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GLOBAL ACADEMIC EXCELLENCE

A BIBLIOMETRIC ANALYSIS OF SCIENTIFIC OUTPUT IN THE FIELD OF ARABIC LANGUAGE: TRENDS AND RESEARCH DEVELOPMENTS FROM 2005 TO 2024

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Abstract:

This study presents a comprehensive bibliometric analysis of global scientific output in the field of Arabic language research from 2005 to 2024, aiming to identify publication trends, key contributors, and research developments over the past two decades. The significance of Arabic language studies has grown in parallel with global interest in linguistic diversity, education, translation, and religious scholarship. However, a systematic and data-driven overview of research productivity and collaboration in this domain remains limited. Addressing this gap, the present study employs a robust bibliometric methodology using data retrieved from the Scopus database based on two keywords: "arabic" and "language". A total of 1,175 documents were identified and analyzed using Scopus Analyzer for basic bibliographic metrics, OpenRefine for data cleaning and normalization, and VOSviewer for network visualization and mapping of author collaboration, keyword co-occurrence, and citation patterns. The analysis reveals a consistent growth in publication volume, with notable peaks in specific years, reflecting heightened academic engagement. Saudi Arabia, Jordan, and the United States emerged as the most productive countries, while highly cited articles often focused on Arabic

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computational linguistics, language acquisition, and Quranic studies. Keyword analysis showed recurring themes such as "Arabic language," "natural language processing," and "machine translation," indicating a strong interdisciplinary interest. Moreover, international collaboration networks highlight increasing research partnerships between Arab and Western institutions. In conclusion, this bibliometric analysis not only maps the intellectual landscape of Arabic language studies but also underscores emerging trends and future research opportunities, serving as a valuable resource for scholars, educators, and policymakers in linguistic and cultural research domains.

Keywords:

Arabic Language, Bibliometric Analysis, Scopus, Research Trends, VOSviewer, Language Studies

Introduction

Bibliometric analysis has become an essential tool for evaluating research output and identifying trends within specific academic fields. This method involves the quantitative analysis of scientific literature to assess the impact, productivity, and collaboration patterns of researchers and institutions. In the context of the Arabic language, bibliometric analysis can provide valuable insights into the evolution of research, highlight influential works, and identify emerging areas of interest. This study aims to conduct a comprehensive bibliometric analysis of scientific output in the field of Arabic language research, focusing on trends and developments over recent years.

The application of bibliometric analysis in various fields has demonstrated its utility in mapping research trends and evaluating academic performance. For instance, studies have utilized bibliometric methods to assess research output in fields such as integrative and complementary medicine, urology and nephrology, and genitourinary cancer within the Arab world (Ibrahim et al. 2022; Sweileh et al. 2014; Zyoud, Al-Jabi, and Sweileh 2015). These analyses have revealed significant insights into the productivity, citation impact, and collaborative networks of researchers in these domains. Similarly, bibliometric studies in the humanities, such as Arabic dialectology and translation studies, have highlighted the integration of digital technologies and interdisciplinary approaches as key drivers of research development (Bernikova and Redkin 2017, 2019; Redkin and Bernikova 2015).

In the specific context of Arabic language research, bibliometric analysis has identified several key trends and developments. Recent studies have shown a growing interest in the computerization of Arabic language and the application of computational linguistics to address linguistic challenges (Algaradi et al. 2022; Elawadi et al. 2019). The integration of information and communication technologies (ICT) has led to the development of new methodologies and tools for linguistic analysis, which have significantly influenced the field. Additionally, research on Arabic language teaching and learning has emphasized the need for innovative approaches and the incorporation of sociocultural dimensions to enhance educational outcomes (Wahba, England, and Taha 2017; Wahba, Taha, and England 2014).

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Furthermore, bibliometric studies have underscored the importance of international collaboration and the impact of research evaluation policies on the quality of scientific output. For example, the analysis of library and information science research in the Arab world revealed a significant increase in publications, but also highlighted the prevalence of publications in predatory journals and the need for qualitative criteria in research evaluation (Khader 2024). These findings suggest that while there is substantial progress in Arabic language research, there are also challenges that need to be addressed to ensure the continued growth and impact of the field.

In summary, bibliometric analysis provides a powerful framework for understanding the trends and developments in Arabic language research. By examining the quantity and quality of scientific output, as well as the collaborative networks and emerging areas of interest, this study aims to offer a comprehensive overview of the current state of research in this field. The insights gained from this analysis can inform future research policies and strategies, ultimately contributing to the advancement of Arabic language studies.

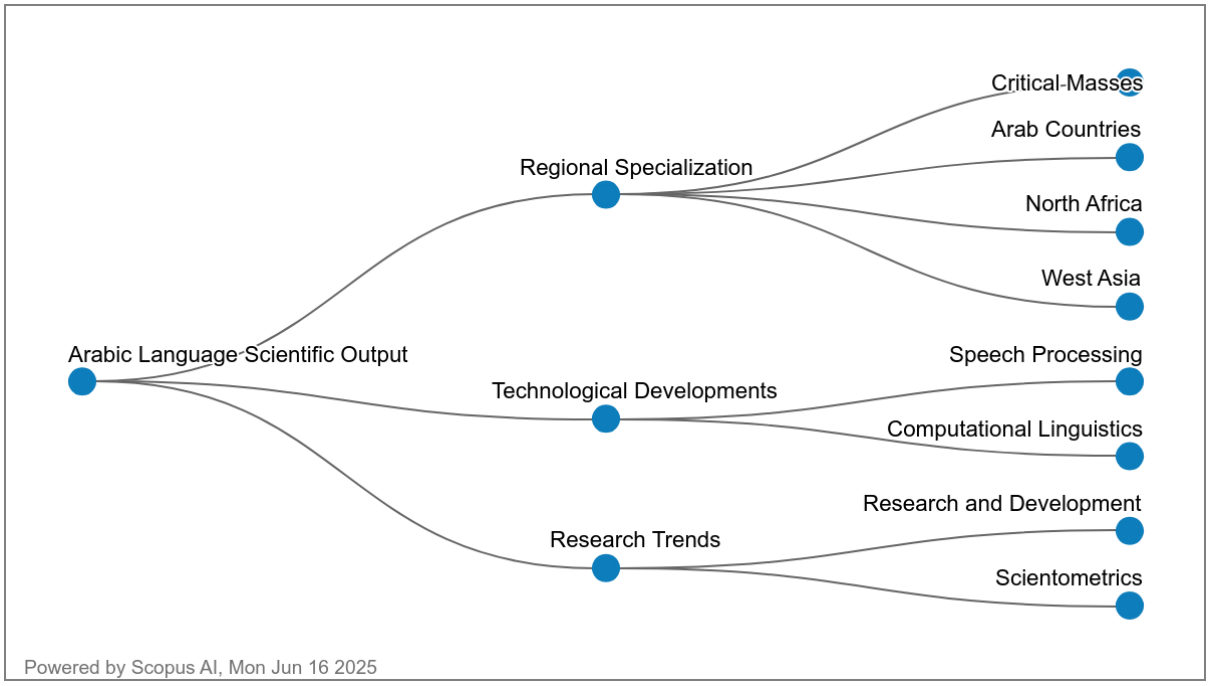

Figure 1: Overview of Literature

Source: Adapted from Scopus Database, accessed on 16th June 2025 (https://www.scopus.com)

Research Question

1. What the annual publication trend in scientific output in the field of Arabic language studies research from 2005 to 2024?
2. What is the level of influence and subject area productivity in the field of Arabic language research?
3. What are the top 10 most cited articles in this field?
4. Which are the top 10 countries based on the number of publications?
5. What are the most frequently used keywords related to Arabic language research?
6. What does the co-authorship network reveal about collaboration among countries?

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Methodology

This study adopted bibliometric techniques to systematically gather, structure, and analyze bibliographic data from scientific publications (Alves, Borges, and De Nadae 2021; Assyakur and Rosa 2022; Verbeek et al. 2002). In addition to basic statistical measures such as identifying core journals, publication trends by year, and leading authors (Wu and Wu 2017), bibliometrics includes more sophisticated techniques like document co-citation analysis. the analysis incorporated more advanced methods, including document co-citation analysis.

A rigorous and iterative approach was applied throughout the literature review process, beginning with the careful selection of relevant keywords, followed by comprehensive database searches and detailed analytical procedures. This strategy facilitated the compilation of an extensive and reliable body of literature for analysis (Fahimnia, Sarkis, and Davarzani 2015). In line with the study's objective to identify influential research developments, particular attention was given to high-impact publications, which offer critical insights into the theoretical foundations and scholarly direction of the field.

To ensure the reliability and precision of the dataset, Elsevier's Scopus database was used as the primary source of bibliographic records (Al-Khoury et al. 2022; Khiste and Paithankar 2017; di Stefano, Peteraf, and Veronay 2010), owing to its wide coverage and academic credibility. Furthermore, to maintain a high standard of scholarly quality, only peer-reviewed journal articles were included in the analysis, while other publication types such as books, book chapters, and lecture notes were intentionally excluded (Gu et al. 2019). The final dataset encompassed relevant publications from the period spanning 2005 to December 2024 and was subsequently processed using OpenRefine for data cleaning and VOSviewer for visualizing patterns in international co-authorship networks and keyword co-occurrence.

Data Search Strategy

The data retrieval was conducted on Scopus using the following structured search string applied to article titles: TITLE (arabic AND language) AND PUBYEAR > 2004 AND PUBYEAR < 2025 AND (LIMIT-TO (SRCTYPE , "j")) AND (LIMIT-TO (PUBSTAGE , "final")) AND (LIMIT-TO (LANGUAGE, "English") OR LIMIT-TO (LANGUAGE , "Arabic")). This query required the presence of both "Arabic" and "language" within the title, limited results to the publication years 2005 through 2024, restricted the document source type to journals, included only final publication stages, and filtered for publications in either English or Arabic. This comprehensive search strategy yielded an initial dataset of 1,175 articles for subsequent bibliometric analysis.

Table 1: The Search String

Scopus	TITLE (arabic AND language) AND PUBYEAR > 2004 AND PUBYEAR < 2025 AND (LIMIT-TO (SRCTYPE , "j")) AND (LIMIT-TO (PUBSTAGE , "final")) AND (LIMIT-TO (LANGUAGE, "English") OR LIMIT-TO (LANGUAGE , "Arabic"))

Table 2: The Selection Criterion in Searching

Criterion	Inclusion	Exclusion
Language	English and Arabic	Non-English and Arabic
Time line	2005 - 2024	< 2005

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Literature type	Journal (Article)	Conference, Book, Review
Publication Stage	Final	In Press

Data Analysis

VOSviewer, developed by Nees Jan van Eck and Ludo Waltman at Leiden University in the Netherlands (Van Eck and Waltman 2010, 2017), is a highly accessible bibliometric software tool designed to assist in the visualization and analysis of scientific literature. The software is particularly effective in generating network visualizations, clustering related items, and creating density maps. Its adaptability enables researchers to explore co-authorship, co-citation, and keyword co-occurrence networks, offering a broad and detailed overview of research landscapes. The interactive user interface, along with regular updates, supports the efficient and dynamic analysis of large datasets. With capabilities such as metric computation, visualization customization, and compatibility with diverse bibliometric databases, VOSviewer serves as a vital asset for scholars aiming to delve into complex research environments.

A key advantage of VOSviewer lies in its ability to convert complex bibliometric data into clear and interpretable visual maps and charts. Emphasizing network visualization, it effectively identifies clusters of related items, tracks keyword co-occurrence trends, and produces informative density maps. Its intuitive interface supports users at all experience levels, streamlining the process of navigating research landscapes. Continued enhancements to the software have ensured its relevance in bibliometric research, offering robust analytical tools including customizable visuals and performance metrics. The tool's flexibility in handling various bibliometric structures, such as citation and co-authorship networks, further cements its role as a valuable instrument for in-depth scholarly exploration.

The dataset used in this study included publication metadata-such as publication year, title, author name, journal, citations, and keywords-extracted in PlainText format from the Scopus database, covering the period from 2004 to December 2024. Analysis was conducted using VOSviewer version 1.6.19. By employing VOS clustering and mapping methodologies, the software enabled detailed exploration and visualization of bibliometric networks. Distinct from the traditional Multidimensional Scaling (MDS) approach, VOSviewer arranges items in a low-dimensional space to ensure that the distance between two items accurately mirrors their degree of relatedness (Van Eck and Waltman 2010). In doing so, it shares conceptual parallels with MDS (Appio, Cesaroni, and Di Minin 2014). However, unlike MDS, which typically employs similarity metrics such as cosine and Jaccard indices, VOSviewer applies a more suitable normalization technique for co-occurrence data which is calculated as (Van Eck and Waltman 2007):

$$AS_{ij} = \frac{C_{ij}}{w_i w_j}$$

which is "proportional to the ratio between on the one hand the observed number of cooccurrences of i and j and on the other hand the expected number of co-occurrences of i and j under the assumption that co-occurrences of i and j are statistically independent" (Van Eck and Waltman 2007).

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Finding

What The Annual Publication Trend In Scientific Output In The Field Of Arabic Language Studies Research From 2005 To 2024?

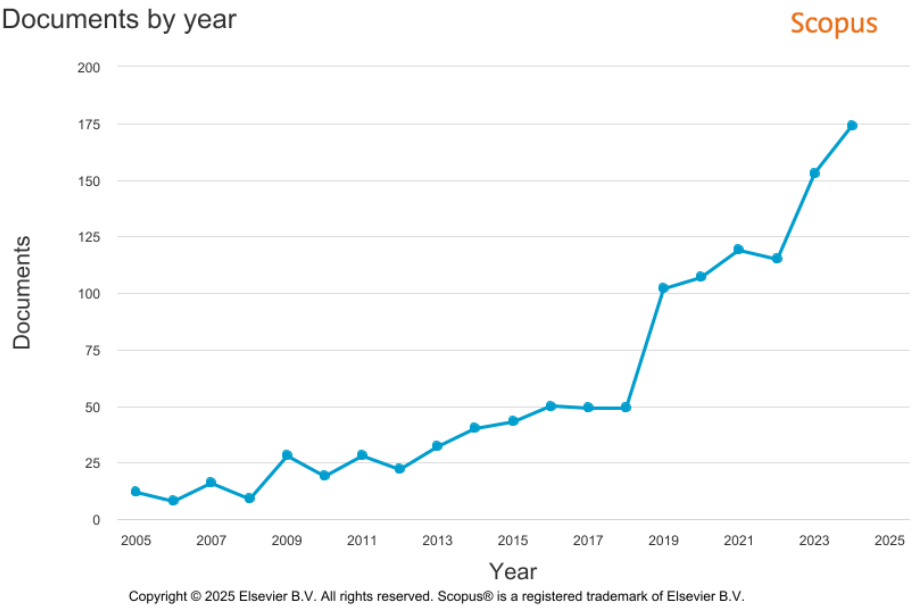

Figure 2: Trend Of Research In Arabic Language Studies By Years

Source: Adapted from Scopus Database, accessed on 16th June 2025 (https://www.scopus.com)

Table 3: Trend Of Research In Arabic Language Studies By Years

Year	Number of Article	Percentage	Year	Number of Article	Percentage
2024	174	14.8%	2014	40	3.4%
2023	153	13.0%	2013	32	2.7%
2022	115	9.8%	2012	22	1.9%
2021	119	10.1%	2011	28	2.4%
2020	107	9.1%	2010	19	1.6%
2019	102	8.7%	2009	28	2.4%
2018	49	4.2%	2008	9	0.8%
2017	49	4.2%	2007	16	1.4%
2016	50	4.3%	2006	8	0.7%
2015	43	3.7%	2005	12	1.0%

Source: Data retrieved from Scopus Database (https://www.scopus.com), accessed on 16th June 2025

Based on the data provided, the scientific output in the field of Arabic language has shown a significant upward trend from 2005 to 2024. In the early phase (2005-2010), the annual number of publications remained below 30, accounting for less than 2.5% each year. This limited output suggests that Arabic language studies were still emerging on the global academic stage, possibly hindered by access, funding, or indexing issues. A turning point is evident starting from 2011, with gradual increases in both absolute numbers and percentages. The growth becomes more pronounced after 2018, doubling from 49 articles (4.2%) in 2018 to 102 articles (8.7%) in 2019, and then continuing its rise steadily over the next five years.

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From 2020 onward, the field enters a period of rapid expansion. The number of articles jumped from 107 (9.1%) in 2020 to a peak of 174 (14.8%) in 2024, reflecting heightened academic interest and possibly greater institutional support for Arabic language research. The consistent increase each year, particularly between 2021 and 2024, suggests a sustained momentum likely driven by digital humanities, computational linguistics, and interdisciplinary research involving Arabic texts. The growing output also reflects improved accessibility to academic publishing platforms and greater global collaboration. Overall, the data points to a vibrant and maturing field, with Arabic language research gaining both visibility and scholarly depth in recent years.

What Is The Level Of Influence And Subject Area Productivity In The Field Of Arabic Language Research?

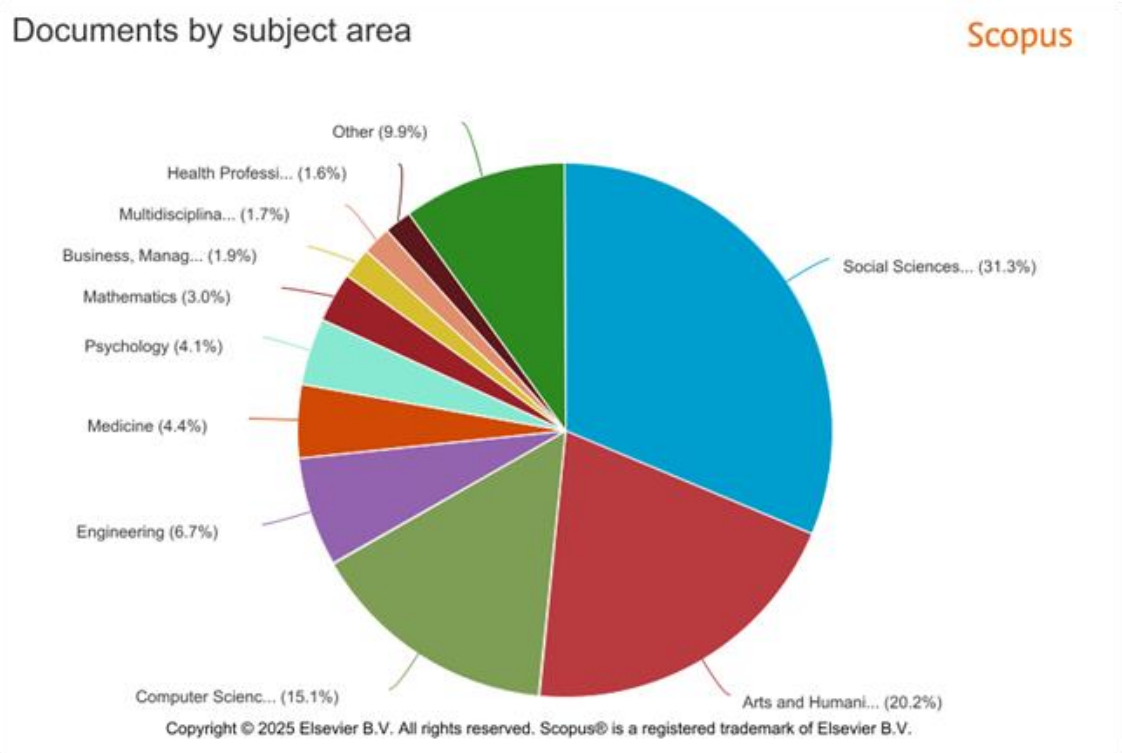

Figure 3: Level of Influence and Subject Area Productivity in The Field of Arabic Language Research

Source: Adapted from Scopus Database, accessed on 16th June 2025 (https://www.scopus.com)

Table 4: Distribution of Arabic Language Research by Subject Area (2005-2024)

Subject Area	Number of Article	Percentage
Social Sciences	673	31.30%
Arts and Humanities	434	20.20%
Computer Science	325	15.10%
Engineering	143	6.70%
Medicine	95	4.40%
Psychology	87	4.10%
Mathematics	64	3.00%
Business, Management and Accounting	41	1.90%

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Multidisciplinary	37	1.70%
Health Professions	35	1.60%

Source: Data retrieved from Scopus Database (https://www.scopus.com), accessed on 16th June 2025

The distribution of Arabic language research across subject areas reveals three distinct patterns of scholarly engagement. The dominant fields are Social Sciences (31.30%), Arts and Humanities (20.20%), and Computer Science (15.10%), which together account for nearly two-thirds of all publications. This concentration reflects the traditional focus on sociolinguistic, cultural, and educational aspects of Arabic, alongside growing computational approaches to language processing. The substantial share of Computer Science publications particularly highlights the increasing integration of technological methods in Arabic linguistic research, driven by advances in natural language processing and artificial intelligence applications for Arabic text and speech analysis.

A secondary tier of disciplines demonstrates more specialized applications of Arabic language research. Engineering (6.70%), Medicine (4.40%), and Psychology (4.10%) represent significant but smaller segments, indicating interdisciplinary connections with technical, medical, and cognitive studies. These fields likely include research on Arabic speech recognition technologies, language-related disorders, and psycholinguistic studies of bilingualism. The presence of Business (1.90%) and Economics (1.30%) suggests emerging interest in Arabic's role in commerce and finance, though these areas remain relatively underdeveloped compared to core linguistic disciplines.

The long tail of subject areas - including Materials Science (1.50%), Neuroscience (1.10%), and Environmental Science (0.80%) - demonstrates the remarkably diverse, if limited, applications of Arabic language research across the sciences. While these fields collectively represent less than 15% of publications, their existence indicates niche intersections between Arabic studies and various scientific domains. The minimal representation in hard sciences like Chemistry (0.30%) and Physics (0.90%) suggests that most interdisciplinary research remains concentrated in fields with more direct linguistic connections. This distribution underscores both the breadth of Arabic language research applications and the continued dominance of traditional humanities and social science approaches in the field.

What Are The Top 10 Most Cited Articles In This Field?

Table 5: The Top 10 Most Cited Articles in Arabic Language Research

Authors	Title	Year	Source title	Cited by
Farghaly A. & Shaalan K.(Farghaly and Shaalan 2009)	Arabic natural language processing: Challenges and solutions	2009	ACM Transactions on Asian Language Information Processing	414
Elkhafaifi H.(Elkhafaifi 2005)	Listening comprehension and anxiety in the Arabic language classroom	2005	Modern Language Journal	345

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Hamdy N. & Gomaa E.H.(Hamdy and Gomaa 2012)	Framing the Egyptian Uprising in Arabic Language Newspapers and Social Media	2012	Journal of Communication	195
Oueslati O. et al.(Oueslati et al. 2020)	A review of sentiment analysis research in Arabic language	2020	Future Generation Computer Systems	181
Tubaiz N. et al.(Tubaiz, Shanableh, and Assaleh 2015)	Glove-Based Continuous Arabic Sign Language Recognition in User-Dependent Mode	2015	IEEE Transactions on Human-Machine Systems	148
Storch N. & Aldosari A.(Storch and Aldosari 2010)	Learners' use of first language (Arabic) in pair work in an EFL class	2010	Language Teaching Research	145
Guellil I. et al.(Guellil et al. 2021)	Arabic natural language processing: An overview	2021	Journal of King Saud University - Computer and Information Sciences	141
Fahmy S.(Fahmy 2010)	Contrasting visual frames of our times: A framing analysis of English- and Arabic-language press coverage of war and terrorism	2010	International Communication Gazette	120
Aly S. & Aly W.(Aly and Aly 2020)	DeepArSLR: A novel signer-independent deep learning framework for isolated arabic sign language gestures recognition	2020	IEEE Access	119
Mohandes M. et al.(Mohandes, Deriche, and Liu 2014)	Image-based and sensor-based approaches to arabic sign language recognition	2014	IEEE Transactions on Human-Machine Systems	116

Source: Data retrieved from Scopus Database (https://www.scopus.com), accessed on 16th June 2025

The ten most highly cited publications in the Arabic language research field highlight both the interdisciplinary nature and evolving priorities of the field. The most cited work by Farghaly and Shaalan (2009), with 414 citations, serves as a foundational study in Arabic Natural Language Processing (NLP), reflecting its central role in advancing computational linguistics. Similarly, Elkhafaifi's (2005) study on anxiety in Arabic language classrooms (345 citations) shows strong interest in pedagogical and psychological dimensions. Other frequently cited works, such as those by Hamdy & Gomaa (2012) and Fahmy (2010), focus on media framing and sociopolitical discourse in Arabic-language media, indicating the relevance of Arabic language studies in communication and media research.

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Additionally, a notable number of highly cited papers (e.g., DeepArSLR by Aly & Aly, 2020; and Glove-Based Sign Language Recognition by Tubaiz et al., 2015) relate to Arabic Sign Language and deep learning applications, reflecting a technological shift in the research landscape. These publications, mostly appearing in high-impact journals like IEEE and ACM, underline the integration of Arabic language studies into cutting-edge domains such as artificial intelligence, human-computer interaction, and sentiment analysis. The appearance of review papers such as Oueslati et al. (2020) with 181 citations further signals the field's maturation, as it moves toward synthesizing past findings and setting future research agendas. Overall, these citation patterns showcase both foundational works and emerging innovations shaping the trajectory of Arabic language research.

Which Are The Top 10 Countries Based On The Number Of Publications?

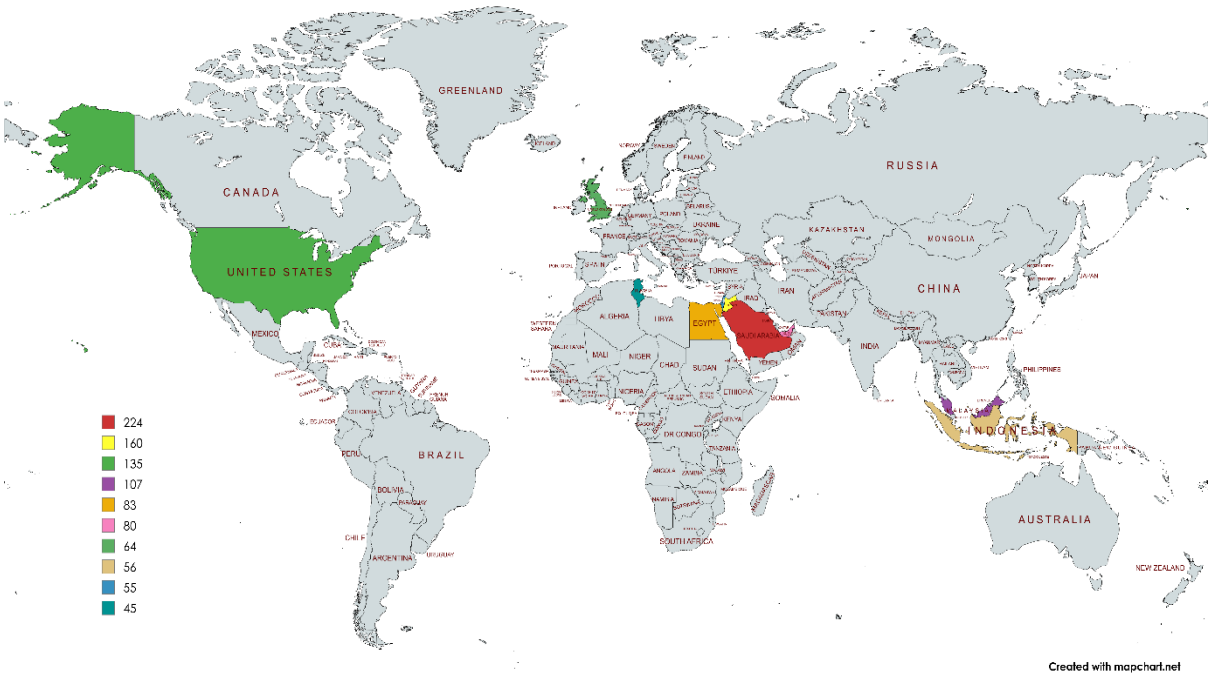

Figure 4: The Top 10 Countries Based on The Number of Publications

Source: Constructed By Using MapChart.Net based on Data from Scopus Database (https://www.scopus.com), Accessed on 16th June 2025

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Table 6: Top 10 Countries by Publication Output in Arabic Language Research (2005-2024)

Country/Territory	Number of Article	Percentage
Saudi Arabia	224	14.6%
Jordan	160	10.4%
United States	135	8.8%
Malaysia	107	7.0%
Egypt	83	5.4%
United Arab Emirates	80	5.2%
United Kingdom	64	4.2%
Indonesia	56	3.6%
Israel	55	3.6%
Tunisia	45	2.9%

Source: Data retrieved from Scopus Database (https://www.scopus.com), accessed on 16th June 2025

The distribution of publications by country reveals that Arabic language research is not only concentrated in Arabic-speaking nations but also attracts significant academic engagement globally. Saudi Arabia leads with 224 publications (14.6%), reflecting its strategic investment in Arabic linguistic research and academic infrastructure. Jordan (10.4%) and Egypt (5.4%) follow closely, indicating their historical role and scholarly tradition in Arabic language studies. The presence of the United Arab Emirates (5.2%) in the top six further underscores the growing academic output from Gulf countries, driven by educational reforms and funding in language and AI-related research.

Interestingly, non-Arabic-speaking countries such as the United States (8.8%), United Kingdom (4.2%), and Israel (3.6%) feature prominently, pointing to a strong global interest in Arabic language for purposes including Middle Eastern studies, computational linguistics, and geopolitics. Malaysia and Indonesia's presence (7.0% and 3.6%, respectively) suggests a Southeast Asian engagement rooted in Islamic studies and multilingual research environments. Tunisia rounds out the top ten with 2.9%, consistent with its active scholarly community in language and humanities. This geographic diversity highlights that Arabic language research has become a global academic endeavor, supported by varied motivations from religious studies to artificial intelligence applications.

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What Are The Most Frequently Used Keywords Related To Arabic Language Research?

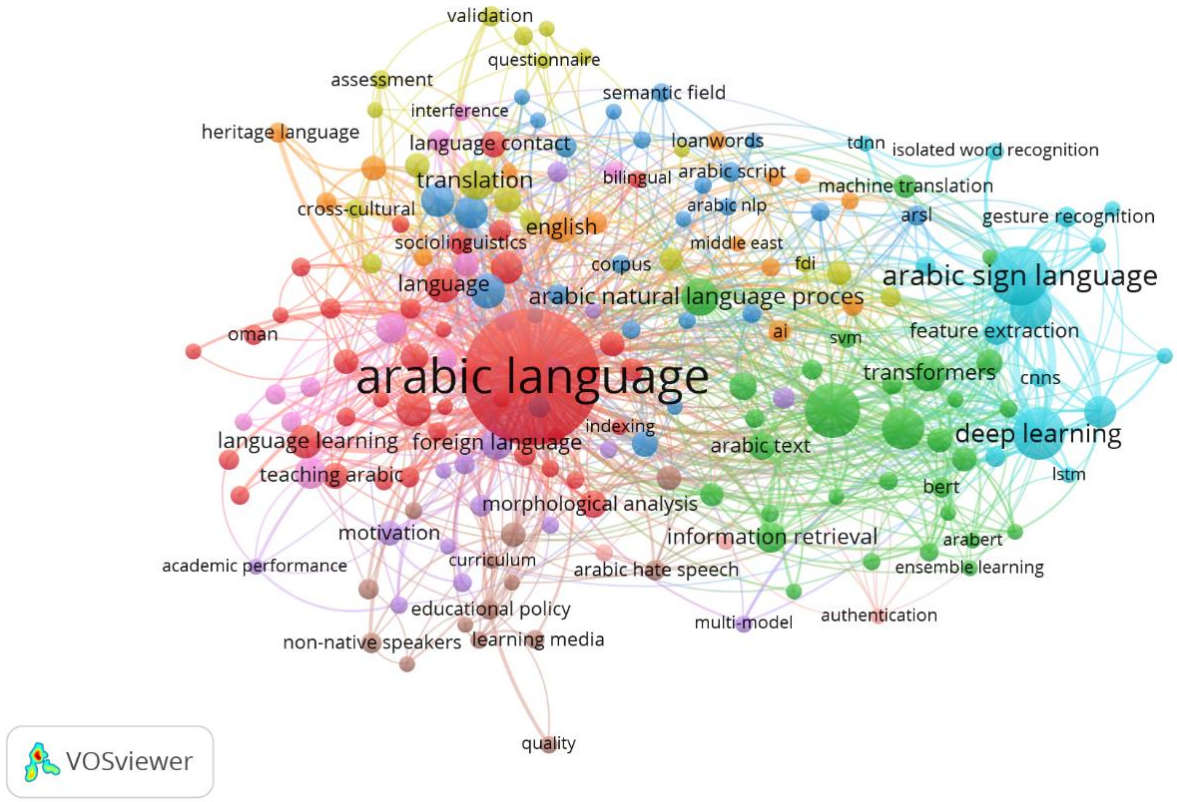

Figure 5: Most Frequently Used Keywords Related to Arabic Language Research
Source: Author's Analysis using VOSviewer based on data retrieved from Scopus Database (https://www.scopus.com), accessed on 16th June 2025

Table 7: Frequency Distribution of Keywords in Arabic Language Research (2005-2024)

Keyword	Occurrences	Total Link Strength
Arabic Language	390	650
Natural Language Processing	62	155
Deep Learning	56	147
Arabic Sign Language	71	142
Machine Learning	36	110
Sign Language Recognition	37	84
Transformers	24	71
Bilingualism	22	66
Translation	32	64
Language Policy	22	57

Source: Data retrieved from Scopus Database (https://www.scopus.com), accessed on 16th June 2025

The keyword analysis reveals three dominant research clusters in Arabic language studies from 2005-2024. The most prominent cluster centers on computational approaches, with "natural language processing" (62 occurrences, 155 link strength), "deep learning" (56/147), and "machine learning" (36/110) demonstrating strong interconnectivity. This reflects a significant

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technological shift in Arabic linguistics research, particularly in areas like machine translation, sentiment analysis, and speech recognition. The high link strength of technical terms like "transformers" (24/71) and "convolutional neural network" (20/50) confirms growing AI integration, while specialized terms like "Arabic sign language recognition" (37/84) highlight niche applications.

A second major cluster focuses on sociolinguistics and language education, with "bilingualism" (22/66), "language policy" (22/57), and "diglossia" (19/52) showing robust connections. This indicates sustained academic interest in Arabic's unique linguistic situation, particularly regarding Modern Standard Arabic versus dialects. Educational keywords like "second language learning" (25/45) and "language teaching" (20/36) appear frequently but with moderate link strength, suggesting these topics are well-studied but somewhat isolated from technological developments. The presence of "offensive language" (12/32) and "Arabic hate speech" (8/17) reflects emerging research on digital communication challenges.

A third, more fragmented cluster encompasses traditional linguistics and cross-cultural studies, including "morphological analysis" (16/30), "sociolinguistics" (11/31), and "Arabic dialects" (11/20). These keywords exhibit weaker connections to the dominant computational cluster, revealing a disciplinary divide. Notably, "Arabic for non-native speakers" (14/27) and "translation" (32/64) serve as bridges between applied linguistics and technical research. The long tail of low-frequency keywords (e.g., "language embodiment" with only 3 link strength) indicates numerous specialized but underdeveloped research avenues that could benefit from greater interdisciplinary integration.

What Does The Co-Authorship Network Reveal About Collaboration Among Countries?

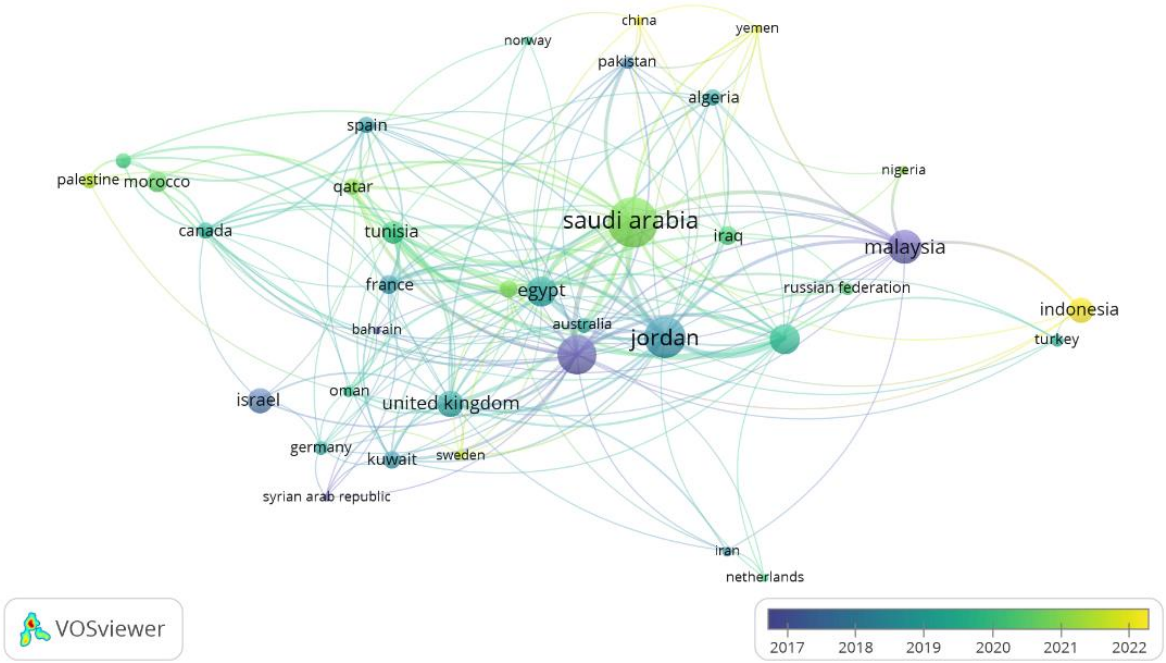

Figure 6: The Co-Authorship Network Reveal About Collaboration Among Countries
Source: Author's Analysis using VOSviewer based on data retrieved from Scopus Database (https://www.scopus.com), accessed on 16th June 2025

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Table 8:International Collaboration in Arabic Language Research (2005-2024)

Country	Documents	Citations	Total Link Strength
Saudi Arabia	224	2752	125
Jordan	160	1284	101
United States	135	2551	81
United Arab Emirates	80	1577	67
Tunisia	45	508	63
Egypt	83	1278	59
United Kingdom	64	795	53
Lebanon	27	275	48
Malaysia	107	592	44
France	32	366	40

Source: Data retrieved from Scopus Database (https://www.scopus.com), accessed on 16th June 2025

The co-authorship network analysis reveals distinct patterns of international collaboration in Arabic language research. Saudi Arabia emerges as the most productive country (224 documents) with the highest citation impact (2,752 citations) and strongest collaboration links (total link strength 125), reflecting its leading role in both research output and knowledge dissemination. Jordan (160 documents, 1,284 citations) and the United States (135 documents, 2,551 citations) follow closely, demonstrating robust research activity and influence. The strong link strengths between these countries (Saudi Arabia-Jordan: 101, Saudi Arabia-US: 81) indicate well-established research partnerships, likely facilitated by shared academic interests in Arabic computational linguistics and language education. The United Arab Emirates (80 documents, 1,577 citations) and Tunisia (45 documents, 508 citations) also show notable collaboration intensity, suggesting growing regional research networks in the Arab world.

The data highlights a clear divide between Arab nations and Western countries in terms of research focus and collaboration patterns. While Arab countries like Egypt (83 documents, 1,278 citations) and Lebanon (27 documents, 275 citations) contribute significantly to traditional Arabic linguistics and sociocultural studies, Western nations such as the United Kingdom (64 documents, 795 citations) and France (32 documents, 366 citations) tend to specialize in computational approaches and theoretical linguistics. Malaysia (107 documents, 592 citations) stands out as an active non-Arab contributor, likely focusing on Arabic as a religious language in Islamic studies. The relatively weaker link strengths between Arab countries and European nations (e.g., France 40, Germany 11) suggest opportunities for enhanced cross-regional collaboration, particularly in emerging areas like AI-driven language technologies.

Several interesting outliers appear in the network. Israel (55 documents, 569 citations) shows substantial research output but minimal collaboration (link strength 7), reflecting political barriers to regional cooperation. China (7 documents, 62 citations) and Russia (15 documents, 72 citations) have surprisingly low representation, indicating untapped potential for engagement in Arabic language research. The limited collaboration from African nations like Algeria (26 documents, 235 citations) and Nigeria (7 documents, 21 citations) suggests underdeveloped research networks in these regions. Overall, the co-authorship patterns reveal a research landscape dominated by Gulf countries and Western nations, with emerging contributions from Southeast Asia, but lacking strong global interconnectivity, particularly

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with Global South countries. This presents opportunities for more inclusive international partnerships to address diverse challenges in Arabic language studies.

Conclusion

This bibliometric analysis examined scientific output in Arabic language research from 2005 to 2024, aiming to identify trends, influential contributions, and collaboration patterns. The study addressed six research questions, focusing on publication trends, subject areas, highly cited works, leading countries, keyword clusters, and co-authorship networks.

Key findings reveal a significant increase in annual publications, particularly after 2018, driven by advancements in computational linguistics and interdisciplinary research. Social Sciences, Arts and Humanities, and Computer Science dominate the field, reflecting a blend of traditional linguistic studies and technological innovations. The most cited articles highlight foundational work in Arabic NLP, pedagogy, and sign language recognition, while Saudi Arabia, Jordan, and the United States emerge as top contributors. Keyword analysis identifies three major research clusters: computational approaches, sociolinguistics, and traditional linguistics. Co-authorship networks indicate strong regional collaborations but limited global interconnectivity, with untapped potential in underrepresented regions.

The study contributes to the field by systematically mapping research trends, revealing gaps, and emphasizing the growing role of AI in Arabic language studies. Practical implications include guiding funding priorities, fostering cross-border partnerships, and informing curriculum development. Limitations include database restrictions and the exclusion of non-English/Arabic publications. Future research could expand data sources, explore qualitative dimensions, and address understudied areas like dialectal NLP and low-resource language technologies.

In conclusion, this analysis underscores the dynamic evolution of Arabic language research, bridging traditional scholarship and modern technological applications. The findings highlight the importance of continued investment in computational linguistics, interdisciplinary collaboration, and inclusive global networks to advance the field further. Bibliometric methods prove invaluable for tracking these developments, offering a roadmap for future research and policy decisions in Arabic language studies.

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