reflects the underlying morphology of the word and connects with traditional Qura'nic recitation that preserves such pronunciations. Collectively, these orthographic features form a unique system that resists oversimplification while inviting deeper textual engagement.

The flexibility observed in these substitutions supports the theological function of *Rasm Uthmani*. Through *al-Badl*, the script accommodates various *qira'at*, or canonical readings, without altering the semantic core of the Qur'anic message. This capacity to encompass legitimate variation is crucial in Qur'anic studies, as it allows for the preservation of regional and historical dialects within the same scriptural framework. Barzilai (2019) underscores that such orthographic plurality is considered part of divine wisdom, enabling the Qur'an to

resonate with diverse communities while reinforcing its unifying role across cultures and geographies.

Moreover, the preservation of multiple readings through orthographic substitution upholds a crucial interpretive tradition in Islam. The differences in recitation, rooted in authenticated chains of transmission, often lead to variant expressions of divine meaning without contradiction. For instance, the reading of *maliki* versus *māliki* in Sūrah al-Fātiḥah carries theological nuances—authority versus ownership—both of which are embraced within Islamic exegesis. The orthographic system, through strategic substitutions like *al-Badl*, reflects this inclusivity, preserving both semantic richness and phonological authenticity (Khalifa et al., 2016). The Uthmani script's lack of full diacritical marks and vowels places significant interpretative responsibility on the reader, requiring mastery of context and oral tradition. This design emphasizes the living nature of the Qur'an—its preservation is not merely textual but also embodied through recitation and memorization. Such reliance on context, rather than visual cues alone, reflects the script's dynamic functionality, bridging the historical depth of classical Arabic with the evolving needs of Qur'anic pedagogy (Awadh et al., 2016).

Representation of the Glottal Stop (*Ahkam al-Hamzat*)

The representation of the glottal stop (*hamzah*) in *Rasm Uthmānī* adheres to classical Arabic grammatical rules while displaying remarkable adaptability to oral recitation practices. Unlike modern orthographies that mark *hamzah* uniformly, *Rasm Uthmānī* allows for contextual flexibility. In initial positions, *hamzah* is commonly written above *alif* and marked with short vowels as in *amr*, *akhadha*, and *anzala*. However, when certain grammatical particles like *lām* are present, as in *la-in*, the *alif* may be omitted for fluidity. Similarly, interrogative *hamzah* in *aʾanzala* may result in the visual reduction to a single *alif*. In canonical constructs like *bismi Allāh*, the *hamzah waṣl* is entirely absent from the script, further affirming the primacy of oral transmission over orthographic uniformity in *Rasm Uthmānī*.

This variability becomes more prominent in medial and final positions. In medial cases, the form of *hamzah* depends on the vowel of the preceding letter: following *ḍammah*, it is written over *wāw* (e.g., *yuʾfakūn*); after *kasrah*, it sits on *yāʾ* (*suʾilat*); and after *fatḥah*, over *alif* (*saʾala*). When preceded by a consonant with *sukūn*, it may be left unmarked, such as in *al-afʾidah*. Words like *abnāʾukum* demonstrate how *hamzah* following *alif* may lead to the omission of a second *alif* to maintain phonetic clarity. In final positions, *hamzah* follows similar rules, appearing over *yāʾ*, *wāw*, or *alif* depending on the preceding vowel, as in *shayʾin*, *luʾluʾ*, and *qaraʾa*. In cases where the preceding letter is silent, the *hamzah* may be written independently or omitted, as in *shayʾ*, which reinforces the need for mastery of recitation beyond visual cues.

The stylization, placement, or omission of *hamzah* carries theological and pedagogical significance. Misrepresentation can lead to altered meanings, such as confusing *ilāh* (God) with *ilāhu* (his deity). For non-native speakers, consistent marking is crucial in pedagogical contexts, often necessitating complementary use of vowelized *Rasm Imlāʾī* forms. Scholarly debate further complicates *hamzah*'s classification: many scholars treat it as a full letter (*ḥarf*), while figures like al-Mubarrid consider it a diacritical mark (*dhabt*), and Ibn Khalīl describes it as *raʾs al-ʿayn aṣ-ṣughrā*, symbolizing its hybrid nature. This mirrors *Rasm Uthmānī*'s broader objective of balancing phonetic integrity with orthographic subtlety. The script's treatment of *hamzah* allows for the preservation of multiple *qirāʾāt*, enriching interpretive possibilities while maintaining textual unity. As such, *hamzah* in *Rasm Uthmānī* operates as a convergence point

of linguistic, theological, and pedagogical traditions that define the Qur'anic textual experience.

Word Separation and Connection (al-Faṣl wa al-Waṣl)

The principle of *al-faṣl wa al-waṣl*—the separation and conjunction of words—is a defining aspect of *Rasm Uthmānī*, representing not only an orthographic convention but also a linguistic philosophy grounded in the fusion of syntax, morphology, phonology, and theology. In contrast to modern Arabic writing, where word boundaries are determined largely by grammatical regularity, *Rasm Uthmānī* exhibits a nuanced treatment of word division, selectively joining or separating words based on rhythmic flow, phonetic cohesion, and sacred textual integrity. These decisions are governed by grammatical logic and informed by the oral recitation tradition (*tajwīd*), making them essential for both textual accuracy and recitational fluency (Shalabī, nd).

In *Rasm Uthmānī*, the decision to join or separate words depends significantly on their morphological structure and grammatical relationship. Words that form prepositional or conjunctive constructions are often joined to reflect syntactic unity. For example, prepositions such as *fī* (في) or *li-* (لـ) are typically attached to the nouns or pronouns that follow them, indicating their close grammatical and semantic connection. Similarly, prefixes like *bi-* and *ka-* are frequently joined with their governed terms. Yet, the Uthmānī script occasionally separates words even when morphological rules would suggest otherwise. This practice arises especially in cases where phonological clarity and rhythmic cadence are prioritized, as in the example of *fī mā* (في ما), which may be joined or separated depending on the context and the presence or absence of *idghām* (assimilation).

The phenomenon of *idghām* plays a crucial role in shaping orthographic patterns related to *al-waṣl*. *Idghām* refers to the assimilation of one consonant into another, typically when two similar or compatible letters occur consecutively. This phonetic merging is common in Qur'anic recitation and is often mirrored in the writing system of *Rasm Uthmānī*. A classical example is the phrase *an lā* (أن لا), where the assimilation of the *nūn* into the following *lām* may lead to a joined or separated form depending on recitational needs. In Sūrah al-A'rāf (7:62), the phrase *ḥaqīqun ʿalā an lā aqūla ʿalā Allāh* (حَقِيقٌ عَلَى أَنْ لَا أَقُولَ عَلَى اللَّهِ) demonstrates such flexibility, where *an lā* is separated despite the close syntactic link, preserving phonetic flow and semantic clarity (Shāliḥ, nd).

Orthographic representation also takes into account the sanctity of certain words, particularly divine names. The word *Allāh* (الله) is treated with particular reverence and orthographic distinction in *Rasm Uthmānī*. When combined with grammatical elements, its representation may vary to maintain theological integrity and visual prominence. For instance, phrases like *wa lillāhi* (وَلِلَّهِ) demonstrate elision of alif due to phonological reasons, yet they retain morphological precision and theological emphasis. This reflects how sacred semantics influence orthographic choices, reinforcing the spiritual dimensions of scriptural preservation.

The manuscript also records exceptions in cases where word division challenges syntactic expectations. In Sūrah al-Nisā' (4:66), the phrase *wa idhan la'ātaynāhum* (وَإِذًا لَّآتَيْنَاهُم) displays separation between *idhan* and *la'ātaynā*, despite their functional contiguity. Similarly, in Sūrah al-Isrā' (17:73), the phrase *wa idhan la'adhqannāka* (وَإِذًا لَّأَذَقْنَاكَ) follows a comparable pattern. These examples reveal how *Rasm Uthmānī* accommodates context-sensitive distinctions, reflecting both rhythmic beauty and interpretive complexity embedded in the text.

Additionally, compound and emphatic expressions often employ separation to highlight distinct lexical elements. In Sūrah al-Baqarah (2:234), the phrase *fī mā faʿalna* (فِي مَا فَعَلْنَ) appears in a separated form to preserve the individual semantic units and emphasize causality. This use of separation allows for syntactic clarity while aiding memorization and melodic balance during recitation. Conversely, in expressions such as *fīmā kuntum fīhi* (فِيمَا كُنتُمْ فِيهِ), the joining of *fī* and *mā* is retained, reflecting a unified conceptual structure.

These orthographic choices in *Rasm Uthmānī* are not merely visual conventions but serve a deeper linguistic and pedagogical function. They reflect a sophisticated understanding of how word boundaries affect not only recitational flow but also semantic interpretation. The deliberate joining or separation of words provides interpretive cues that support both exegetical analysis and oral transmission. According to Hula and Kasim (2021), such distinctions embody a harmonization of grammar, rhythm, and theology—where the written form of the Qurʾan sustains the nuances of divine language across recitational styles and cultural contexts.

Contemporary scholarship also acknowledges the relevance of these orthographic practices in analyzing Qurʾanic syntax. The interplay between written structure and spoken recitation reveals patterns that help scholars uncover deeper meanings within verses. Pasichnyk et al. (2021) argue that the Uthmānī approach to word boundaries enhances our understanding of Arabic linguistic development by demonstrating how orthography interacts with semantic coherence, rhythm, and grammar. As such, *Rasm Uthmānī* not only preserves the textual integrity of the Qurʾan but also serves as a dynamic tool for linguistic analysis and theological reflection.

Al-faṣl wa al-waṣl in *Rasm Uthmānī* represents a deliberate system of orthographic regulation that transcends mere spelling conventions. It is a framework designed to uphold the Qurʾan's oral authenticity, grammatical structure, and theological depth. By allowing selective flexibility in word connection and separation, the Uthmānī script enables both reciters and scholars to engage with the Qurʾan in a manner that honors its complexity and sanctity, reaffirming its status as a living text that bridges the past and present.

CONCLUSION

The study of orthographic characteristics in *Rasm ʿUthmānī*—particularly the practices of *al-badl* (letter substitution), *aḥkām al-hamzāt* (rules of the glottal stop), and *al-faṣl wa al-waṣl* (separation and conjunction of words)—demonstrates the script's intricate balance between phonological fidelity and theological preservation. Through these orthographic mechanisms, the ʿUthmānī script upholds the authenticity of the Qurʾanic text across diverse readings (*qirāʾāt*), dialects, and recitational styles. The flexibility afforded by substitutions such as *yāʾ* for *alif*, or the variable representation of *hamzah*, reflects a deliberate linguistic philosophy that values oral transmission while maintaining visual integrity. These features allow the script to adapt to morphological and phonetic variations without compromising the unity and sanctity of the sacred text.

Moreover, the findings affirm that *Rasm ʿUthmānī* is not merely a scriptural artifact but a living orthographic system imbued with religious authority and historical continuity. Its treatment of sound-symbol correspondence, contextual variation, and syntactic structuring through word junctions and separations reveals a profound harmony between written form and spoken tradition. The study also highlights how the ʿUthmānī script contributes to broader understandings of Arabic linguistic heritage, offering scholars and readers a model of divine

communication that transcends textual literalism. Thus, *Rasm ʿUthmānī* serves not only as a tool of textual preservation but as a dynamic interface through which believers engage with the Qur'an's enduring message across generations and geographies.

REFERENCES

Abbas, N., Qassim, T., & Jasim, H. (2023). Request constructions in classical Arabic versus modern Arabic: A corpus-based study. *Journal of Ethnic and Cultural Studies*, 1–15. https://doi.org/10.29333/ejecs/1598

Abu-Rabia, S. (2002). Reading in a root–based–morphology language: The case of Arabic. *Journal of Research in Reading*, 25(3), 299–309. https://doi.org/10.1111/1467-9817.00177

AlSunbul, E. (2023). The studies of Qur'anic recitation according to Ibn Taghri in his unpublished manuscript *Fatih al-Bārī fīmā yaḥtāju ilayhi al-muqriʾ wa al-qāriʾ*. *Revista De Gestão E Secretariado*, 14(10), 16898–16916. https://doi.org/10.7769/gesec.v14i10.2816

Anwar, H. (2003). Kontroversi seputar wacana mushaf 'Utsman. *Refleksi*, 5(1), 1–18. https://doi.org/10.15408/ref.v5i1.40454

Awadh, F., Phénix, T., Antzaka, A., Lallier, M., Carreiras, M., & Valdois, S. (2016). Cross-language modulation of visual attention span: An Arabic-French-Spanish comparison in skilled adult readers. *Frontiers in Psychology*, 7. https://doi.org/10.3389/fpsyg.2016.00307

al-Tawḥīdī, Yaḥyā Manāf Amīn Qādir. (2021). *Kayfiyyat jamʿ al-Qurʾān al-karīm: Dirāsah waṣfiyyah taḥlīliyyah. Journal of Arts, Literature, Humanities and Social Sciences*, *(68)*, 1–20. https://doi.org/10.33193/JALHSS.68.2021.497

Barzilai, M. (2019). Templaticity effects on differential processing of consonants and vowels. *Laboratory Phonology Journal of the Association for Laboratory Phonology*, 10(1). https://doi.org/10.5334/labphon.180

Boudraa, M., Bennour, A., Mekhaznia, T., Alqarafi, A., Marie, R., Al-Sarem, M., & Dogra, A. (2024). Revolutionizing historical manuscript analysis: A deep learning approach with intelligent feature extraction for script classification. *Acta Informatica Pragensia*, 13(2), 251–272. https://doi.org/10.18267/j.aip.239

Bursi, A. (2018). Connecting the dots: Diacritics, scribal culture, and the Qurʾān in the first/seventh century. *Journal of the International Qur'anic Studies Association*, 3(1), 111–157. https://doi.org/10.1515/jiqsa.3.2018.a005

Hermawan, W., & Putra, A. (2023). Manuskrip mushaf Al-Qur'an Kerajaan Lingga di Pulau Penyengat Kepulauan Riau: Analisis sejarah, rasm, dan qirāʾāt. *Qof*, 7(1), 81–102. https://doi.org/10.30762/qof.v7i1.994

Hula, I., & Kasim, A. (2021). Al-qawāʿid al-sittah dalam rasm al-mushaf (six rules of rasm and the uniqueness in Qur'an). `*A Jamiy: Jurnal Bahasa dan Sastra Arab*, 10(2), 385. https://doi.org/10.31314/ajamiy.10.2.385-418.2021

Hula, I., & Mala, A. (2021). Al-furūq al-ḍabṭiyyah bayna al-rasm al-muṣḥafī wa al-rasm al-imbalāʾī. *Al-Lisan*, 6(1), 85–111. https://doi.org/10.30603/al.v6i1.1930

Inayatullah, A., & Safruroh, S. (2024). Kodifikasi Al-Qur'an: Studi analisis sejarah. *Pelita*, 2(1), 18–27. https://doi.org/10.38073/pelita.v2i1.1864

Ismail, I. (2019). Sistematika mushaf Al-Qur'an. *Ta Dibia: Jurnal Ilmiah Pendidikan Agama Islam*, 8(1), 85. https://doi.org/10.32616/tdb.v8.1.152.85-94

Kahila, M., Nasir, H., Sabry, M., Malik, F., & Has, M. (2024). Husainnasir. *Living Islam: Journal of Islamic Discourses*, 7(1). https://doi.org/10.14421/lijid.v7i1.4804

Khalifa, S., Habash, N., Abdulrahim, D., & Hassan, S. (2016). A large scale corpus of Gulf Arabic. https://doi.org/10.48550/arxiv.1609.02960

Laqam, A. (2020). Sīmiyāʾ al-ʿalāmah al-iʿrābiyyah fī al-dars al-lughawī al-ḥadīth: Dirāsah taḥlīliyyah taṭbīqiyyah ʿalā qaṣīdat Īlyādhat ʿUmān. *Majallat Kullīyat al-Lughah al-ʿArabiyyah bi-Itāy al-Bārūd*, 33(4), 3897–3990. https://doi.org/10.21608/jlt.2020.123658

Madzkur, Z. (2012). Legalisasi rasm 'Uthmani dalam penulisan Al-Qur'an. *Journal of Qur'an and Hadith Studies*, 1(2), 215–236. https://doi.org/10.15408/quhas.v1i2.1325

Murphy, F., & Nile, R. (2012). Writing, remembering and embodiment: Australian literary responses to the First World War. *M/C Journal*, 15(4). https://doi.org/10.5204/mcj.526

Nashoiha, I., & Widayati, R. (2022). Form, consistency and relevance of dhabṭ in Qur'an manuscript at Museum of Sunan Drajat Lamongan East Java. *Jurnal Studi Ilmu-Ilmu Al-Qur'an dan Hadis*, 23(2), 285–310. https://doi.org/10.14421/qh.v23i2.3571

Nirwana, A., Fahmi, A., Marshal, F., Maulana, C., & Fadli, N. (2024). Methods of Qur'an research and Quran tafseer research: Its implications for contemporary Islamic thought. *Bir*, 2(1), 33–42. https://doi.org/10.69526/bir.v2i1.34

Pasichnyk, N., Hotsa, N., Kosenko, A., Plavutska, O., & Bloshchynskyi, I. (2021). Category of negation paradigm in diachrony. *Linguistics and Culture Review*, 5(S2), 1226–1235. https://doi.org/10.21744/lingcure.v5ns2.1701

Putra, A., Yasir, M., Husin, N., & Akram, N. (2023). The textological analysis of the Qur'anic manuscript written by Syekh Muhammad Said Ranah Kumpai Kampar Riau. *Dinika Academic Journal of Islamic Studies*, 8(1), 69–91. https://doi.org/10.22515/dinika.v8i1.6678

Rozi, F., & Hasanah, S. (2023). Implementation of the Yanbu'a method in improving students' Qur'an reading fluency. *Alsys*, 3(6), 669–678. https://doi.org/10.58578/alsys.v3i6.1988

Rohmah, L. (2018). Kajian terhadap rasm dalam naskah mushaf Al-Qurʾān Madura. *Al-Itqan: Jurnal Studi Al-Qur'an*, 4(2), 27–54. https://doi.org/10.47454/itqan.v4i2.683

Rohmah, N., Syatta, M., Zahrah, U., & Chaudittisreen, N. (2024). The concept of iʿjāz rasm of the Qur'an according to M. Syamlūl on the words ḥasanāt and sayyiʾāt in the Qur'an. *Jurnal Ilmu Agama*, 25(2), 224–233. https://doi.org/10.19109/jia.v25i2.24799

Rosa, E., Wendry, N., & Hanif, M. (2023). Kaidah rasm dalam manuskrip mushaf Al-Qur'an Nagari Tuo Pariangan. *Alqudwah*, 1(2), 108. https://doi.org/10.24014/alqudwah.v1i2.25446

Sari, N., & Putra, B. (2025). Analisis rasm terhadap manuskrip Al-Qur'an kuno karya Syaikh Ibrahim Mufti di Surau Tuo Kabupaten Lima Puluh Kota. *Al-Fahmu: Jurnal Ilmu Al-Qur'an dan Tafsir*, 4(1), 27–40. https://doi.org/10.58363/alfahmu.v4i1.249

Shabana, R., Siddiqui, M., & Taiba, S. (2023). Prevailing legacy of the Khulāfa-e-Rāshidīn: Their enduring influence on present age Islamic governance. *Al-Qamar*, 105–118. https://doi.org/10.53762/alqamar.06.02.e08

Shalabī, ʿA. F. I. (n.d.). *Rasm muṣḥaf ʿUthmānī wa awhām al-musytashriqīn*. Dār al-Manārah.

Shāliḥ, ʿA. K. I. ʿA. (n.d.). *Al-muṭāf fī rasm al-muṣḥaf*. Dār al-Ṣaḥābah.

Yahya, M., & Aini, A. (2017). Karakteristik dan fragmen sejarah manuskrip mushaf Al-Qur'an Dolah Bakri Bantul. *Mutawatir*, 7(2), 235–262. https://doi.org/10.15642/mutawatir.2017.7.2.235-262

Zaini, M., & Jusoh, N. (2022). Problematika penulisan Al-Qur'an dengan rasm Uthmani pada Al-Qur'an cetakan Indonesia dan Malaysia. *Tafse: Journal of Qur'anic Studies*, 5(1), 155. https://doi.org/10.22373/tafse.v5i1.12508