

Repositioning Taṣrīf Lughawī and Taṣrīf Iṣṭilāḥī in the Age of Artificial Intelligence: Foundations for Arabic Sentence Construction

Reposisi Taṣrīf Lughawī dan Taṣrīf Iṣṭilāḥī di Era Kecerdasan Buatan sebagai Fondasi Penyusunan Kalimat Bahasa Arab

Rizky Umi Nasihatus Sholihah¹, Abdul Hafidz bin Zaid ² Agus Yasin ³ Ulfa Muna Kamila⁴ Isnaeni Budi Setiawati Arifah⁵

^{1. 2. 3. 4. 5} University of Darussalam Gontor

*Corresponding author: rizkynasiha@gmail.com

Abstract:

Arabic morphology instruction has traditionally emphasized taṣrīf iṣṭilāḥī through the memorization of morphological paradigms, while the role of taṣrīf lughawī as a productive competence for Arabic sentence construction has received limited scholarly attention. Meanwhile, contemporary linguistics and Artificial Intelligence highlight the importance of productive morphological analysis in meaning construction and language processing. This study aims to reposition taṣrīf lughawī and taṣrīf iṣṭilāḥī within Arabic morphology instruction by proposing taṣrīf lughawī as the foundation of Arabic sentence construction. Employing a qualitative case study design, the research was conducted at Pondok Pesantren Miftahul Ulum Panyeppe, Pamekasan. Data were collected through participant observation, semi-structured interviews, and document analysis and analyzed using Braun and Clarke's thematic analysis. The findings reveal that taṣrīf iṣṭilāḥī functions primarily as a conceptual framework for developing learners' morphological awareness, whereas taṣrīf lughawī serves as the productive competence that enables word formation, sentence construction, and meaning-making in authentic communicative contexts. Based on these findings, the study proposes a conceptual model positioning taṣrīf iṣṭilāḥī as the conceptual foundation and taṣrīf lughawī as the productive mechanism of Arabic morphology instruction. The study contributes to the advancement of Arabic morphology pedagogy by integrating insights from classical Arabic morphology, contemporary linguistic theory, and Artificial Intelligence, particularly within the domain of Arabic Natural Language Processing

Keyword: Taṣrīf Lughawī; Taṣrīf Iṣṭilāḥī; Arabic Morphology Instruction; Arabic Morphology; Artificial Intelligence.

Abstrak:

Pembelajaran ilmu ṣarf selama ini lebih banyak berorientasi pada penguasaan taṣrīf iṣṭilāḥī melalui hafalan paradigma perubahan kata, sehingga fungsi taṣrīf lughawī sebagai kompetensi produktif dalam pembentukan kalimat bahasa Arab belum memperoleh perhatian yang memadai. Padahal, perkembangan linguistik modern dan Artificial Intelligence menunjukkan bahwa analisis morfologi yang produktif memiliki peran penting dalam pembentukan makna dan pemrosesan bahasa. Penelitian ini bertujuan untuk mereposisi taṣrīf lughawī dan taṣrīf iṣṭilāḥī dalam pembelajaran ilmu ṣarf dengan menempatkan taṣrīf lughawī sebagai fondasi pembentukan kalimat bahasa Arab. Penelitian menggunakan pendekatan kualitatif dengan desain studi kasus di Pondok Pesantren Miftahul Ulum Panyeppe, Pamekasan. Data dikumpulkan melalui observasi partisipatif, wawancara semi-terstruktur, dan analisis dokumen, kemudian dianalisis menggunakan thematic analysis menurut Braun dan Clarke. Hasil penelitian menunjukkan bahwa taṣrīf iṣṭilāḥī berfungsi sebagai kerangka konseptual untuk membangun kesadaran morfologis (morphological awareness), sedangkan taṣrīf lughawī merupakan kompetensi produktif yang memungkinkan pembelajar membentuk kata, menyusun kalimat, dan menghasilkan makna dalam konteks komunikasi. Penelitian ini mengusulkan sebuah model konseptual yang menempatkan taṣrīf iṣṭilāḥī sebagai fondasi konseptual dan taṣrīf lughawī sebagai

mekanisme produktif dalam pembelajaran bahasa Arab. Temuan tersebut memperluas perspektif pembelajaran ilmu şarf serta memberikan implikasi bagi pengembangan kurikulum, pedagogi bahasa Arab, dan integrasi pembelajaran morfologi dengan perkembangan Artificial Intelligence, khususnya *Arabic Natural Language Processing.

Kata Kunci: *Taşrîf Lughawî; Taşrîf Iştilâhî; Pembelajaran Şarf; Morfologi Bahasa Arab; Artificial Intelligence.*

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INTRODUCTION

Arabic morphology (*ṣarf*) constitutes one of the fundamental pillars of Arabic language learning because it provides the linguistic mechanism through which words are derived and transformed to construct meaningful sentences. Mastery of morphology enables learners not only to recognize lexical relationships among words derived from the same trilateral root but also to determine their grammatical functions and contextual meanings. Consequently, Islamic boarding schools (*pesantren*) in Indonesia have traditionally positioned *ṣarf* as a prerequisite for studying Arabic syntax and classical Islamic texts. One institution that consistently maintains this tradition is Pondok Pesantren Miftahul Ulum Panyebben, Pamekasan, through its instruction using *Al-Miftāḥ lil-'Ulūm*. Classroom observations indicate that morphology instruction extends beyond memorizing conjugation paradigms (*taṣrīf iṣṭilāḥī*) to developing students' ability to derive multiple lexical forms from a single root for authentic sentence construction. This pedagogical practice suggests that Arabic sentence construction depends not merely on memorizing morphological paradigms but also on functional mastery of word formation, which is represented by *taṣrīf lughawī*.

Within the Arabic linguistic tradition, the study of *ṣarf* has evolved through two complementary orientations, namely *taṣrīf lughawī* and *taṣrīf iṣṭilāḥī*. *Taṣrīf lughawī* refers to the process of deriving various lexical forms from a single root according to semantic and syntactic requirements in sentence construction. This orientation views morphology as a productive linguistic competence that enables speakers and learners to generate appropriate word forms in different communicative contexts. In contrast, *taṣrīf iṣṭilāḥī* emphasizes the systematic organization of morphological paradigms into standardized conjugation patterns that facilitate grammatical instruction and rule classification. Rather than representing two opposing concepts, these orientations are mutually complementary. *Taṣrīf iṣṭilāḥī* provides the theoretical framework for understanding morphological patterns, whereas *taṣrīf lughawī* functions as the practical mechanism through which words, phrases, and sentences are constructed. This perspective is consistent with the classical Arabic linguistic tradition, which regards morphological transformation as the primary mechanism for generating new lexical meanings and grammatical functions in context (Ibn Jinnī, 1952; Ibn Mālik, 1982; Al-Rājihī, 1999). Therefore, successful morphology instruction should not be assessed solely by learners' ability to memorize conjugation paradigms but also by their capacity to employ morphological knowledge effectively in Arabic sentence construction.

This phenomenon is reflected in the morphology instruction implemented at Pondok Pesantren Miftahul Ulum Panyebben, where *Al-Miftāḥ lil-'Ulūm* serves as one of the principal instructional texts for learning to read classical Arabic literature. Morphology instruction is designed not merely to enable students to memorize verbal and nominal paradigms but also to develop their ability to identify lexical roots, determine morphological patterns (*awzān*), recognize semantic changes resulting from derivational processes, and select appropriate word forms according to sentence context. Such instructional practices indicate that the learning process is substantially closer to the principles of *taṣrīf lughawī*, which emphasize productive word formation, than to the exclusive memorization of *taṣrīf iṣṭilāḥī* paradigms. This observation is consistent with contemporary studies on morphological awareness, which argue that understanding the relationship between roots, morphological patterns, and lexical meaning plays a crucial role in reading comprehension, vocabulary development, and sentence construction. Consequently, the instructional practices at the pesantren not only preserve the classical tradition of Arabic morphology but also demonstrate its continuing relevance to

contemporary linguistic theory and the demands of Artificial Intelligence-based language processing.

Although research on Arabic morphology, Arabic language instruction, and Arabic Natural Language Processing has expanded considerably over the past decade, these fields have generally evolved as separate scholarly domains. Studies in Arabic language education have predominantly focused on instructional methods, learning media, pedagogical strategies, and grammatical achievement. In contrast, research in computational linguistics has concentrated on developing morphological analyzers, root extraction techniques, pattern recognition models, and machine-learning algorithms to improve Arabic language processing. Meanwhile, classical discussions of *taṣrīf lughawī* and *taṣrīf iṣṭilāḥī* have largely remained within normative descriptions of Arabic morphology and have rarely been reconstructed as a conceptual framework linking word formation, sentence construction, and the morphological processing mechanisms employed by Artificial Intelligence systems. Consequently, a significant conceptual and pedagogical gap remains regarding how these two dimensions of Arabic morphology can be repositioned to bridge the classical tradition of *ṣarf* with contemporary computational linguistics. Addressing this gap, the present study draws upon evidence from morphology instruction at Pondok Pesantren Miftahul Ulum Panyeppe, Pamekasan, to propose a renewed theoretical perspective on the roles of *taṣrīf lughawī* and *taṣrīf iṣṭilāḥī* as foundational components of Arabic sentence construction in the age of Artificial Intelligence.

Based on the foregoing discussion, this study aims to reposition the concepts of *taṣrīf lughawī* and *taṣrīf iṣṭilāḥī* through an analysis of Arabic morphology instruction at Pondok Pesantren Miftahul Ulum Panyeppe, Pamekasan. The study is grounded in the assumption that these two dimensions of Arabic morphology should not be viewed as competing concepts but rather as complementary components with distinct functions. *Taṣrīf lughawī* is conceptualized as the productive foundation that enables the contextual formation of words, phrases, and sentences, whereas *taṣrīf iṣṭilāḥī* serves as a systematic framework for understanding Arabic morphological patterns. Building upon this perspective, the study proposes a conceptual framework that positions *taṣrīf lughawī* as the primary foundation for Arabic sentence construction, while *taṣrīf iṣṭilāḥī* functions as an instrument for strengthening learners' morphological awareness. The proposed framework is expected to contribute not only to the theoretical development of Arabic morphology instruction but also to curriculum innovation, competency-based Arabic language education, and the advancement of Artificial Intelligence and Arabic Natural Language Processing systems that require functionally grounded morphological representations.

RESEARCH METHODS

This study employed a qualitative approach using a case study design to explore the implementation of *taṣrīf lughawī* and *taṣrīf iṣṭilāḥī* in Arabic morphology instruction and to examine their respective roles in developing Arabic sentence construction skills at Pondok Pesantren Miftahul Ulum Panyeppe, Pamekasan, Indonesia. A qualitative case study was considered appropriate because the study sought to obtain a holistic and contextual understanding of how the two dimensions of Arabic morphology are conceptualized, practiced, and integrated within the authentic learning environment of the pesantren. Rather than measuring the effectiveness of a particular instructional intervention, this study aimed to interpret the pedagogical meanings underlying instructional practices, classroom interactions, and institutional traditions that shape students' morphological competence. According to Yin (2018), a case study is particularly suitable for investigating contemporary educational

phenomena within their real-life settings, especially when the boundaries between the phenomenon and its context are not clearly evident. Likewise, Merriam and Tisdell (2016) emphasize that qualitative case studies enable researchers to develop an in-depth understanding of educational practices by considering their social, cultural, and institutional contexts. Therefore, Pondok Pesantren Miftahul Ulum Panyebben was purposefully selected as the research site because of its long-standing tradition of Arabic language instruction, its systematic implementation of *Al-Miftāḥ lil-'Ulūm* as the primary instructional resource for Arabic morphology, and its distinctive emphasis on developing students' ability to construct Arabic sentences through practical morphological competence.

The study utilized both primary and secondary data sources to obtain a comprehensive understanding of the implementation of **taṣrīf lughawī** and **taṣrīf iṣṭilāḥī** in Arabic morphology instruction. Primary data were collected from participants selected through purposive sampling based on their direct involvement, experience, and knowledge of Arabic morphology teaching at Pondok Pesantren Miftahul Ulum Panyebben. The participants consisted of the pesantren leader, the coordinator of the Arabic language program, two Arabic morphology (**ṣarf**) instructors, and four students who had completed the core morphology learning program using **Al-Miftāḥ lil-'Ulūm**. These participants were intentionally selected because they possessed rich information regarding the instructional objectives, teaching strategies, learning experiences, and practical implementation of both **taṣrīf lughawī** and **taṣrīf iṣṭilāḥī**. Secondary data were obtained from institutional documents, including the Arabic language curriculum, morphology instructional materials, lesson plans, learning schedules, students' learning records, and other academic documents relevant to the implementation of Arabic morphology instruction. The integration of these two data sources enabled the researcher to examine the phenomenon from multiple perspectives and strengthened the credibility of the research findings through data triangulation.

Table 1. Characteristics of Research Participants

PARTICIPANT CODE	ROLE	EXPERIENCE	SELECTION CRITERIA
P01	Pesantren Leader	>20 years	Responsible for educational policies and Arabic learning development
P02	Arabic Program Coordinator	8 years	Coordinates Arabic language and morphology programs
P03	Arabic Morphology Instructor	10 years	Responsible for teaching <i>ṣarf</i> using <i>Al-Miftāḥ lil-'Ulūm</i>
P04	Arabic Morphology Instructor	6 years	Responsible for morphology instruction and student assessment
P05	Student	5 years	Completed all levels of <i>Al-Miftāḥ lil-'Ulūm</i>
P06	Student	4 years	Demonstrated active participation in morphology learning
P07	Student	4 years	High achievement in Arabic morphology
P08	Student	3 years	Actively involved in Arabic learning activities

As presented in Table 1, this study involved eight participants who were purposively

selected based on their level of involvement, professional experience, and knowledge of Arabic morphology instruction at Pondok Pesantren Miftahul Ulum Panyebben. The participants represented different levels of the institutional structure, including educational leadership, program management, classroom instruction, and student learning experiences. Such diversity enabled the researcher to obtain comprehensive perspectives on how *taṣrīf lughawī* and *taṣrīf iṣṭilāḥī* are conceptualized, implemented, and experienced within the pesantren. The pesantren leader and the Arabic language program coordinator provided information regarding institutional policies, curriculum design, and the philosophical orientation of Arabic language instruction. Meanwhile, the Arabic morphology instructors contributed detailed explanations of instructional planning, teaching strategies, learning materials, and classroom practices. The participating students offered first-hand accounts of their learning experiences, challenges, and strategies in mastering Arabic morphology and applying it to Arabic sentence construction. Following Patton (2015), all participants were regarded as information-rich cases because they possessed extensive experience and were capable of providing meaningful insights relevant to the objectives of this study.

Data were collected through participant observation, semi-structured interviews, and document analysis to obtain a comprehensive understanding of the implementation of *taṣrīf lughawī* and *taṣrīf iṣṭilāḥī* in Arabic morphology instruction. Participant observation was conducted to examine classroom learning activities, teacher–student interactions, instructional strategies, and the practical application of morphological concepts during the learning process. Particular attention was given to how teachers introduced morphological patterns, guided students in deriving lexical forms from Arabic roots, and facilitated the application of morphological knowledge in Arabic sentence construction. Semi-structured interviews were employed to explore participants' experiences, pedagogical perspectives, instructional objectives, and perceptions regarding the respective roles of *taṣrīf lughawī* and *taṣrīf iṣṭilāḥī* in developing Arabic language competence. In addition, document analysis was carried out by examining the Arabic language curriculum, instructional modules, *Al-Miftāḥ lil-'Ulūm*, lesson plans, assessment documents, students' learning records, and other institutional documents related to Arabic morphology instruction. The integration of these three data collection techniques enabled methodological triangulation, thereby strengthening the credibility, consistency, and depth of the research findings (Creswell & Poth, 2018; Yin, 2018).

Table 2. Data Collection Techniques

Data Collection Technique	Research Focus	Data Source
Participant Observation	Classroom learning activities, implementation of <i>taṣrīf lughawī</i> and <i>taṣrīf iṣṭilāḥī</i> , teacher–student interaction	Arabic morphology learning activities
Semi-structured Interview	Participants' experiences, pedagogical perspectives, and understanding of Arabic morphology	Pesantren leader, Arabic program coordinator, teachers, students
Document Analysis	Curriculum implementation, instructional materials, institutional support, and learning assessment	Curriculum, <i>Al-Miftāḥ lil-'Ulūm</i> , lesson plans, assessment documents, academic records

To ensure the trustworthiness of the findings, this study adopted the four criteria proposed by Lincoln and Guba (1985), namely credibility, transferability, dependability, and

confirmability. Credibility was established through prolonged engagement in the research setting, methodological triangulation involving observations, interviews, and document analysis, as well as member checking to verify the accuracy of the interview data and the researcher's interpretations. Transferability was enhanced by providing rich and detailed descriptions of the research context, participants, instructional practices, and institutional characteristics of Pondok Pesantren Miftahul Ulum Panyebben, enabling readers to determine the applicability of the findings to similar educational contexts. Dependability was maintained by documenting all stages of the research process, including participant selection, data collection procedures, coding, theme development, and data interpretation, thereby creating a transparent audit trail. Finally, confirmability was ensured by maintaining analytical memos, preserving the original research data, and continuously comparing evidence across multiple data sources to minimize researcher bias. Collectively, these strategies strengthened the rigor, credibility, and overall quality of the qualitative findings.

The data were analyzed using thematic analysis following the six-phase framework developed by Braun and Clarke (2006, 2021). This analytical approach was selected because it provides a systematic and flexible procedure for identifying, organizing, interpreting, and reporting meaningful patterns across multiple qualitative data sources. In the present study, thematic analysis enabled the researcher to examine how *taṣrīf lughawī* and *taṣrīf iṣṭilāḥī* were conceptualized, implemented, and experienced within Arabic morphology instruction at Pondok Pesantren Miftahul Ulum Panyebben. The analysis began with repeated reading of interview transcripts, observation field notes, and institutional documents to develop familiarity with the data. Subsequently, meaningful data segments were coded inductively according to their relevance to morphology instruction, sentence construction, and pedagogical practices. Similar codes were then grouped into broader themes representing the instructional functions of *taṣrīf lughawī*, the pedagogical role of *taṣrīf iṣṭilāḥī*, and their relationship to Arabic sentence construction. These themes were continuously reviewed, refined, and validated through constant comparison across the three data sources until a coherent thematic framework was established. Finally, the themes were interpreted in relation to the theoretical foundations of Arabic morphology and contemporary developments in Artificial Intelligence, allowing the study to formulate a conceptual framework for repositioning *taṣrīf lughawī* and *taṣrīf iṣṭilāḥī* in Arabic language learning.

Table 3. Phases of Thematic Analysis

Phase	Analytical Process	Application in This Study	Expected Output
Phase 1	Familiarization with the data	Reading interview transcripts, observation notes, and institutional documents repeatedly to understand the implementation of <i>taṣrīf lughawī</i> and <i>taṣrīf iṣṭilāḥī</i> .	Initial understanding of the research context
Phase 2	Generating initial codes	Coding meaningful statements related to morphology instruction, sentence construction, and pedagogical practices.	Initial codes
Phase 3	Searching for themes	Grouping similar codes into broader categories representing the instructional roles of <i>taṣrīf lughawī</i> and <i>taṣrīf iṣṭilāḥī</i> .	Preliminary themes
Phase	Reviewing	Comparing and refining themes by	Validated themes

4	themes	examining consistency across interviews, observations, and documents.	
Phase 5	Defining and naming themes	Clearly defining each theme and identifying relationships among the themes.	Final themes and conceptual relationships
Phase 6	Producing the report	Interpreting the findings and developing a conceptual framework for repositioning <i>taṣrīf lughawī</i> and <i>taṣrīf iṣṭilāḥī</i> .	Research findings and conceptual framework

As presented in Table 3, the data analysis followed six iterative and interconnected phases of thematic analysis. The process began with familiarization with the data through repeated reading of interview transcripts, observation field notes, and institutional documents. Meaningful data segments were subsequently coded and organized into preliminary themes reflecting the implementation of *taṣrīf lughawī* and *taṣrīf iṣṭilāḥī* in Arabic morphology instruction. These themes were then reviewed and refined by comparing evidence across different data sources to ensure analytical consistency. In the final stages, each theme was clearly defined and interpreted in relation to Arabic morphological theory and the principles of Artificial Intelligence-based language processing. This analytical procedure enabled the researcher not only to identify recurring instructional patterns but also to construct a conceptual framework explaining the complementary roles of *taṣrīf lughawī* and *taṣrīf iṣṭilāḥī* as the foundations of Arabic sentence construction.

RESULTS

Repositioning *Taṣrīf Lughawī* as the Foundation of Arabic Sentence Construction

The findings of this study indicate that Arabic morphology instruction at Pondok Pesantren Miftahul Ulum Panyepren emphasizes not only mastery of morphological paradigms (*taṣrīf iṣṭilāḥī*), but also the productive application of morphological knowledge in constructing meaningful Arabic sentences. Classroom observations revealed that morphology lessons consistently began with the presentation of conjugation patterns before progressing to activities requiring students to derive multiple lexical forms from a single root and apply them in contextualized sentences. This instructional sequence demonstrates that memorizing paradigms is treated as an initial stage of learning rather than the ultimate instructional objective.

During one learning session, the teacher introduced the root **كتب** and asked students to derive several related forms, including **كاتب**, **مكتوب**, **كتاب**, **مكتبة**, and **كتابة**. After identifying the corresponding *awzān*, students were instructed to compose different Arabic sentences using each derived form. Throughout the activity, the teacher repeatedly emphasized that understanding the function and meaning of each lexical form was more important than merely memorizing the conjugation table.

The observation was supported by interview data. One morphology instructor explained:

P03: *"Students are expected to memorize the conjugation patterns because they provide the foundation. However, our primary objective is to enable them to produce appropriate words and use them correctly in Arabic sentences. If they can only recite the paradigms without constructing sentences, then morphology has not yet fulfilled its educational purpose."*

Similarly, a student described morphology learning as a process of understanding relationships among words rather than memorizing isolated forms.

P06: "At first, we memorized the patterns. Later, the teacher required us to derive many words from one root and explain why each word was used in a different sentence. That activity helped us understand Arabic texts more easily."

Document analysis also supports this instructional orientation. The instructional materials in *Al-Miftāḥ lil-'Ulūm* present morphological paradigms systematically while incorporating exercises that require learners to identify roots, derive lexical forms, and apply them in reading and sentence-construction activities. These exercises demonstrate that morphology instruction is designed to develop productive language competence rather than rote memorization alone.

Taken together, these findings suggest that *taṣrīf iṣṭilāḥī* functions primarily as a conceptual framework that introduces learners to Arabic morphological patterns, whereas *taṣrīf lughawī* represents the productive mechanism through which morphological knowledge is transformed into communicative competence. Consequently, the ability to construct Arabic sentences emerges as the principal learning outcome of morphology instruction. This finding supports the argument that *taṣrīf lughawī* should be repositioned as the foundation of Arabic sentence construction, while *taṣrīf iṣṭilāḥī* should be understood as an instructional tool that strengthens learners' morphological awareness and facilitates productive language use.

DISCUSSION

The findings of this study demonstrate that Arabic morphology instruction at Pondok Pesantren Miftahul Ulum Panyeppeen reflects a complementary relationship between *taṣrīf lughawī* and *taṣrīf iṣṭilāḥī* rather than a dichotomous one. Although instruction begins with the introduction of morphological paradigms through *taṣrīf iṣṭilāḥī*, the learning process does not end with the mastery of these paradigms. Instead, the paradigms serve as a conceptual foundation that enables students to derive multiple lexical forms from a single root, understand the semantic changes resulting from derivational processes, and apply these forms appropriately in Arabic sentence construction. These findings indicate that the primary function of *taṣrīf iṣṭilāḥī* is not to serve as the ultimate instructional goal but to develop learners' morphological awareness. This awareness is subsequently operationalized through *taṣrīf lughawī*, which functions as a productive mechanism for word formation, sentence construction, and meaning-making in authentic linguistic contexts. The distinction is important because it shifts attention from whether students can reproduce morphological paradigms toward whether they can use morphological knowledge to generate and interpret language. Accordingly, the present study extends the pedagogical understanding of Arabic morphology by positioning *taṣrīf lughawī* as an applied competence that connects morphological knowledge with actual language use. This interpretation is consistent with previous studies arguing that morphological awareness plays an important role in vocabulary development, reading comprehension, and language production because it enables learners to recognize systematic relationships among roots, morphological patterns, and lexical meanings (Carlisle, 2000; Kuo & Anderson, 2006; Saiegh-Haddad & Schiff, 2016).

The distinction between morphological knowledge and morphological use is particularly relevant in the context of Arabic, where a single root may generate a range of lexical forms through different morphological patterns. Knowledge of the paradigm provides learners with a systematic representation of these relationships, but productive language competence requires more than the ability to recall those patterns. Learners must be able to identify the relevant root, select an appropriate pattern, construct the resulting form, interpret its semantic implications, and integrate the form into a syntactically meaningful utterance. The findings from Panyeppeen

indicate that *taṣrīf iṣṭilāḥī* becomes pedagogically meaningful when learners use the paradigmatic system as a resource for carrying out these productive operations. In this sense, the memorization of forms constitutes an initial stage of learning rather than its endpoint. Such an interpretation is compatible with broader research on morphological awareness, which distinguishes knowledge about morphological structure from the ability to use morphological relationships in processing and producing language (Carlisle, 2000; Kuo & Anderson, 2006). The present study adds an Arabic pedagogical perspective to this discussion by showing how the relationship between paradigmatic knowledge and productive morphological use can be organized within traditional Arabic morphology instruction.

The repositioning of *taṣrīf lughawī* as a central component of Arabic sentence construction is further supported by contemporary linguistic perspectives that conceptualize morphology as a productive system for meaning-making rather than merely a classification of word forms. Modern linguistic theories emphasize that morphological competence involves understanding how word forms are constructed and how morphological structures contribute to grammatical and semantic interpretation (Aronoff & Fudeman, 2011; Booij, 2012). From this perspective, morphology cannot be completely separated from syntax and semantics because a morphological choice influences the grammatical role and semantic interpretation of a lexical item within a larger construction. The findings of the present study are consistent with this view. Students' understanding becomes more functional when instruction emphasizes the relationships among roots (*jidhr*), morphological patterns (*awzān*), lexical meanings, and contextual use in complete sentences. Accordingly, *taṣrīf lughawī* should not be reduced to the mechanical derivation of one word from another. It represents a productive linguistic competence through which learners mobilize morphological knowledge to construct forms, interpret meanings, and participate in Arabic language use. This interpretation broadens the scope of Arabic morphology instruction from paradigm-oriented learning toward productive language competence.

This finding also helps clarify the pedagogical relationship between *taṣrīf iṣṭilāḥī* and *taṣrīf lughawī*. The two should not be treated as competing models in which one must replace the other. Rather, they perform different but interdependent functions within the learning process. *Taṣrīf iṣṭilāḥī* provides systematic knowledge about morphological patterns and establishes a conceptual map of the Arabic morphological system. *Taṣrīf lughawī*, by contrast, mobilizes that knowledge in the formation and interpretation of actual linguistic expressions. The former provides structural orientation, whereas the latter provides productive application. The pedagogical significance of this relationship lies in the transition from knowing morphological forms to using morphological relations. Students who merely memorize paradigms may demonstrate declarative knowledge without necessarily being able to use that knowledge productively. When paradigmatic knowledge is followed by derivation, contextual interpretation, and sentence construction, morphology becomes connected to communicative language competence. The findings therefore suggest that the effectiveness of morphology instruction should not be evaluated solely from students' ability to reproduce paradigms but also from their ability to mobilize morphological knowledge in meaningful linguistic contexts.

The relationship identified in this study has further significance when considered in relation to contemporary developments in Artificial Intelligence and Arabic Natural Language Processing (Arabic NLP). Arabic NLP systems commonly perform computational operations such as morphological analysis, segmentation, lemmatization, root identification, morphological feature identification, and contextual disambiguation. These operations demonstrate that Arabic lexical forms can be analyzed in terms of systematic relationships among roots, patterns,

grammatical features, and contextual meanings. Although computational processing and traditional Arabic morphology instruction operate within fundamentally different epistemological and technological frameworks, there is a conceptual correspondence between productive morphological analysis and the linguistic operations represented in *taṣrīf lughawī*. The relevance of this connection does not mean that AI systems literally implement the traditional pedagogical concept of *taṣrīf lughawī*. Rather, the correspondence provides a conceptual basis for reconsidering how morphological competence can be taught in an educational environment increasingly supported by language technologies.

This connection is particularly important because AI-assisted Arabic language learning requires learners to move beyond the passive recognition of grammatical information. When AI systems provide morphological analyses, identify roots, generate lexical forms, or offer alternative interpretations, learners can use these outputs as resources for examining morphological relationships. For example, an AI system may generate several forms derived from a particular root, but the educational value of that output depends on whether learners can explain the morphological pattern, identify the semantic differences among the forms, and determine which form is appropriate within a particular sentence. In such an instructional configuration, AI does not replace morphological reasoning. Instead, it can provide additional linguistic evidence that learners must examine and interpret. This perspective is particularly relevant to the present study because the findings position productive morphological competence, rather than simple paradigm recall, as an important outcome of Arabic morphology instruction.

At the same time, the relationship between traditional morphology instruction and AI should be interpreted cautiously. Computational morphological analysis is based on formal representations, algorithms, linguistic resources, and statistical or neural models, whereas *taṣrīf lughawī* in traditional Arabic pedagogy is embedded in a broader system of linguistic knowledge and instructional practice. The two should therefore not be treated as equivalent. The contribution of the present study is instead to identify a conceptual bridge between them. The productive orientation of *taṣrīf lughawī* provides a useful pedagogical perspective for designing AI-supported morphology learning in which students do not merely receive automatically generated answers. They examine how forms are related to roots and patterns, evaluate the grammatical and semantic appropriateness of generated forms, and reconstruct their own linguistic reasoning. Such an orientation is consistent with contemporary approaches to technology-enhanced learning that emphasize the importance of maintaining learner agency and higher-order cognitive engagement when digital tools are incorporated into instruction.

Based on the overall findings and discussion, this study proposes a conceptual repositioning of the relationship between *taṣrīf lughawī* and *taṣrīf iṣṭilāḥī* in Arabic morphology instruction. Traditionally, *taṣrīf iṣṭilāḥī* has occupied a central position because it provides a systematic framework for understanding morphological paradigms. The findings suggest, however, that paradigmatic knowledge functions most effectively as a conceptual foundation for developing learners' morphological awareness, whereas the competence that directly connects morphological knowledge with language use is represented by *taṣrīf lughawī*. Accordingly, the relationship between the two is better understood as hierarchical and complementary rather than competitive. *Taṣrīf iṣṭilāḥī* establishes knowledge of the morphological system, while *taṣrīf lughawī* transforms that knowledge into productive competence involving word formation, sentence construction, contextual interpretation, and language use.

Table 4. Conceptual Repositioning of *Taṣrīf Iṣṭilāḥī* and *Taṣrīf Lughawī* in Arabic Morphology Instruction

Dimension	<i>Taṣrīf Iṣṭilāḥī</i>	<i>Taṣrīf Lughawī</i>	Pedagogical Relationship
Primary orientation	Understanding morphological paradigms	Productive use of morphological patterns	Knowledge precedes application
Main function	Establishes morphological awareness	Operationalizes morphological awareness	Complementary functions
Unit of learning	Paradigms, forms, and patterns	Words, derivatives, and contextualized expressions	From abstract patterns to linguistic use
Cognitive process	Recognition, classification, and recall	Derivation, interpretation, evaluation, and application	From declarative knowledge to productive reasoning
Relationship with meaning	Identifies formal morphological relationships	Explores semantic consequences of morphological choices	Form and meaning are integrated
Relationship with syntax	Provides morphological forms and features	Applies forms within sentence structures	Morphology supports syntactic construction
Learner outcome	Knowledge of the Arabic morphological system	Productive morphological competence	Conceptual knowledge becomes functional competence
Potential application	AI Presenting paradigms, patterns, and morphological features	Generating, comparing, analyzing, and contextualizing lexical forms	AI supports analysis while learners retain interpretive responsibility
Position in instruction	Conceptual foundation	Applied and productive dimension	<i>Taṣrīf iṣṭilāḥī</i> supports <i>taṣrīf lughawī</i>
Ultimate pedagogical orientation	Understanding how the morphological system is organized	Using morphological knowledge to construct and interpret language	From paradigm mastery toward language production

Source: Developed by the authors based on the findings of the present study and the synthesis of Arabic morphological and contemporary linguistic perspectives.

The conceptual model presented in Table 4 demonstrates that the repositioning proposed by this study does not diminish the importance of *taṣrīf iṣṭilāḥī*. On the contrary, paradigmatic knowledge remains necessary because learners require a systematic representation of morphological structures before they can manipulate those structures productively. The principal change concerns its pedagogical function and endpoint. Instead of treating paradigm mastery as the final indicator of successful morphology learning, the model positions it as the foundation for subsequent morphological reasoning and language production. In this configuration, *taṣrīf lughawī* becomes the dimension through which students demonstrate whether their morphological knowledge can be mobilized in actual linguistic

contexts. The shift is therefore not from *taṣrīf iṣṭilāḥī* to *taṣrīf lughawī* in an oppositional sense, but from paradigm-centered instruction toward an integrated paradigm-to-production model.

The model also has implications for assessment in Arabic morphology education. If morphology instruction is evaluated primarily through the reproduction of paradigms, assessment may privilege memorization while providing limited evidence of productive competence. The present findings suggest that assessment should additionally examine whether learners can derive appropriate forms, explain morphological relationships, identify semantic differences, construct grammatically meaningful sentences, and justify their morphological choices. Such assessment would provide a closer correspondence between what students know about morphology and what they can actually do with morphological knowledge. This orientation is particularly relevant to language education because morphological competence ultimately contributes to vocabulary development, comprehension, and production rather than existing solely as an independent body of grammatical knowledge (Carlisle, 2000; Kuo & Anderson, 2006).

The pedagogical implications become even more significant in technology-supported learning environments. AI can potentially provide learners with rapid access to morphological forms, root analyses, pattern classifications, and contextual examples. However, the present conceptualization suggests that these technological capabilities should be incorporated into activities that require learners to reason about the generated information. A productive AI-supported morphology lesson, for example, may begin with learners identifying a root and predicting possible forms, followed by AI-generated alternatives that students compare against their own analysis. Students can then examine differences in pattern, grammatical function, and meaning before constructing sentences using the selected forms. In this sequence, AI serves as a source of linguistic evidence rather than an unquestioned authority. Such an approach preserves the central role of human interpretation while taking advantage of the computational capacity of contemporary language technologies.

The broader contribution of this study consequently lies in connecting a classical Arabic linguistic-pedagogical distinction with contemporary conceptions of productive language competence and technology-supported learning. The findings indicate that *taṣrīf iṣṭilāḥī* and *taṣrīf lughawī* should be integrated within a developmental sequence in which systematic knowledge provides the foundation for productive application. The conceptual bridge to AI/NLP further suggests that morphology instruction can move beyond the reproduction of fixed paradigms toward activities involving generation, comparison, interpretation, contextualization, and linguistic justification. This orientation does not abandon traditional morphology; rather, it places traditional morphological knowledge within a broader pedagogical trajectory leading toward functional language use.

Overall, this study proposes that Arabic morphology instruction should be understood as a progression from morphological awareness to productive morphological competence. *Taṣrīf iṣṭilāḥī* remains essential for establishing learners' conceptual understanding of Arabic morphological paradigms, while *taṣrīf lughawī* represents the productive dimension through which that knowledge is transformed into word formation, sentence construction, semantic interpretation, and language use. The conceptual model developed in this study therefore repositions the two not as competing instructional traditions but as interconnected stages of morphological learning. Its relevance extends beyond traditional morphology instruction because productive morphological competence provides a meaningful conceptual foundation for emerging AI-assisted Arabic language learning. Future research can empirically examine whether instruction organized around the transition from *taṣrīf iṣṭilāḥī* to *taṣrīf lughawī*

improves learners' morphological awareness, lexical development, sentence construction, and ability to critically evaluate AI-generated morphological analyses.

CONCLUSION

This study concludes that *taṣrīf lughawī* and *taṣrīf iṣṭilāḥī* represent two complementary dimensions of Arabic morphology that perform distinct pedagogical functions. The findings demonstrate that *taṣrīf iṣṭilāḥī* serves as a conceptual framework for developing learners' morphological awareness through the understanding of morphological paradigms, whereas *taṣrīf lughawī* functions as a productive competence that enables learners to generate lexical forms, construct Arabic sentences, and produce meaning in authentic communicative contexts. Based on these findings, the study proposes repositioning *taṣrīf lughawī* as the foundation of Arabic sentence construction while redefining *taṣrīf iṣṭilāḥī* as the conceptual instrument that supports this productive process. The theoretical contribution of this study lies in the development of a conceptual framework that integrates classical Arabic morphology with the concepts of morphological awareness, contemporary linguistic theory, and recent advances in Artificial Intelligence, particularly within the domain of Arabic Natural Language Processing. Practically, the findings provide implications for curriculum development, Arabic morphology instruction, and the design of learning resources that emphasize productive morphological competence and sentence construction rather than paradigm memorization alone.

This study has several limitations. First, it was conducted at a single research site, namely Pondok Pesantren Miftahul Ulum Panyepren, which may limit the transferability of the findings to other educational contexts. Second, the qualitative case study design prioritizes contextual depth over statistical generalization. Third, the discussion concerning the relationship between *taṣrīf lughawī* and Artificial Intelligence remains conceptual and has not yet been validated through the development or implementation of computational models for Arabic morphological processing. Future research is therefore encouraged to conduct comparative studies across different Islamic boarding schools and higher education institutions, develop valid instruments for assessing *taṣrīf lughawī* competence, and evaluate instructional models that prioritize Arabic sentence construction. Furthermore, subsequent studies may explore the integration of *taṣrīf lughawī* with Arabic Natural Language Processing, Large Language Models (LLMs), and AI-assisted language learning systems to extend the contribution of Arabic morphology to educational innovation and intelligent language technologies.

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