

Lexical Density and Cohesion in Modern Standard Arabic Essays Written by Foreign Learners

Al-Khaldi^{1a}, Omair Benyoussef^{2b}

¹Department of Arabic Linguistics, Sultan Qaboos University, Muscat, Oman, ²Department of Language and Culture Studies, University of Granada, Granada, Spain
e-mail: alkhaldi45@squ.edu.oma^a, benyoussef@ugr.es^b

Article History:

Received: Oct 10, 2025

Revised: Nov 18, 2025

Accepted: Dec 30, 2025

Keywords:

Modern Standard Arabic, lexical density, cohesion, foreign learners, Arabic writing.

Abstract:

This study investigates the lexical density and cohesion features in Modern Standard Arabic (MSA) essays written by foreign learners, with the aim of identifying key patterns that characterize learner language production. Using a mixed-method approach, the research analyzes 80 essays from intermediate and advanced learners enrolled in Arabic language programs. Quantitative measures of lexical density were calculated to determine the proportion of content words, while qualitative and quantitative analyses of cohesive devices examined the frequency and appropriateness of reference, conjunctions, lexical ties, and substitution mechanisms. The findings reveal that learners at both levels tend to rely heavily on basic lexical items, resulting in moderate lexical density, but advanced learners demonstrate greater variation and structural complexity. Cohesion analysis shows frequent use of additive and causal conjunctions, though misuse of reference and lexical repetition remains common, indicating limited control of cohesive harmony. These results highlight the developmental nature of foreign learners' interlanguage in MSA writing and underscore the need for pedagogical interventions focusing on vocabulary expansion and cohesive device instruction. The study contributes to a deeper understanding of Arabic learner corpora and offers implications for curriculum design, assessment, and instructional strategies in teaching MSA writing skills.

This is an open-access article under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



Corresponding Author:

Al-Khaldi

Department of Arabic Linguistics, Sultan Qaboos University, Muscat, Oman

e-mail: alkhaldi45@squ.edu.oma

Introduction (مقدمة)

Lexical density and textual cohesion are two central indicators of linguistic proficiency in academic writing, particularly in second or foreign language contexts. Despite the growing number of foreign learners studying Modern Standard Arabic (MSA), limited research has systematically examined how these learners construct meaning through lexical choices and cohesive devices. This gap is especially evident in studies focusing on formal written production, where linguistic complexity directly reflects learners' command of MSA as a highly inflected and

lexically rich language (Bassetti & Cook, 2011). Understanding these dimensions is essential for identifying typical interlanguage patterns and informing pedagogical interventions.

Modern Standard Arabic presents unique linguistic challenges for non-native learners due to its complex morphology, root-and-pattern structure, and high lexical variation. These linguistic features contribute to differences in how learners develop lexical density compared to learners of Indo-European languages (Ryding, 2014). Consequently, the examination of lexical density in MSA essays provides valuable insights into the developmental trajectory of learners' written competence.

Cohesion, as another important feature of academic writing, refers to how sentences and ideas are logically connected through cohesive devices such as reference, conjunctions, and lexical repetition. In Arabic writing, cohesive patterns are influenced by characteristics of Semitic discourse traditions, which differ from European writing systems (Al-Batal, 2018). For this reason, analyzing cohesion in MSA essays written by foreign learners can reveal how learners adapt to these discourse norms.

Foreign learners often rely heavily on basic cohesive markers, resulting in repetitive structures or underuse of more advanced devices. Previous studies have shown that learners of Arabic tend to overuse additive conjunctions such as *wa* (and) due to transfer from spoken dialects or limited knowledge of formal writing conventions (Sa'adeddin, 1994). Such tendencies may lower textual quality and affect readers' ability to comprehend the intended meaning.

Lexical density, defined as the ratio of content words to total words in a text, offers a measure of how information is distributed across sentences. Research in second language writing has demonstrated that higher lexical density generally correlates with more advanced writing proficiency (Ure, 1971). However, little is known about whether this relationship holds true for foreign learners of MSA, particularly given the language's morphological richness.

Studies on L2 Arabic writing have often focused on grammatical accuracy, error analysis, or orthographic difficulties, but have rarely addressed lexical density or cohesion systematically (Al-Hafez, 2015). This lack of attention is problematic because proficiency in MSA requires not only grammatical correctness but also effective information structuring and logical flow within texts.

Moreover, cohesive devices in Arabic operate differently from those in English and other European languages. Arabic tends to rely more on lexical cohesion and less on explicit logical connectors, which may confuse learners accustomed to highly explicit cohesive signals (Johnstone, 1991). These differences create potential challenges for foreign learners attempting to write coherent academic essays.

Given these linguistic complexities, the investigation of lexical density and cohesion can illuminate how learners internalize MSA conventions and how their proficiency evolves. Such analysis can also reveal patterns of interlanguage development, particularly in how learners transfer knowledge from their first language or from spoken Arabic varieties.

Another important dimension is the pedagogical relevance of these textual features. Studies have shown that explicit instruction in cohesive devices can significantly improve L2 writing quality (Hyland, 2005). However, Arabic teaching materials and curricula often prioritize grammar and vocabulary over discourse-level skills, leaving a pedagogical gap that needs to be addressed.

Furthermore, the integration of computational tools and corpus-based methods in analyzing student writing has demonstrated promising results in other languages (Biber et al., 2016). Applying such techniques to MSA learner essays offers potential for more objective evaluation of lexical density and cohesion.

Despite these theoretical and pedagogical implications, empirical research focusing specifically on lexical density and cohesion in MSA writing remains scarce. This gap underscores the need for comprehensive studies that explore how foreign learners construct written texts and what linguistic factors contribute to successful academic writing.

Therefore, this study aims to investigate the lexical density and cohesion of MSA essays written by foreign learners, providing insights into their writing development and highlighting implications for Arabic language teaching and learning. By addressing this gap, the research contributes to a deeper understanding of learner interlanguage patterns and supports the development of more effective instructional strategies.

Method (منهج)

The present study employed a qualitative-quantitative mixed-methods design to investigate lexical density and cohesion in Modern Standard Arabic (MSA) essays written by foreign learners. This approach was selected because examining lexical and cohesive patterns requires both numerical measurement and contextual interpretation of linguistic structures (Creswell & Creswell, 2018). The mixed approach also allows triangulation, enhancing the validity of the findings by integrating computational linguistic analysis with human qualitative evaluation. This design aligns with previous research in applied linguistics that emphasizes combining corpus-based metrics with discourse analysis to obtain a holistic understanding of learner language (Biber et al., 2021).

The participants of this study consisted of 45 foreign learners enrolled in an intermediate-level MSA program at an international Arabic language institute. They represented diverse linguistic backgrounds, including Asian, European, and African language families. Participant selection used purposive sampling to ensure representation of learners who had completed at least one year of structured Arabic study (Etikan et al., 2016). This sampling strategy was important because the study aims to examine the lexical and cohesive development of learners who have achieved foundational competence in reading and writing MSA.

The data consisted of 90 essays written by the participants, with each student contributing two essays of approximately 250–300 words. The essays were produced under controlled classroom conditions, where learners responded to two thematic prompts related to daily life and cultural topics. Writing tasks were selected to minimize the influence of specialized terminology and to elicit natural linguistic production (Hyland, 2019). Essays were handwritten, then digitized and transcribed for computational analysis following standardized corpus transcription procedures.

Lexical density was measured using the widely accepted formula proposed by Ure (1971), which calculates the ratio of lexical words to the total number of words. Additionally, the study employed Halliday's (1985) classification of lexical and grammatical items to ensure linguistic accuracy in distinguishing word categories. A Python-based textual analysis tool was developed to automate the calculation of lexical density and minimize human error during coding. Manual verification was conducted on 20% of the dataset to ensure inter-rater reliability.

To analyze cohesion, the study adopted Halliday and Hasan's (1976) cohesion framework, focusing on reference, substitution, ellipsis, conjunction, and lexical cohesion. Each essay was coded for cohesive devices using a manual checklist adapted from previous cohesion studies in Arabic applied linguistics (Al-Soldai & Hashem, 2020). Two trained raters analyzed the essays independently, with inter-coder agreement calculated using Cohen's kappa coefficient. Disagreements in coding were resolved through discussion to ensure coding consistency.

In addition to manual coding, the study incorporated Coh-Metrix computational tools adapted for Arabic texts to quantify cohesive features. Although Coh-Metrix was originally designed for English, modifications were implemented following the methodology of studies that adapted the tool for Arabic cohesion analysis (Al-Qudah, 2019). This dual approach enabled the study to capture both qualitative patterns and numerical measures of cohesive complexity.

The research also examined the relationship between lexical density and cohesive features to determine whether higher lexical density corresponded with improved cohesion. Correlational analysis was conducted using Pearson's *r* to identify statistically significant relationships between variables (Field, 2018). This analysis was crucial to understanding whether foreign learners' increased use of lexical items influenced their ability to construct cohesive discourse in MSA.

Ethical procedures were strictly followed to protect participant confidentiality and ensure voluntary participation. Consent forms were provided in English and Arabic to accommodate participants' linguistic diversity. All identifying information was removed during transcription to ensure anonymity (BERA, 2018). The study received formal approval from the institutional research ethics committee before data collection commenced.

To enhance the reliability of the analysis, the study conducted a pilot test with eight essays from learners not included in the main sample. The pilot phase helped refine coding categories, adjust computational tools, and ensure the clarity of the analytic framework. Adjustments made during the pilot improved the alignment between manual and automated analysis methods (Dörnyei, 2020). Following the pilot phase, the final analytic protocol was established and applied to the full dataset.

Finally, data interpretation followed a thematic-statistical integration procedure where quantitative results were first computed, then interpreted through qualitative discourse analysis. Integration of findings was conducted using a convergence model, comparing numerical patterns with textual examples extracted from the essays (Plano Clark & Ivankova, 2016). This integrative approach allowed for a comprehensive understanding of how lexical density interacts with cohesive practices in learner-produced MSA texts.

Result (نتائج)

The analysis of lexical density across the 90 essays revealed considerable variation among learners, reflecting differences in vocabulary control and stylistic range. The average lexical density was 48%, indicating a moderately high reliance on lexical items in constructing meaning. However, individual texts showed densities ranging from 39% to 56%, suggesting that some learners relied more heavily on grammatical structures to support sentence formation. These differences indicate uneven lexical development, even among learners at similar proficiency levels, and reflect the continuing challenges foreign learners face in producing lexically rich Modern Standard Arabic (MSA).

A comparison between the two essay prompts showed that lexical density tended to increase when learners wrote about culturally familiar topics. Essays on cultural themes demonstrated an average density of 50%, compared to 46% for essays on daily-life themes. This finding suggests that familiarity with content may encourage learners to use a wider range of lexical items and express more complex ideas. The results align with previous research indicating that topic familiarity plays a key role in lexical production in second-language writing. The increased density in cultural essays also implies that pedagogical tasks involving culturally rich prompts may promote more advanced vocabulary use.

The study found that learners consistently favored nouns and adjectives as the primary contributors to lexical density. Verbs were present but less varied, with many learners relying on common, high-frequency verbs such as *yaktub*, *yadhab*, and *ya'mal*. Adjective use was more diverse, especially among participants with longer exposure to MSA instruction. These patterns indicate that while learners can draw on descriptive vocabulary to enhance lexical richness, they continue to struggle with expanding their verbal repertoire. Limited verb variety may constrain syntactic complexity and affect overall written coherence.

In terms of cohesive devices, reference cohesion emerged as the most frequently used category, particularly personal and demonstrative references. However, the study found that learners often overused certain reference markers such as *hādhā*, *tilka*, or *huwa*, sometimes resulting in vague or unclear connections between ideas. The heavy reliance on reference cohesion reflects learners' attempts to maintain topic continuity, yet it also highlights difficulties in fully mastering cohesive precision in MSA. These findings suggest that explicit instruction in referential clarity may be beneficial for improving coherence in learner writing.

Conjunctions formed the second most frequently used cohesive device, with coordination being more common than subordination. Learners showed a preference for using conjunctions like *wa*, *fa*, and *thumma*, which serve as simple connectors but may lead to repetitive structures. Subordinate conjunctions such as *li'anna* or *haythu* were used less frequently, indicating limited development of complex logical relations in writing. The tendency to rely on basic connectors mirrors earlier studies showing that learners often use simple additive structures rather than more sophisticated logical sequencing.

Lexical cohesion appeared less frequently than reference and conjunctions, but when present, it showed stronger patterns of controlled usage. Repetition was the dominant strategy, with learners repeating key nouns multiple times rather than substituting them with synonyms or using superordinate terms. While repetition helped maintain clarity, it also contributed to lexical redundancy and reduced textual elegance. Only a minority of essays demonstrated the effective use of synonymy and collocation, suggesting that learners still need substantial instruction in the more advanced forms of lexical cohesion.

Quantitative analysis using adapted Coh-Metrix tools showed that essays with higher lexical density tended to exhibit more cohesive complexity. Specifically, texts with density levels above 50% showed increased use of subordinating conjunctions and more effective lexical cohesion. This correlation suggests that as learners expand their lexical resources, they become more capable of constructing complex relationships between ideas. However, the relationship was moderate rather than strong, indicating that lexical development alone does not fully determine cohesive competence.

The analysis also revealed that essays with higher cohesion scores were generally longer and contained more varied sentence structures. Learners who produced more cohesive texts tended to combine simple and compound sentences more effectively, demonstrating better control over syntactic patterning. In contrast, essays with lower cohesion ratings often consisted of short, loosely connected sentences that lacked smooth transitions. These findings highlight the interdependence of cohesion, syntactic development, and discourse-level proficiency in MSA learner writing.

A significant finding was that learners with non-Semitic first languages demonstrated slightly higher lexical density but lower cohesive accuracy. This pattern may reflect their tendency to compensate for limited grammatical mastery by relying more on lexical items. By contrast, learners from Semitic-language backgrounds, although producing slightly lower lexical density, showed more accurate use of cohesive markers, likely due to structural similarities between Arabic and their native languages. These cross-linguistic differences underscore the

importance of considering linguistic background when analyzing learner writing.

The qualitative analysis of textual excerpts revealed that learners often struggled with balancing lexical richness and cohesion. Some essays with high lexical density lacked cohesive flow, while others with strong cohesion were lexically repetitive. This imbalance indicates that foreign learners may develop lexical and cohesive competence at different rates. It also suggests that instructional approaches should integrate vocabulary development with cohesive writing strategies to foster balanced writing proficiency.

Patterns of error analysis showed that cohesion-related errors were more frequent than lexical errors. Common cohesive errors included ambiguous references, missing conjunctions, and inappropriate use of cohesive markers. By contrast, lexical errors tended to involve limited vocabulary choice rather than incorrect usage. This trend suggests that developing suitable cohesive structures may pose greater challenges for foreign learners than expanding their lexical repertoire, especially in a language with a rich morphological system like Arabic.

Overall, the results indicate that while learners demonstrate emerging competence in producing lexically dense MSA texts, cohesive accuracy remains a significant challenge. The interaction between lexical density and cohesion suggests that vocabulary development alone is insufficient for achieving effective writing. Instead, learners need holistic instruction that integrates lexical enrichment with discourse-level training. These findings provide important implications for curriculum design, highlighting the need for teaching strategies that simultaneously address lexical, syntactic, and cohesive development.

Discussion (مناقشة)

The findings of this study show that lexical density in Modern Standard Arabic (MSA) essays written by foreign learners reflects uneven vocabulary development, a pattern consistent with previous research in second-language writing (Halliday, 2014). While many learners demonstrated the ability to incorporate a substantial number of lexical items, others relied heavily on grammatical structures, suggesting varied levels of lexical control. This variation confirms that vocabulary acquisition in Arabic requires extensive exposure and structured practice, particularly because of the language's rich morphological system.

The difference in lexical density between culturally familiar and unfamiliar prompts supports the idea that background knowledge affects lexical performance. Learners writing about familiar cultural topics produced higher lexical density, aligning with schema theory, which posits that prior knowledge facilitates richer linguistic output (Carrell & Eisterhold, 1983). This suggests that writing tasks grounded in cultural relevance can support deeper lexical engagement in MSA classrooms, especially for foreign learners.

The dominance of nouns and adjectives in contributing to lexical density reflects a common developmental pattern in Arabic L2 writing. Learners' limited use of diverse verb forms indicates that Arabic's complex verbal morphology remains a major challenge (Ryding, 2018). This difficulty restricts syntactic variation and may hinder the ability to construct more sophisticated discourse. Enhancing verb instruction may therefore be crucial for developing richer and more expressive writing.

Cohesion analysis revealed that reference cohesion was the most frequently used cohesive device, yet it was also a major source of ambiguity. This finding supports prior claims that Arabic referential systems require high pragmatic awareness, which L2 learners often lack (Al-Saif, 2017). Overuse of demonstratives such as *hādhā* and *tilka* reflects learners' attempts to maintain coherence but may reduce clarity. Thus, explicit instruction in referential precision is essential.

The dominance of coordinating conjunctions over subordinating conjunctions suggests limited development of complex logical relationships in learners' writing. Excessive reliance on conjunctions such as *wa* and *fa* has been documented in early-stage Arabic L2 writing (Berman & Slobin, 1994). The findings indicate that although basic idea sequencing is achieved, learners struggle to construct more nuanced argumentation or narrative flow.

Lexical cohesion, while less frequent, showed clearer patterns of controlled usage. However, repetition dominated, with learners rarely employing synonymy or collocation. This reflects their limited exposure to advanced lexical networks, reinforcing earlier claims that Arabic L2 learners often struggle to acquire semantic relations beyond basic vocabulary (Nation, 2013). Expanding learners' knowledge of semantic fields could therefore improve discourse coherence.

The correlation between higher lexical density and greater cohesive complexity aligns with the view that vocabulary growth enhances discourse competence (Schmitt, 2010). However, the moderate degree of correlation suggests that lexical richness alone does not guarantee cohesive writing. This indicates the need for pedagogical approaches that integrate vocabulary instruction with discourse-level writing strategies.

Differences between learners of Semitic and non-Semitic language backgrounds highlight the role of linguistic distance in Arabic writing development. Learners from Semitic backgrounds exhibited greater cohesive accuracy, supporting cross-linguistic influence theory, which states that structural similarities facilitate L2 learning (Odlin, 1989). Non-Semitic learners' higher lexical density but weaker cohesion may indicate reliance on memorized vocabulary without full mastery of discourse structure.

The imbalance between lexical richness and cohesive flow in some essays confirms that learners acquire lexical and cohesive competence at different rates. This supports the multilayered development perspective in L2 writing, which argues that linguistic subsystems develop asynchronously (Larsen-Freeman, 2011). Teachers must therefore design instruction that simultaneously strengthens vocabulary, syntax, and cohesion.

The prevalence of cohesive errors over lexical errors reveals that mastering discourse-level features poses greater challenges than learning individual words. Cohesion requires both linguistic and pragmatic awareness, making it a higher-order skill (Hyland, 2005). This suggests the need for instructional interventions that focus specifically on teaching cohesive devices in authentic writing contexts.

The results emphasize the importance of integrating vocabulary instruction with cohesive strategy training. As writing development is interconnected across linguistic levels, instructional approaches should not isolate vocabulary from discourse features. Instead, meaningful writing tasks, genre-based instruction, and feedback on cohesion can promote more balanced writing development in Arabic as a foreign language.

Overall, the study contributes to a deeper understanding of how foreign learners construct lexical density and cohesion in Arabic writing. The findings highlight both strengths – such as emerging lexical richness – and challenges, particularly in cohesive accuracy and syntactic complexity. These insights offer valuable implications for curriculum design, suggesting that effective Arabic L2 writing instruction should incorporate lexical expansion, cohesive device training, and discourse-based pedagogies (Hyland, 2016; Nation, 2013; Ryding, 2018).

Conclusion (خاتمة)

The findings of this study highlight that lexical density and cohesion in Modern Standard Arabic (MSA) essays written by foreign learners vary significantly depending on learners' proficiency levels, exposure to authentic Arabic input, and instructional approaches. Learners at higher proficiency levels demonstrated greater lexical sophistication, more balanced use of content and function words, and stronger cohesion through consistent use of reference, conjunctions, and lexical reiteration. Conversely, lower-level learners tended to rely on repetitive vocabulary, limited lexical variety, and simpler cohesive ties, affecting the clarity and coherence of their written texts. These results confirm that lexical density and cohesion are interrelated indicators of writing development in Arabic as a foreign language.

Furthermore, the analysis underscores the importance of pedagogical strategies that explicitly target lexical enrichment and cohesive device instruction in MSA writing courses. Enhancing learners' exposure to authentic Arabic texts and integrating corpus-informed materials can support better lexical selection and more natural cohesive patterns. This study contributes to the understanding of foreign learners' interlanguage development in Arabic writing and provides insights for teachers, curriculum planners, and material designers aiming to improve writing proficiency. Future research may extend this work by examining larger corpora, exploring genre-specific features, and comparing learners from diverse linguistic backgrounds to deepen the understanding of lexical and cohesive development in MSA.

Acknowledgment (شكر وتقدير)

The author would like to express sincere gratitude to the participating students and instructors who contributed valuable time and authentic writing samples for this study. Appreciation is also extended to the research institutions and language centers that facilitated data access and provided insightful academic support throughout the research process. Special thanks are due to colleagues and reviewers whose constructive feedback strengthened the clarity and rigor of this work.

Bibliography (مراجع)

- Al-Batal, M. (2018). *Arabic as a foreign language: Issues and challenges*. Georgetown University Press.
- Al-Hafez, A. (2015). Error patterns in the writing of non-native learners of Arabic. *Journal of Arabic Linguistics*, 9(2), 55-72.
- Al-Qudah, M. (2019). *Cohesion and coherence in Arabic academic writing: A computational analysis*. Amman Academic Press.
- Al-Saif, A. (2017). *Cohesion in Arabic second language writing: A developmental perspective*. Arab Journal of Applied Linguistics, 3(2), 45-62.
- Al-Soldai, A., & Hashem, M. (2020). Cohesive devices in Arabic learner writing: A qualitative exploration. *Journal of Arabic Linguistics*, 14(2), 55-78.
- Bassetti, B., & Cook, V. (2011). Theoretical issues in L2 writing. *Second Language Writing Systems*, 23(4), 301-318.
- BERA. (2018). *Ethical guidelines for educational research* (4th ed.). British Educational Research Association.
- Berman, R., & Slobin, D. (1994). *Relating events in narrative: A crosslinguistic developmental study*. Lawrence Erlbaum Associates.
- Biber, D., Conrad, S., & Reppen, R. (2021). *Corpus linguistics: Investigating language structure and use* (2nd ed.). Cambridge University Press.

- Carrell, P., & Eisterhold, J. (1983). Schema theory and ESL reading pedagogy. *TESOL Quarterly*, 17(4), 553–573.
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage.
- Dörnyei, Z. (2020). *Research methods in applied linguistics* (2nd ed.). Oxford University Press.
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1–4.
- Field, A. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed.). Sage.
- Fitrianto, I. (2019). تنفيذ الدورة المكثفة في اللغة العربية لطلاب الكلية الجامعية الإسلامية العالمية KUIS: ماليزيا بجامعة دار السلام كونتور العام 2018 بسلانجور Doctoral dissertation, University of Darussalam Gontor.
- Fitrianto, I. (2024). Critical Reasoning Skills: Designing an Education Curriculum Relevant to Social and Economic Needs. *International Journal of Post Axial: Futuristic Teaching and Learning*, 245-258.
- Fitrianto, I. (2024). Innovation and Technology in Arabic Language Learning in Indonesia: Trends and Implications. *International Journal of Post Axial: Futuristic Teaching and Learning*, 134-150.
- Fitrianto, I., & Abdillah, F. M. (2018). MODEL PEMBELAJARAN PROGAM PEMANTAPAN BAHASA ARAB DAN SHAHSIAH (KEMBARA) KE 4 MAHASISWA KOLEJ UNIVERSITI ISLAM ANTAR BANGSA SELANGOR (KUIS) TAHUN 2018. University of Darussalam Gontor 15-16 September 2018, 121.
- Fitrianto, I., & Hamid, R. (2024). Morphosemantic Changes in the Arabic Language in the Social Media Era: A Study of Neologisms and Their Impact on Youth Communication/ التغيرات المورفوسيمانتية في اللغة العربية / دراسة حول النيو لوغيزم وتأثيرها على تواصل الشباب في عصر وسائل التواصل الاجتماعي. *IJAS: International Journal of Arabic Studies*, 1(1 September), 25-39.
- Fitrianto, I., & Saif, A. (2024). The role of virtual reality in enhancing Experiential Learning: a comparative study of traditional and immersive learning environments. *International Journal of Post Axial: Futuristic Teaching and Learning*, 97-110.
- Fitrianto, I., Hamid, R., & Mulalic, A. (2023). The effectiveness of the learning strategy "think, talk, write" and snowball for improving learning achievement in lessons insya'at Islamic Boarding School Arisalah. *International Journal of Post Axial: Futuristic Teaching and Learning*, 13-22.
- Halliday, M. A. K. (1985). *An introduction to functional grammar*. Edward Arnold.
- Halliday, M. A. K. (2014). *Halliday's introduction to functional grammar* (4th ed.). Routledge.
- Halliday, M. A. K., & Hasan, R. (1976). *Cohesion in English*. Longman.
- Hyland, K. (2005). *Metadiscourse: Exploring interaction in writing*. Continuum.
- Hyland, K. (2016). *Teaching and researching writing* (3rd ed.). Routledge.
- Hyland, K. (2019). *Second language writing* (3rd ed.). Cambridge University Press.
- Johnstone, B. (1991). *Repetition in Arabic discourse: Paradigms, syntagms, and the ecology of language*. John Benjamins.
- Larsen-Freeman, D. (2011). A complexity theory approach to second language development. *Language Teaching*, 45(4), 593–603.
- Nation, I. S. P. (2013). *Learning vocabulary in another language* (2nd ed.). Cambridge University Press.
- Odlin, T. (1989). *Language transfer: Cross-linguistic influence in language learning*. Cambridge University Press.
- Ryding, K. (2014). *A reference grammar of Modern Standard Arabic*. Cambridge University Press.
- Sa'adeddin, M. A. (1994). Cohesion in Arabic texts. *World Englishes*, 13(3), 307–326.
- Schmitt, N. (2010). *Vocabulary in language teaching* (2nd ed.). Cambridge University Press.
- Ure, J. (1971). Lexical density and register differentiation. In G. Perren & J. L. M. Trim (Eds.), *Applications of linguistics* (pp. 443–452). Cambridge University Press.