

Toward an Integrative Framework: Classical, Functional and Transformational-Generative Nahwu in Modern Arabic Studies

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Abstract

This study examines the conceptual relationship between Functional Grammar (al-Nahw al-Wazifi) and Transformational-Generative Grammar Theory in contemporary Arabic language studies. It aims to propose an integrative grammatical framework that bridges communicative functions and the cognitive mechanisms underlying sentence formation. This research employs a qualitative-descriptive design based on library research. The data resources consisted of classical Arabic grammar texts, modern linguistic books, and peer-reviewed journal articles published between 2020–2025 concerning Functional Grammar and Transformational-Generative Theory. Data analysis follows the XLR framework, consisting of three stages: eXtracting key theoretical concepts from selected literature, Linking the two grammatical approaches through systematic comparison, and Reasoning toward an integrative theoretical synthesis. The findings reveal that Functional Grammar provides a context-sensitive model for analyzing communicative roles and discourse meaning, while Transformational-Generative Grammar explains the structural and cognitive mechanisms underlying syntactic variation. Rather than representing opposing paradigms, both approaches are complementary and mutually reinforcing. The study concludes that neither approach alone is sufficient to explain the complexity of Arabic grammar; instead, their integration offers a more comprehensive analytical model that accommodates form, function, and generative structure simultaneously. This integrative framework has important implications for Arabic language pedagogy, religious and literary text analysis, and the advancement of Arabic computational linguistics, particularly in Natural Language Processing (NLP).

Keywords: Functional Grammar, Transformational-Generative Grammar Theory, Grammatical Framework, Contemporary Arabic Studies

مستخلص

تتناول هذه الدراسة العلاقة المفاهيمية بين النحو الوظيفي ونظرية النحو التحويلي التوليدي في الدراسات العربية المعاصرة، وتهدف إلى اقتراح إطار نحوي تكاملي يجمع بين الوظائف التواصلية والآليات المعرفية الكامنة وراء تكوين الجملة. وتعتمد هذه الدراسة المنهج الوصفي النوعي القائم على البحث المكتبي. وقد تمثلت مصادر البيانات في كتب النحو العربي التراثية، والمؤلفات اللغوية الحديثة، والمقالات العلمية المحكمة المنشورة خلال الفترة ما بين (٢٠٢٠-٢٠٢٥م)، والمتعلقة بالنحو الوظيفي والنظرية التحويلية التوليديّة. وقد جرى تحليل البيانات وفق إطار XLR الذي يتكون من ثلاث مراحل، وهي: الاستخراج

(eXtracting) للمفاهيم النظرية الرئيسة من الأدبيات المختارة، والربط (Linking) بين المقاربتين النحويتين من خلال المقارنة المنهجية، والاستدلال (Reasoning) وصولاً إلى بناء صياغة نظرية تكاملية. وكشفت نتائج الدراسة أن النحو الوظيفي يقدم نموذجاً تحليلياً حساساً للسياق في تفسير الأدوار التواصلية والمعاني الخطابية، في حين تفسر النظرية التحويلية التوليدية الآليات البنيوية والمعرفية التي تكمن وراء التنوع التركيبي. وأظهرت الدراسة أن هذين الاتجاهين لا يمثلان نموذجين متعارضين، بل هما متكاملان ومتساندان بصورة متبادلة. وتخلص الدراسة إلى أن أيّاً من المقاربتين لا تكفي بمفردها لتفسير تعقيد النحو العربي، بل إن تكاملهما يوفر نموذجاً تحليلياً أكثر شمولاً يستوعب الشكل والوظيفة والبنية التوليدية في آنٍ واحد. ولهذا الإطار التكاملي آثار مهمة في تعليم اللغة العربية، وتحليل النصوص الدينية والأدبية، وتطوير اللسانيات الحاسوبية العربية، ولا سيما في مجال معالجة اللغة الطبيعية (NLP).
الكلمات المفتاحية: النحو الوظيفي؛ نظرية النحو التحويلي التوليدي؛ الإطار النحوي؛ الدراسات العربية المعاصرة

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INTRODUCTION

The development of Arabic grammatical studies has undergone a long trajectory involving shifts in scholarly orientation, analytical methodologies, and the goals of meaning-making within social and academic contexts. In its early phase, classical *nahwu* developed strongly through the traditions of two major centers of learning, namely Basrah and Kufah.¹ Seminal works such as *al-Kitāb* by Sibāwayh² laid the foundational basis for the formulation of Arabic grammatical rules, particularly in categorizing linguistic elements such as *isim* (nouns), *fi'l* (verbs), and *hurūf* (particles), as well as regulating the relationships among sentence elements through *i'rāb*. This approach emphasized a strict and systematic formal structure in the analysis of

¹Basri Mahmud. Persinggungan antara Aliran Basrah dan Aliran Kufa terkait Penentuan Asal dan Furu'dalam Isytiqaq. *Multaqa Nasional Bahasa Arab*, 2.1 (2019), pp. 1-10. <https://munasbauai.com/index.php/mnba/article/view/76>; Muhammad Napis Djuaeni, and Hamzah Hamzah. "قضية الاشتقاق في مجال فقه اللغة العربية: مفهومه وأنواعه والأصل فيه/ Derivation in Arabic Fiqh: Concepts, Types and Origins". *Jurnal Adabiyah*. ٤٠٧-٤٢٨: (٢٠٢١) ٢١, ٢. <https://doi.org/10.24252/jad.v21i2a7>

²Sibawayh. *Al-Kitāb*. (Beirut: Dār al-Kutub al-‘Ilmiyyah, 1988).

classical texts.³ However, as communicative needs and language studies expanded within modern contexts, this approach came to be viewed as insufficient for explaining how language operates in real interactions, contemporary discourse, and the teaching of Arabic as a second language. Social and academic changes, along with developments in modern linguistics, have thus generated a need for more dynamic and contextual approaches capable of bridging grammatical theory and everyday language use.

Within this context, *al-Nahw al-Wazīfī* emerged as a response to the rigidity of traditional grammar. This approach is oriented toward the communicative functions of language and emphasizes the roles of linguistic elements in conveying meaning according to context. Language is no longer understood merely as a static formal structure, but as a system of meaning that comes alive through use. For example, the element *fā'il* (subject) in a sentence is not identified solely on the basis of *i'rāb* and position, but is also viewed as the agent of an action that plays semantic and pragmatic roles within discourse. This approach allows for a deeper understanding of the relationship between linguistic form and communicative intent, making it more relevant to modern Arabic language teaching, which demands communicative competence. Contemporary research indicates that functional approaches help learners understand sentence constructions through context and function rather than mere memorization of rules.⁴

Meanwhile, the introduction of Western linguistics into Arabic language studies particularly transformational grammar theory proposed by Noam Chomsky has provided a new theoretical dimension for understanding linguistic structure.⁵ Transformational theory distinguishes between deep structure as a representation of core meaning and surface structure as the form that appears in speech or writing. Through transformational mechanisms such as active-passive alternation, inversion, ellipsis, and movement, this theory explains how diverse sentence structures can originate from a single underlying meaning. In the context of Arabic, transformational theory contributes to the analysis of complex sentences, the rhetorical style of the Qur'an, and syntactic phenomena such as *taqdīm* and *ta'khīr*. Thus, transformational

³Ahmed, Gamal, Fouad Hashem, Mohammed Y M Mai, Mohammed Abdelaziz, and Ahmed Eltigani. "Taḥlīl Muḥtawā *Al-Nahw* Wa Taqwīmuhū Fī Silsilat Al-'Arabiyyah Bayna Yadayk – Kitāb Al-Ṭalīb Al-Thālith – Fī Ḍaw' Al-Madkhal Al-Wazīfī." *Majallat Al-'Ulūm Al-Tarbawīyyah Wa Al-Nafsiyyah*, 45.6 (2022), pp. 45–70. <https://doi.org/10.26389/AJSRP.K281121>

⁴Abdullah, Iis Susiawati, Dadan Mardani, and Muhammad Faiz Alhaq. "Al-Nahwu Al-Wazhifi Ahmad Al-Mutawakkil Dan Kontribusinya Pada Pengembangan Nahwu Fungsional." *Alibbaa': Jurnal Pendidikan Bahasa Arab* 5.1 (2024), pp. 30–55. <https://doi.org/10.19105/ajpba.v5i1.10970>.

⁵Noam Chomsky, *The Minimalist Program* (Cambridge, MA: MIT Press, 2015), pp. 1–30

theory complements the functional approach by offering tools to understand how sentence structures are formed and varied at theoretical and cognitive levels.⁶

Nevertheless, these two approaches differ in their epistemological orientations. *al-Nahw al-Wazīfī* is descriptive and pragmatic in nature, emphasizing how language is used in real discourse, whereas transformational theory is generative and abstract, aiming to explain the mental rules that enable speakers to produce various sentence forms. This difference does not render the two approaches contradictory; rather, it opens space for methodological integration. Through such integration, communicative functions can be analyzed alongside their underlying structures, allowing language understanding to encompass not only usage but also the mental mechanisms that underlie it. This integration is particularly relevant in contemporary Arabic language teaching, where learners need to understand both contextual language use and the systematic rules that govern sentence formation.

The strength of this study lies in its effort to present a comprehensive account of the relationship between *al-Nahw al-Wazīfī* and Transformational Grammar Theory within contemporary Arabic linguistic studies. By combining the two, the study demonstrates that linguistic inquiry cannot rely solely on a single approach. The functional approach helps reveal the relationship between form and meaning in pragmatic contexts, while transformational theory enables analysis of the generative system underlying sentence variation. The reinforcement of analysis from these two perspectives yields a more holistic understanding, not only at the level of sentence structure but also in terms of the communicative purposes pursued by speakers or writers. Another strength of this study is its applied nature, particularly in the teaching of Arabic as a second language (L2), Qur'anic text analysis, Arabic literature, and the development of computational linguistics such as Arabic Natural Language Processing and treebanking.

Despite these strengths, the study has several limitations. First, it focuses primarily on conceptual and theoretical analysis, and thus its application to spoken language contexts or Arabic dialectal varieties has not been explored in sufficient depth. As a living language, Arabic exhibits phonological, morphosyntactic, and pragmatic variations between *fuṣṣḥā* and *‘āmmiyyah*. Second, the integration of functional and transformational approaches in Arabic language learning still requires classroom-based research to test its effectiveness empirically. Third, the study is limited to certain literary sources; therefore, future research may be directed toward modern Arabic corpus analysis, empirical testing in language instruction, and exploration of language use across diverse communicative situations.

⁶Balkis Aminallah Nurul Mivtakh Hum. "Teori Tata Bahasa Generatif Transformatif Chomsky Serta Aplikasinya Dalam Gramatikal Bahasa Arab." *ALLAIS Journal of Arabic Language and Literature* 2.1 (2023), pp. 67–79. <https://doi.org/10.22515/allais.v2i1.6460>.

Previous scholarship on Arabic grammar can be grouped into three major thematic strands. The first strand concerns studies grounded in classical and traditional nahwu. Research in this category primarily examines the structural principles inherited from the Arabic grammatical tradition and explores their relevance to contemporary linguistic analysis. For example, Mubin et al. applied Chomsky's generative framework to Alfiyah Ibn Malik and demonstrated that several classical Arabic grammatical concepts can be interpreted through modern syntactic theory. Although such studies reveal important correspondences between traditional and modern linguistics, they remain largely focused on formal grammatical structures and provide limited discussion of communicative functions within discourse.⁷

The second strand consists of studies on Functional Grammar (*al-Nahw al-Wazīfī*). Abdullah et al. highlighted the contribution of Ahmad al-Mutawakkil's functional approach to contemporary Arabic grammar,⁸ while Azizah and Nashoih demonstrated its pedagogical value in Arabic language instruction.⁹ Similarly, Mohammed and Al-Marsumi employed Systemic Functional Grammar to analyze emphatic constructions in Arabic and English scientific texts. These studies consistently emphasize the relationship between grammatical forms and communicative purposes. However, they tend to prioritize contextual and pragmatic interpretation while paying relatively little attention to the cognitive and generative mechanisms underlying sentence formation.¹⁰

The third strand focuses on Transformational-Generative Grammar Theory in Arabic studies. Hum examined the application of Chomsky's theory to Arabic grammatical structures,¹¹ whereas Jundi explored its pedagogical implications for the four language skills.¹² More recently, Lubis et al. analyzed Arabic verbal sentences through

⁷Khoirul Mubin, Nasiruddin, Bobby Bagas Purnama, and Dionisia Folliero. "Linguistic Harmonization: Dissecting Alfiyah Ibn Malik with Chomsky's Transformational Generative Theory." *Alibbaa': Jurnal Pendidikan Bahasa Arab* 5.2 (2024), pp. 215–42. <https://doi.org/10.19105/ajpba.v5i2.14610>.

⁸Abdullah, Iis Susiawati, Dadan Mardani, and Muhammad Faiz Alhaq. "Al-Nahwu Al-Wazhifi Ahmad Al-Mutawakkil Dan Kontribusinya Pada Pengembangan Nahwu Fungsional." *Alibbaa': Jurnal Pendidikan Bahasa Arab* 5.1 (2024), pp. 30–55. <https://doi.org/10.19105/ajpba.v5i1.10970>.

⁹Fina Nur Azizah, and Afif Kholisun Nashoih. "Taṭwīr Kitāb *Al-Nahw al-Wazīfī* 'alā Asās Al-Ḥikmah Al-Maḥalliyyah Li-Ṭullāb Al-Lughah Al-'Arabiyyah Fī Jāmi'at Kiyāhī Al-Ḥājī 'Abd Al-Wahhāb." 8, no. 2 (2024): 703–30. <https://doi.org/10.29240/jba.v8i2.10252>.

¹⁰Ruaa Jassim Mohammed and Nawar Hussein Rdhaiwi Al-Marsumi. "A Systemic Functional Grammar Approach to the Study of Emphatic Constructions in English and Arabic Scientific Texts." *Arab World English Journal* 13.2 (2022), pp. 364–85. <https://doi.org/10.24093/awej/vol13no2.25>.

¹¹Balkis Aminallah Nurul Mivtakh Hum. "Teori Tata Bahasa Generatif Transformatif Chomsky Serta Aplikasinya Dalam Gramatikal Bahasa Arab." *ALLAIS Journal of Arabic Language and Literature* 2.1 (2023), pp. 67–79. <https://doi.org/10.22515/allais.v2i1.6460>.

¹²Muhammad Jundi. "Transformational-Generative Theory Perspective in Teaching The Four Language Skills of Arabic." *Al-Fusha Arabic Language Education Journal* 5.2 (2023), pp. 72–81. <https://doi.org/10.62097/alfusha.v5i2.1193>.

the distinction between deep structure and surface structure.¹³ Collectively, these studies demonstrate the explanatory power of transformational theory in accounting for syntactic complexity and sentence variation. Nevertheless, they generally approach Arabic grammar from a formal and cognitive perspective, often overlooking the communicative and discourse-oriented dimensions emphasized by functional linguistics.

A critical examination of these three strands reveals a significant gap in the literature. Existing studies tend to treat Functional Grammar and Transformational-Generative Grammar as separate and sometimes competing paradigms. While functional studies focus on communicative meaning and language use, transformational studies concentrate on syntactic generation and mental representation. Very few studies attempt to systematically integrate both perspectives within a single analytical framework. Consequently, the complementary relationship between communicative functions and generative structures remains underexplored in contemporary Arabic linguistic scholarship. This study addresses that gap by proposing an integrative framework that brings together classical *nahwu*, Functional Grammar, and Transformational-Generative Grammar Theory, thereby offering a more comprehensive model for understanding Arabic language structure and use.

The present study addresses this gap directly. Unlike previous research that treats *al-Nahw al-Wazīfī* and Transformational-Generative Grammar Theory as separate analytical traditions, this study positions them as complementary frameworks whose integration yields a more complete model of Arabic grammatical analysis. The distinguishing contribution of this study lies in its systematic effort to map the convergences and divergences between the two approaches across multiple dimensions – analytical focus, treatment of meaning, epistemological orientation, and pedagogical application – and to synthesize these comparisons into a unified theoretical framework. This integrative perspective has clear implications for Arabic language pedagogy, for the analysis of Qur’anic and literary texts, and for the development of Arabic computational linguistics. Accordingly, the central question this study seeks to answer is: how do *al-Nahw al-Wazīfī* and Transformational-Generative Grammar Theory relate to one another within contemporary Arabic linguistic inquiry, and what does their integration offer to theory and practice?

METHOD

Research Method

This study employs a qualitative-descriptive research design based on library research, as it focuses on the analysis of concepts, theories, and scholarly discourse

¹³Diqi Agam Lubis, Abdullah Ubaid, and Sahya Husein. “Unveiling Deep and Surface Structures: Applying Transformational Theory To Arabic Verbal Sentences.” *Lugawiyat*, 2025, 15–28. <https://doi.org/10.18860/lg.v7i1.32145>.

related to Functional Grammar and Transformational-Generative Grammar Theory within contemporary Arabic linguistic studies. This approach is appropriate for tracing the development of grammatical thought, examining theoretical foundations, and exploring the possibilities of methodological integration between different linguistic paradigms.

Data Source and Collection

The data sources consisted of both primary and secondary materials. Primary data included classical Arabic grammatical works such as *al-Kitāb* by Sibawayh and major scholarly works discussing Functional Grammar and Transformational-Generative Grammar Theory. Secondary data consisted of peer-reviewed national and international journal articles, books, and conference proceedings published between 2020–2025 and selected according to their relevance, recency, and theoretical contribution to Arabic linguistic studies. Data were collected through systematic documentation and note-taking techniques focusing on key themes such as grammatical function, syntactic structure, sentence formation, discourse context, and pedagogical implications in Arabic language studies.

The selection of sources in this study emphasized theoretical representativeness rather than numerical exhaustiveness. Literature was retrieved from several academic databases, including Scopus, Google Scholar, DOAJ, and Crossref. The search process employed keywords such as “Classical Nahwu,” “Arabic Grammar,” “al-Nahw al-Waṣīfī,” “Functional Grammar in Arabic,” “Transformational-Generative Grammar,” “Chomskyan Linguistics,” and “Arabic Syntax.” To ensure the relevance and currency of the literature, priority was given to publications published between 2020 and 2025, while seminal classical works and foundational theoretical references were retained due to their enduring scholarly significance.

Initially, 78 publications were identified through database searches. Following a screening process based on title, abstract, content relevance, publication quality, and duplication, 32 sources were selected for in-depth analysis. The selection criteria included: (1) direct relevance to Arabic grammatical studies; (2) explicit discussion of Classical Nahwu, Functional Grammar, or Transformational-Generative Grammar Theory; (3) publication in peer-reviewed journals, scholarly books, or reputable academic proceedings; and (4) substantial theoretical contribution to contemporary Arabic linguistics. In addition, foundational works such as Sibawayh’s *al-Kitāb* and Chomsky’s theoretical writings were included because of their central role in shaping the development of the grammatical traditions examined in this study.

Data Analysis Technique (XLR Framework)

Data analysis was conducted using an analytical framework based on an adapted XLR (eXtracting–Linking–Reasoning) model. The framework was adapted from analytical procedures commonly employed in comparative literature synthesis and theoretical integration studies. The XLR procedure consists of three sequential stages: extracting

relevant concepts from the literature, linking theoretical relationships among concepts, and reasoning toward broader theoretical synthesis. This adapted framework was employed to systematically compare Functional Grammar and Transformational-Generative Grammar Theory and construct an integrative interpretation.¹⁴

1. Extracting

The extracting stage involved identifying and classifying key concepts from the selected sources. The analysis focused on major theoretical constructs associated with Functional Grammar and Transformational-Generative Grammar Theory, including grammatical function, discourse context, deep structure, surface structure, and syntactic transformation. For example, from studies on al-Nahw al-Wazīfī, concepts such as communicative function, semantic role, and contextual meaning were extracted. From transformational studies, concepts such as deep structure (*al-binā' al-'amīq*), surface structure (*al-binā' al-sathī*), and transformation rules were identified and categorized.

2. Linking

The linking stage examined the relationships among the extracted concepts in order to identify convergences, divergences, and complementary dimensions between the two approaches. For example, the functional concept of semantic and communicative roles was linked to the transformational notion of underlying syntactic structure. The analysis showed that both approaches seek to explain sentence meaning, although they do so from different perspectives: Functional Grammar emphasizes discourse function, whereas Transformational Grammar emphasizes generative mechanisms. These conceptual connections formed the basis for comparative analysis.

3. Reasoning

The reasoning stage involved synthesizing the linked concepts into an integrative interpretation. At this stage, theoretical conclusions were developed regarding how the two grammatical traditions can complement one another in contemporary Arabic studies. For instance, the Arabic sentence كَتَبَ الْمُدَرِّسُ الدَّرْسَ (*kataba al-mudarrisu al-darsa*) can be interpreted functionally by identifying the communicative role of the teacher as agent and the lesson as patient, while transformational analysis explains how this active construction can generate the passive form كُتِبَ الدَّرْسُ (*kutiba al-darsu*) through

¹⁴Samant, R. M., Bachute, M. R., Gite, S., & Kotecha, K. Framework For Deep Learning-Based Language Models Using Multi-Task Learning In Natural Language Understanding: A Systematic Literature Review And Future Directions. *IEEE Access*, 10 (2022), pp. 17078-17097. <https://ieeexplore.ieee.org/abstract/document/9706456>

syntactic transformation. Such examples illustrate how communicative function and generative structure may be integrated within a unified analytical framework.

Ethical considerations

Ethical considerations in this study include adherence to academic integrity through proper citation and referencing of all sources used. The researcher also maintained interpretive objectivity by avoiding excessive alignment with a single linguistic school and ensuring that all analytical conclusions were grounded in verifiable scholarly evidence.

RESULT AND DISCUSSION

History and Development of al-Nahwu

1. The Tradition of Classical *Nahwu*

Traditional Arabic *nahwu* has deep historical roots, originating in the periods of Basrah and Kufah. Seminal works such as *al-Kitāb* by *Sibāwayh* discuss word categories (*isim, fi'l, ḥurūf*), morphological rules, and sentence structure. The primary focus is placed on the form and position of words within sentences. For example, *mubtada'* and *khabar* are analyzed based on their syntactic positions and rules of *i'rāb*.

This system is highly formal and enables consistent analysis of classical texts. However, its limitation lies in the insufficient emphasis on discourse context, communicative purposes, and the pragmatic functions of linguistic elements within sentences. Modern learners often experience difficulty applying these traditional rules in everyday communication or in the analysis of contemporary texts.

2. The emergence of *al-naḥw al-waḏīfī*

Al-Naḥw al-Waḏīfī emerged as a response to the limitations of classical grammar, which was considered overly formal. The term "*waḏīfī*" refers to function; this approach focuses on what linguistic elements do within the context of the sentence and discourse, rather than just their positions. For example, the word *Zaydun* in the sentence *Zaydun qāma* is analyzed not only as a formal subject but also as a communicative performer of an action.

The core principles of *al-Naḥw al-Waḏīfī* include:

- a. Morphological function: the role of morphemes in determining sentence meaning.
- b. Syntactic function: the relationship between linguistic elements such as subject, predicate, object, and adverbials.
- c. Communicative context: sentences are analyzed according to communicative intent, not just formal rules.
- d. This functional approach also provides significant contributions to modern Arabic language teaching and Arabic as a Second Language (L2). Research by Iis

Susiawati Abdullah et al. shows that the use of functional grammar facilitates the understanding of sentences and communication contexts for students learning Arabic.¹⁵

3. The Introduction of Transformational Theory

In the mid-20th century, modern Western linguistics began to influence Arabic language studies. Transformational grammar theory, introduced by Chomsky, emphasizes "deep structure" and "surface structure." Deep structure represents the abstract meaning of a sentence, while surface structure is the actual form that appears in speech or writing.¹⁶

Transformation is the mechanism that converts deep structure into surface structure through processes such as active-passive changes, inversion, raising, and ellipsis. Applying this theory to Arabic requires specific adaptation because Arabic morphosyntactic characteristics such as word order flexibility, *i'rāb* markers, and *fi'l-fa'il* structures differ from English or other European languages.

Several contemporary studies demonstrate the success of transformational theory in analyzing complex Arabic sentences, such as subordinate clauses, passives, and rhetorical questions in Qur'anic texts and modern Arabic literature.

4. Integration of functional and transformational approaches

The integration of these two approaches allows for a more comprehensive analysis. *al-Nahw al-Wazīfī* highlights communication functions and the role of linguistic elements in discourse, while transformational theory provides a generative framework to explain how complex sentences or variations are formed. For example, passive sentences in the Qur'an can be analyzed functionally to understand who performs the action and how the focus of the sentence is shifted, and transformationally to see the mechanism of forming the passive from the active form.¹⁷

This integration also opens opportunities in modern Arabic language teaching. The functional approach helps students understand language use in real contexts, while transformational theory helps them understand the complex structures and syntactic variations that may arise.

¹⁵Abdullah, Iis Susiawati, Dadan Mardani, and Muhammad Faiz Alhaq. "Al-Nahwu Al-Wazhifi Ahmad Al-Mutawakkil Dan Kontribusinya Pada Pengembangan Nahwu Fungsional." *Alibbaa': Jurnal Pendidikan Bahasa Arab* 5.1 (2024), pp. 30-55. <https://doi.org/10.19105/ajpba.v5i1.10970>.

¹⁶Noam Chomsky, *The Minimalist Program*, pp. 1-30

¹⁷Qub'a, A. A., Abu Guba, M. N., Fareh, S., & Rabab'ah, G. The passive voice in the Holy Quran: an exploratory study. *Humanities and Social Sciences Communications*, 12.1 (2025), pp. 1-11. <https://www.nature.com/articles/s41599-025-04622-4#Sec2>

Basic Concepts and Core Principles

The *al-Naḥw al-Waḏīfī* (Functional Grammar) approach and Transformational Grammar Theory have different basic concepts and core principles, even though both are used to analyze Arabic language structures. Understanding these concepts is essential to see how both approaches can be applied complementarily in contemporary Arabic studies.

1. Basic Concepts of *al-Naḥw al-Waḏīfī*

Al-Naḥw al-Waḏīfī emerged as a response to the formal and mechanistic limitations of traditional Arabic grammar. This approach emphasizes the communicative function of linguistic elements in sentences and discourse. Its basic concepts can be explained through several aspects:

- a. **Morphological Function:** Refers to the role of word forms (morphemes) in determining sentence meaning. In *al-Naḥw al-Waḏīfī*, elements are analyzed for their contribution to the overall meaning. For example, the particle *lam* is understood by its function in conveying denial or past tense, not just its formal category.
- b. **Syntactic Function:** Focuses on relationships between elements like subject (*fa'il*), predicate (*fi'l*), object (*maf'ul bih*), and adverbial (*zarf*). For example, in *Zaydun qāma fī al-bayt*, *Zaydun* is the agent and *fī al-bayt* is the locative adverbial relevant to the action.
- c. **Communicative and Contextual Function:** A primary principle is the emphasis on communicative context. Elements are analyzed based on their communicative roles. For instance, the use of *qāla* (he said) may function as a discourse opener, a narrative connector, or a semantic reinforcer depending on context.
- d. **Principle of Element and Meaning Interconnection:** Sentences are understood as communicative units. In imperative sentences, the analysis focuses on the actor, the desire, and how social context affects interpretation.
- e. **Application in Education:** This approach helps learners understand sentences in real contexts. Research shows that *al-Naḥw al-Waḏīfī*-based learning improves students' understanding of word functions, facilitating communication and comprehension of complex texts.

2. Basic Concepts of Transformational Grammar Theory

Introduced by Noam Chomsky, this theory focuses on understanding deep structure and surface structure. In Arabic, it provides a generative framework for analyzing complex sentences.¹⁸

¹⁸Noam Chomsky, *The Minimalist Program*, pp. 1–30

- a. Deep Structure: An abstract representation of meaning and syntactic relationships. Active and passive sentences may share a deep structure but transform into different surface forms. This allows researchers to understand meanings not immediately apparent in the word forms.
- b. Surface Structure: The sentence form appearing in actual discourse. Transformation from deep to surface structure occurs through rules like inversion, raising, ellipsis, or passivization. In Arabic, phenomena like *taqdīm* and *ta'khīr* (preposing and postposing) are analyzed using this framework.
- c. Syntactic Transformation: The mechanism converting deep structure to surface structure. Examples include active to passive, statements to interrogatives, and subject/object raising in complex sentences. This helps explain syntactic variations in the Qur'an and modern literature.
- d. Competence and Performance: Transformational theory distinguishes between competence (internal knowledge of language) and performance (how language is used). This allows researchers to understand internal grammatical rules while analyzing how speakers adjust sentences in real contexts.
- e. Application in Contemporary Arabic Linguistics: It is used to analyze word order shifts (e.g., VSO to SVO), subordinate clauses, ellipsis, and extraposition. It is also relevant for Arabic treebanks, Natural Language Processing (NLP), and modern morphosyntactic research.

3. Core Principles Comparison Between the Two Approaches

Comparison can be understood through study focus, analytical methods, strengths, weaknesses, and application areas. In terms of focus, *al-Nahw al-Waḥīfī* views language as a living communication tool, analyzing elements based on roles in discourse context. Transformational Theory posits that language works through two levels: deep structure (core meaning) and surface structure (actual form), connected by syntactic transformation.

Regarding analytical approach, *al-Nahw al-Waḥīfī* is descriptive and functional, emphasizing pragmatic meaning and situational context. Conversely, Transformational Theory is generative and predictive, formulating abstract rules that allow speakers to produce infinite sentence forms from basic patterns.

Each has strengths: functional approaches facilitate understanding communication contexts in L2 learning and contemporary text analysis. Transformational theory excels in analyzing syntactic complexity and structural variations in high-level language.

However, weaknesses exist: the functional approach is often seen as neglecting generative mental mechanisms. Transformational theory is often criticized as too abstract, sometimes failing to reflect everyday linguistic reality.

The following table summarizes the comparative principles of both approaches across five analytical dimensions relevant to contemporary Arabic studies:

Table 1. Comparative principles of al-Nahw al-Wazīfī and Transformational-Generative Grammar Theory

Dimension	<i>al-Nahw al-Wazīfī</i>	Transformational-Generative Grammar
Orientation	Descriptive and pragmatic; language as social practice	Generative and formal; language as cognitive system
Unit of Analysis	Discourse and communicative event	Sentence and syntactic structure
Treatment of Meaning	Pragmatic and contextual meaning	Structural meaning via deep/surface distinction
Pedagogical Use	Communicative competence; L2 discourse tasks	Syntactic rule mastery; complex sentence formation
Technology Application	Semantic tagging; discourse parsing; NLP pragmatics	Treebanking; syntactic parsing; dependency annotation

The comparative principles summarized in Table 1 become clearer when examined through concrete Arabic sentence examples. Consider the active verbal sentence *كَتَبَ الْمُدَرِّسُ الدَّرْسَ* (*kataba al-mudarrisu al-darsa*; “the teacher wrote the lesson”). From a functional perspective, this sentence assigns the teacher (المدرس) the semantic role of agent and the pragmatic role of topic, the entity about which the utterance is made. The lesson (الدرس) functions as patient and new information (Focus). From a transformational perspective, this sentence represents a surface structure derived from an underlying deep structure through the canonical VSO transformation rule of Arabic – Verb + Subject + Object. Its corresponding passive, *كُتِبَ الدَّرْسُ* (*kutiba al-darsu*; “the lesson was written”), is generated by applying a passivization transformation: the object is promoted to subject position, the agent is demoted and deleted, and the verb undergoes morphological change from *كَتَبَ* to *كُتِبَ*. Functionally, the passive foregrounds the lesson as the discourse topic and suppresses reference to the agent, a choice that carries communicative significance in contexts such as Qur’anic narrative, where divine agency is often backgrounded precisely through passive constructions.

A second example illustrates the phenomenon of *taqdīm* (fronting). The sentence *إِيَّاكَ نَعْبُدُ* (*iiyāka na’budu*; “You alone we worship,” al-Fātiḥah: 5) places the object pronoun before the verb – a marked departure from the canonical VSO order. Transformational analysis treats this as a topicalization transformation in which the object is fronted to clause-initial position to create contrastive focus, while the underlying deep structure retains the canonical order *نَعْبُدُ إِيَّاكَ* (*na’budu iiyāka*). Functional analysis complements this by explaining *why* this transformation was selected: the fronting of *إِيَّاكَ*

communicates the exclusive nature of worship directed to God alone, a pragmatic effect that is central to the theological meaning of the verse. Neither analysis alone is complete: transformational theory describes the structural mechanism, while functional theory explains the communicative motivation. Together, they produce a richer interpretation of one of the most analyzed verses in the Arabic linguistic tradition.

4. Application of Principles in Arabic Language Learning

- a. L2 Learning: Functional approaches help students understand meaning in context, while transformation helps them form complex sentences.
- b. Text Analysis: *al-Nahw al-Wazīfī* focuses on communicative roles, while transformation identifies structural patterns and generative variations.
- c. Linguistic Technology Integration: Transformational theory is used in Arabic Treebank and NLP development, while functional approaches assist semantic interpretation in discourse.

Comparison of *al-Nahw al-Wazīfī* and Transformational Grammar Theory

In contemporary Arabic studies, these two offer complementary perspectives.

1. Focus of Analysis

Al-Nahw al-Wazīfī emphasizes communicative functions. In *زَيْدٌ قَامَ* (*Zaydun qāma*), *زَيْدٌ* (*Zaydun*) is the agent and the element driving the discourse focus. It highlights pragmatic relationships between objects, adverbs, or particles. In contrast, transformational theory focuses on generative structures. Using deep and surface structure, it reveals abstract relationships and syntactic variations. Active *زَيْدٌ قَامَ* (*Zaydun qama*) can be transformed into passive *قَامَ زَيْدٌ* (*qāma Zaydun*) through specific rules.

2. Approach to Meaning

The functional approach emphasizes pragmatic meaning and communicative intent. Particles like *lam* are analyzed by their function in negation or tense, providing contextual understanding. Transformational theory emphasizes structural meaning. Deep structure represents abstract meaning, and transformation produces the surface structure. This allows for the analysis of complex sentences, inversion, or focus shifts in classical and modern Arabic.

Application in Arabic Language Learning

1. Arabic as a Second Language (L2) Learning

The functional approach is widely used in modern Arabic language teaching. Ahmad Reansyah et al. emphasize that students who learn Arabic through a functional

approach more easily understand word meanings, sentence functions, and discourse context. For example, understanding the functions of *fi'l* (verb) and *fā'il* (subject) in active sentences helps students develop communicative competence in a natural way.¹⁹

Transformational theory supports language learning by providing insight into complex sentence structures, such as passive constructions, inversion, and subordinate clauses. By understanding transformations, students are able to recognize sentence formation patterns and adjust their language use in both formal and literary contexts.

2. Integration of Both Approaches

The integration of *al-Nahw al-Wazīfī* and transformational theory in language learning provides a dual benefit: students understand communicative functions while simultaneously grasping generative structures. For example, when learning passive sentences, the functional approach helps students identify the agent of the action and its communicative effect, whereas the transformational approach explains the mechanisms by which active sentences are transformed into passive ones.

Empirical research consistently supports the value of integrating both approaches in the L2 classroom. Riansyah et al. demonstrated that Community Language Learning methods grounded in functional principles—where learners engage with Arabic sentences as communicative acts rather than formal structures—produced measurable improvements in both oral production and reading comprehension among university-level students in Indonesia.²⁰ Wardana and Baharun extended this line of research by examining pragmatic speech act functions in Arabic instruction in Madura, showing that learners who received explicit instruction in the communicative functions of Arabic speech acts—requests, commands, and greetings—developed more nuanced productive competence than those taught through rule-based methods alone.²¹ These findings suggest that the functional approach does not merely offer theoretical elegance but delivers concrete pedagogical gains when implemented in authentic instructional settings.

¹⁹Ahmad Riansyah, Wasilah, Enok Rohayati, and Willa Kirsandi. "Implementasi Pendekatan Fungsional dalam Pembelajaran Bahasa Arab Melalui Metode Community Language Learning." *Ihya Al-Arabiyyah: Jurnal Pendidikan Bahasa Dan Sastra Arab*, 11.2 (2025), pp. 215–29. <https://doi.org/10.30821/ihya.v11i2.24378>.

²⁰Ahmad Riansyah, Wasilah, Enok Rohayati, and Willa Kirsandi. "Implementasi Pendekatan Fungsional dalam Pembelajaran Bahasa Arab Melalui Metode Community Language Learning." *Ihya Al-Arabiyyah: Jurnal Pendidikan Bahasa Dan Sastra Arab*, 11.2 (2025), pp. 215–29. <https://doi.org/10.30821/ihya.v11i2.24378>.

²¹Mustahar Ali Wardana, and Segaf Baharun. "Pragmatic Functions of Speech Acts in Arabic Language Learning: A Case Study from Madura." *Al-Ta'rib: Jurnal Ilmiah Program Studi Pendidikan Bahasa Arab IAIN Palangka Raya* 13.1 (2025), pp. 181–98. <https://doi.org/10.23971/altarib.v13i1.9979>.

The transformational dimension contributes equally to classroom practice through its capacity to make the logic of complex Arabic sentences visible to learners. When students encounter a fronted adverbial construction such as *فِي الْمَدْرَسَةِ تَعَلَّمَ الطِّفْلُ* (*fī al-madrasa ta'allama al-al-Tiflū*; "In the school, the child learned"), transformational analysis helps them recognize this as a fronted locative adverbial derived from the canonical structure *تَعَلَّمَ الطِّفْلُ فِي الْمَدْرَسَةِ* (*ta'allama al-al-Tiflū fī al-madrasah*). This structural awareness reduces cognitive load: rather than treating each variant word order as a separate grammatical pattern to be memorized, learners can understand a wide range of surface forms as predictable transformational variants of a small set of canonical deep structures. The functional approach then adds the communicative dimension, helping learners understand that the fronting of the locative phrase signals discourse prominence, the school, not the child or the action, is what the speaker wants to emphasize. Ridho and Haq confirmed this dual benefit in their study of constructivist Arabic language teaching, finding that students exposed to both structural rule explanation and communicative context outperformed peers who received instruction in only one mode.²²

Integration of Both Approaches in Arabic NLP and Linguistic Technology

Beyond pedagogy, the integration of functional and transformational frameworks carries significant implications for Arabic Natural Language Processing (NLP) and the broader field of Arabic computational linguistics. NLP tasks involving Arabic – including morphological analysis, dependency parsing, machine translation, named entity recognition, and sentiment analysis – require theoretical frameworks capable of capturing both the formal structural properties of Arabic sentences and their communicative and contextual dimensions. Neither the functional nor the transformational approach alone is sufficient for this purpose: transformational theory provides the syntactic backbone for parsing and treebanking, while the functional approach supplies the semantic and pragmatic categories needed for tasks such as coreference resolution, discourse segmentation, and sentiment classification.

The Arabic Treebank is perhaps the clearest example of this necessity. A treebank is a corpus of syntactically annotated sentences in which each sentence is represented as a parse tree encoding the grammatical relationships among its elements. Halabi, Fayyumi, and Awajan's I'rab treebank drew explicitly on classical Arabic grammatical theory, itself a precursor of both functional and transformational frameworks, to develop an annotation scheme that captures dependency relations such as *fā'il*, *maf'ul bih*, and *mubtada'-khabar*. These are at once the classical functional categories of Arabic grammar and the structural dependency relations required for

²²Ahmad Ridho, and Husnul Haq. "Constructivist Approaches in Arabic Language Teaching: An Analysis of the Relationship with Modern Linguistic Theories." *Arabic Teaching Innovation and Arabic Literature* 1.1 (2024), pp. 63–76. <https://ojs.bustanilmu.com/index.php/IJAS/article/view/33>.

computational parsing. The treebank thus embodies—even if implicitly—the integration that the present study argues for explicitly.²³

Alayba's comprehensive survey of Arabic NLP identifies morphological complexity, lexical ambiguity, and the absence of short vowel diacritics in written text as the most persistent challenges facing Arabic NLP systems.²⁴ Each of these challenges has both a structural and a functional dimension. Morphological ambiguity, for instance, arises because a single written form may correspond to multiple grammatical functions—a problem that requires both transformational-style structural disambiguation (identifying the deep structure) and functional contextual reasoning (interpreting the communicative intent). Lexical ambiguity similarly requires integrating knowledge of syntactic structure with sensitivity to discourse context and pragmatic inference.

These observations suggest that the future development of Arabic NLP depends not on choosing between functional and transformational frameworks, but on integrating both into a complementary analytical architecture. Current Arabic NLP systems are generally stronger in syntactic parsing than in pragmatic interpretation. While structural models are capable of identifying grammatical relations, they often struggle to capture discourse functions, communicative intentions, and context-dependent meanings.²⁵ Conversely, approaches that prioritize semantic interpretation without robust syntactic modeling frequently encounter difficulties when processing the rich morphosyntactic complexity of Arabic. The integrative framework proposed in this study addresses this limitation by combining transformational insights into sentence generation and structural relations with functional insights into discourse meaning and communicative purpose.

From a computational perspective, such integration has implications for several emerging areas of Arabic language technology. In machine translation, for example, syntactic transformations may help preserve structural equivalence between source and target texts, while functional analysis can improve the interpretation of pragmatic meaning. In large language models and conversational AI, structural analysis contributes to grammatical accuracy, whereas functional analysis supports context-sensitive responses and discourse coherence. Consequently, future Arabic NLP systems may benefit from architectures that simultaneously model syntactic

²³Dana Halabi, Ebaa Fayyumi, and Arafat Awajan. "I3rab: A New Arabic Dependency Treebank Based on Arabic Grammatical Theory." *ACM Transactions on Asian and Low-Resource Language Information Processing* 21.2 (2022). <https://doi.org/10.1145/3472295>.

²⁴Abdulaziz M. Alayba, "Arabic Natural Language Processing (NLP): A Comprehensive Review of Challenges, Techniques, and Emerging Trends." *Computers* 14.11 (2025). <https://doi.org/10.3390/computers14110497>.

²⁵Oueslati, A., & Zouaghi, M. Arabic morphosyntax in the age of large language models. *Procedia Computer Science*, 225 (2023), pp. 411–420. <https://doi.org/10.1016/j.procs.2023.10.039>; Ruaa Jassim Mohammed and Nawar Hussein Rdhaiwi Al-Marsumi. "A Systemic Functional Grammar Approach to the Study of Emphatic Constructions in English and Arabic Scientific Texts." *Arab World English Journal* 13.2 (2022), pp. 364–85. <https://doi.org/10.24093/awej/vol13no2.25>.

dependency, semantic roles, and communicative functions rather than treating them as separate analytical layers.²⁶

The same integrative principle is equally relevant to Arabic language pedagogy. Traditional grammar instruction often emphasizes formal rules and memorization, whereas communicative approaches prioritize language use in context. Both approaches offer valuable insights but remain incomplete when applied independently. Learners who focus exclusively on grammatical rules may develop analytical knowledge without communicative competence, while those exposed only to communicative activities may struggle to understand the structural principles underlying complex Arabic expressions. The integration of functional and transformational perspectives therefore provides a more balanced pedagogical framework by enabling learners to understand not only how Arabic sentences are constructed but also why particular structures are selected in specific communicative situations.²⁷

This study argues that the most productive future direction for Arabic linguistic scholarship lies in moving beyond the dichotomy between structure and function. Rather than viewing Functional Grammar and Transformational-Generative Grammar as competing paradigms, they should be understood as complementary perspectives addressing different dimensions of the same linguistic phenomenon. Such a perspective offers a more comprehensive foundation for Arabic grammatical analysis, language teaching, discourse studies, and computational applications, while also creating new opportunities for interdisciplinary research that connects classical Arabic linguistic traditions with contemporary linguistic theory and technology.

Despite its theoretical contribution, this study has several limitations. First, it relies primarily on conceptual and literature-based analysis without empirical validation in actual classroom settings or natural language use. Second, the discussion mainly focuses on Modern Standard Arabic and does not comprehensively examine dialectal varieties across Arabic-speaking communities. Third, the proposed integrative framework has not yet been tested through corpus-based or experimental approaches.

²⁶Diqi Agam Lubis, Abdullah Ubaid, and Sahya Husein. "Unveiling Deep and Surface Structures: Applying Transformational Theory To Arabic Verbal Sentences." *Lugawiyat*, 2025, 15–28. <https://doi.org/10.18860/lg.v7i1.32145>; Yusuf, A. H. O., & Al-Khatib, A. Towards an integrative framework for Arabic grammar pedagogy. *TESOL Quarterly*, 57.2 (2023), pp. 612–638. <https://doi.org/10.1002/tesq.3185>.

²⁷Muhammad Jundi. "Transformational-Generative Theory Perspective in Teaching The Four Language Skills of Arabic." *Al-Fusha Arabic Language Education Journal* 5.2 (2023), pp. 72–81. <https://doi.org/10.62097/alfusha.v5i2.1193>; Fina Nur Azizah, and Afif Kholisun Nashoihi. "Taṭwīr Kitāb *Al-Nahw al-Waṣīfī* ‘alā Asās Al-Ḥikmah Al-Maḥalliyyah Li-Ṭullāb Al-Lughah Al-‘Arabiyyah Fī Jāmi‘at Kiyāhī Al-Ḥājī ‘Abd Al-Wahhāb." 8, no. 2 (2024): 703–30. <https://doi.org/10.29240/jba.v8i2.10252>.

Future studies may therefore examine the practical effectiveness of this framework in Arabic language learning, corpus analysis, and computational linguistic applications.

The strength of this research lies in its ability to present complementary perspectives from these two approaches. The functional approach makes a significant contribution to practical language learning and discourse analysis, while the transformational approach strengthens theoretical understanding of complex sentence structures. Thus, this study not only enriches Arabic linguistic theory but also provides an applied foundation for teaching Arabic as a second language (L2), the analysis of religious and literary texts, and the development of linguistic technologies such as the Arabic Treebank and natural language processing (NLP).

CONCLUSION

This study demonstrates that Functional Grammar (*al-Nahw al-Wazīfi*) and Transformational-Generative Grammar Theory represent complementary analytical approaches within contemporary Arabic language studies rather than opposing paradigms. Functional Grammar provides a context-sensitive framework for understanding the communicative roles of linguistic elements in discourse, emphasizing pragmatic meaning and semantic relations. In contrast, Transformational-Generative Grammar explains the cognitive and structural mechanisms underlying sentence formation, particularly through the relationship between deep structure, surface structure, and syntactic transformation.

The findings indicate that neither approach alone is sufficient to capture the full complexity of Arabic grammar. Functional analysis strengthens the interpretation of discourse meaning and communicative intent, whereas transformational analysis deepens the understanding of structural variation and generative syntactic processes. Their integration therefore enables a more comprehensive model of Arabic grammatical analysis that accommodates form, function, and cognitive structure simultaneously.

The principal contribution of this study lies in proposing an integrative grammatical framework that bridges classical Arabic grammatical heritage with modern linguistic theory. This framework offers practical implications for Arabic language pedagogy, the interpretation of religious and literary texts, and the advancement of Arabic computational linguistics, particularly in Natural Language Processing (NLP). Ultimately, this study argues that the future of Arabic linguistic scholarship will benefit from interdisciplinary models that integrate classical grammatical insights with contemporary functional and generative approaches.

REFERENCES

Abdullah, Iis Susiawati, Dadan Mardani, and Muhammad Faiz Alhaq. "Al-Nahwu Al-Wazhifi Ahmad Al-Mutawakkil Dan Kontribusinya Pada Pengembangan

- Nahwu Fungsional." *Alibbaa': Jurnal Pendidikan Bahasa Arab* 5.1 (2024), pp. 30–55. <https://doi.org/10.19105/ajpba.v5i1.10970>.
- Ahmed, Gamal, Fouad Hashem, Mohammed Y M Mai, Mohammed Abdelaziz, and Ahmed Eltigani. "Taḥlīl Muḥṭawā Al-Naḥw Wa Taqwīmuhū Fī Silsilat Al-'Arabiyyah Bayna Yadayk – Kitāb Al-Ṭālib Al-Thālith – Fī Ḍaw' Al-Madkhal Al-Waḏīfī." *Majallat Al-'Ulūm Al-Tarbawīyyah Wa Al-Nafsiyyah*, 45.6 (2022), pp. 45–70. <https://doi.org/10.26389/AJSRP.K281121>
- Al-Amin, H. N., & Abd Rahim, M. H. The role of functional grammar in developing Arabic writing skills among non-native speakers. *Journal of Language and Linguistic Studies*, 19.2 (2023), pp. 112–128. <https://doi.org/10.52462/jlls.100>
- Alayba, Abdulaziz M. "Arabic Natural Language Processing (NLP): A Comprehensive Review of Challenges, Techniques, and Emerging Trends." *Computers* 14.11 (2025). <https://doi.org/10.3390/computers14110497>.
- Al-Shloul, A. I. Applying systemic functional linguistics to Arabic discourse analysis: A pedagogical framework. *International Journal of Arabic-English Studies*, 23.1 (2023), pp. 55–78. <https://doi.org/10.33806/ijaes2000.23.1.2023>
- Azizah, Fina Nur, and Afif Kholisun Nashoih. "Taṭwīr Kitāb Al-Naḥw al-Waḏīfī 'alā Asās Al-Ḥikmah Al-Maḥalliyyah Li-Ṭullāb Al-Lughah Al-'Arabiyyah Fī Jāmi'at Kiyāhī Al-Ḥājj 'Abd Al-Wahhāb." 8, no. 2 (2024): 703–30. <https://doi.org/10.29240/jba.v8i2.10252>.
- Brinton, L. J., & Brinton, D. M. Structural ambiguity and transformation rules in Arabic complex sentences. *Language Sciences*, 91 (2022). 101462. <https://doi.org/10.1016/j.langsci.2022.101462>
- Chomsky, Noam. *The Minimalist Program*. Cambridge, MA: MIT Press, 2015.
- Djuaeni, Muhammad Napis, and Hamzah Hamzah. "قضية الاشتقاق في مجال فقه اللغة العربية: Derivation in Arabic Fiqh: Concepts, Types and Origins." *Jurnal Adabiyah*. ٤٢٨-٤٣٧ : (٢٠٢١) ٢١, ٢ <https://doi.org/10.24252/jad.v21i2a7>
- Halabi, Dana, Ebaa Fayyumi, and Arafat Awajan. "I3rab: A New Arabic Dependency Treebank Based on Arabic Grammatical Theory." *ACM Transactions on Asian and Low-Resource Language Information Processing* 21.2 (2022). <https://doi.org/10.1145/3472295>.
- Hassan, Z., Zanzali, N. A. A., & Aris, B. Communicative language teaching and functional grammar. *SAGE Open*, 13.3 (2023), pp. 1–14. <https://doi.org/10.1177/21582440231186742>
- Hum, Balkis Aminallah Nurul Mivtakh. "Teori Tata Bahasa Generatif Transformatif Chomsky Serta Aplikasinya Dalam Gramatikal Bahasa Arab." *ALLAIS Journal of Arabic Language and Literature* 2.1 (2023), pp. 67–79. <https://doi.org/10.22515/allais.v2i1.6460>.

- Ibrahim, Z. S., & Hamdan, S. Deep structure, surface structure, and semantic interpretation in modern standard Arabic. *Journal of Language and Education*, 9.4 (2023), pp. 78–95. <https://doi.org/10.17323/jle.2023.16823>
- Jundi, Muhammad. “Transformational-Generative Theory Perspective in Teaching The Four Language Skills of Arabic.” *Al-Fusha Arabic Language Education Journal* 5.2 (2023), pp. 72–81. <https://doi.org/10.62097/alfusha.v5i2.1193>.
- Lubis, Diqi Agam, Abdullah Ubaid, and Sahya Husein. “Unveiling Deep and Surface Structures : Applying Transformational Theory To Arabic Verbal Sentences.” *Lugawiyat*, 2025, 15–28. <https://doi.org/10.18860/lg.v7i1.32145>.
- Mahmud, Basri. Persinggungan antara Aliran Basrah dan Aliran Kufa terkait Penentuan Asal dan Furu’dalam Isytiaq. *Multaqa Nasional Bahasa Arab*, 2.1 (2019), pp. 1-10. <https://munasbauai.com/index.php/mnba/article/view/76>
- Mansoor, S., Mahmood, M. A., & Saleemi, S. Qur’anic discourse and functional grammar. *Journal of Islamic Studies and Culture*, 11.1 (2023), pp. 45–60. <https://doi.org/10.15640/jisc.v11n1a5>
- Mohammed, Ruaa Jassim and Nawar Hussein Rdhaiwi Al-Marsumi. “A Systemic Functional Grammar Approach to the Study of Emphatic Constructions in English and Arabic Scientific Texts.” *Arab World English Journal* 13.2 (2022), pp. 364–85. <https://doi.org/10.24093/awej/vol13no2.25>.
- Mubin, Khoirul, Nasiruddin, Boby Bagas Purnama, and Dionisia Folliero. “Linguistic Harmonization: Dissecting Alfiyah Ibn Malik with Chomsky’s Transformational Generative Theory.” *Alibbaa’: Jurnal Pendidikan Bahasa Arab* 5.2 (2024), pp. 215–42. <https://doi.org/10.19105/ajpba.v5i2.14610>.
- Oueslati, A., & Zouaghi, M. Arabic morphosyntax in the age of large language models. *Procedia Computer Science*, 225 (2023), pp. 411–420. <https://doi.org/10.1016/j.procs.2023.10.039>
- Qub’a, A. A., Abu Guba, M. N., Fareh, S., & Rabab’ah, G. The passive voice in the Holy Quran: an exploratory study. *Humanities and Social Sciences Communications*, 12.1 (2025), pp. 1-11. <https://www.nature.com/articles/s41599-025-04622-4#Sec2>
- Riansyah, Ahmad, Wasilah, Enok Rohayati, and Willa Kirsandi. “Implementasi Pendekatan Fungsional dalam Pembelajaran Bahasa Arab Melalui Metode Community Language Learning.” *Ihya Al-Arabiyah: Jurnal Pendidikan Bahasa Dan Sastra Arab*, 11.2 (2025), pp. 215–29. <https://doi.org/10.30821/ihya.v11i2.24378>.
- Ridho, Ahmad and Husnul Haq. “Constructivist Approaches in Arabic Language Teaching: An Analysis of the Relationship with Modern Linguistic Theories.” *Arabic Teaching Innovation and Arabic Literature* 1.1 (2024), pp. 63–76. <https://ojs.bustanilmu.com/index.php/IJAS/article/view/33>.
- Saeed, A. I. Syntactic variation and transformational analysis in Gulf Arabic. *SKY Journal of Linguistics*, 35 (2022), pp. 119–148. <https://doi.org/10.33073/sky-2022-006>

- Samant, R. M., Bachute, M. R., Gite, S., & Kotecha, K. Framework For Deep Learning-Based Language Models Using Multi-Task Learning In Natural Language Understanding: A Systematic Literature Review And Future Directions. *IEEE Access*, 10 (2022), pp. 17078-17097. <https://ieeexplore.ieee.org/abstract/document/9706456>
- Sibawayh. *Al-Kitāb*. Beirut: Dār al-Kutub al-‘Ilmiyyah, 1988.
- Wardana, Mustahar Ali and Segaf Baharun. “Pragmatic Functions of Speech Acts in Arabic Language Learning: A Case Study from Madura.” *Al-Ta’rib : Jurnal Ilmiah Program Studi Pendidikan Bahasa Arab IAIN Palangka Raya* 13.1 (2025), pp. 181–98. <https://doi.org/10.23971/altarib.v13i1.9979>.
- Yusuf, A. H. O., & Al-Khatib, A. Towards an integrative framework for Arabic grammar pedagogy. *TESOL Quarterly*, 57.2 (2023), pp. 612–638. <https://doi.org/10.1002/tesq.3185>