

# Arabic Language Learning and Teaching Trends: A Bibliometric Analysis With Biblioshiny R

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**Abstract.** The bibliometric study investigates how documents related to Arabic language learning and teaching are positioned with metadata exporting from the Scopus database. This research focuses on describing trends and developments in keywords, authors and journal publishers. Furthermore, metadata on the topic of Arabic language learning and teaching with a total of 311 scientific publications on Scopus with metadata last updated on October 5 2023 was analyzed using a bibliometric approach using descriptive statistical methods by biblioshiny R-based app. The results from this study contained more than 300 articles on the theme of Arabic language learning and teaching, the most popular keywords were teaching, human, article, Arabic language, e-learning, students and it was also found that the topics "Translation" and "Artificial Intelligence" is still very poorly studied by researchers in the field of Arabic language learning and teaching.

## Introduction

Arabic language learning and teaching has recently begun to be in line with the industrial revolution 4.0 [1] and has adapted to various types of learning technology that support it, especially with the start of the Covid-19 pandemic at the end of 2019 which has made almost every learning experience throughout the world experience changes [2] in implementing the learning process and also experienced many changes in the topic of study by researchers in the field of Arabic language learning.

By looking at the social facts that learning and teaching Arabic have entered significant development [3], learning and teaching have taken place with technology or e-learning in all areas of education, including learning and teaching Arabic [4], due to harmonious encouragement From the world of industry 4.0 it has even entered the 5.0 era[5], in which case instructional systems and educational technology have received a lot of interest from educators to improve student learning[6]. For example, many curricula have been modified by academics with the aim of utilizing modern teaching, educational innovations are starting to develop such as digital presentations, simulation techniques, online courses, and it has now become commonplace to learn Arabic using computers [7].

However, when we look at the social facts, namely the dynamics of the development of Arabic language learning, we find that in Middle Eastern countries Arabic language learning continues to develop in accordance with cultural developments, so that Arabic is divided into several styles [8], which is very different if we look at language learning. Arabic in Indonesia tends to still be classical and still at the stage of adapting to society 5.0. As a result, Indonesian students who want to continue their studies in Middle Eastern countries are likely to face various difficulties. So that a small number of Indonesian students obtain second and third grade diplomas from various universities in the Middle East.[9] And this is why the role of technology in the 5.0 era is important in learning and teaching Arabic, because Arabic is often classified as a subject that is considered difficult to understand and the learning process is often considered boring because of its rigid nature [10].

The current developments will make things easier for educators and students and will arouse students' interest in carrying out the learning process, especially learning Arabic. Therefore, as a teacher in the digital era, the goal of the teaching and learning process is to create an interesting, creative, innovative and fun teaching and learning process.[11] Through the search above, this research will focus its study

on describing keywords, author names and journal names as well as the characteristics of Arabic language learning and teaching articles using the Scopus database (<https://www.scopus.com/home.uri>), from the description of the characteristics of these articles, an interest in scientific studies will be mapped to generate ideas and innovations in responding to trends in learning and teaching Arabic in the last five years (2019-2023)

### **Research methods**

This research uses a qualitative research design using a bibliometric approach, to classify documents in a research topic according to several criteria in order to evaluate and categorize publications [12], [13] The term bibliometrics was first introduced by P. Otlet in 1934, namely as a measurement of all aspects related to the publication and reading of books and documents [14], [15] bibliometric analysis is usually used to sort and map scientific documents in large and rigorous quantities [16] apart from that, bibliometrics is a science that involves statistics about production, publication, use and dissemination scientific knowledge from bibliographic databases.[17],[18]

The data source used is scientific articles published from the Scopus database which is the most comprehensive database compared to other databases such as PubMed, Web of Science and Google Scholar [19] with the criteria of all published documents related to Arabic language learning and teaching in the 2019 period. -2023. Meanwhile, the data collection method in this research is by means of data mining or analysis steps from the knowledge discovery process in a database from the Scopus database which was accessed on October 5 2023 with a total of 311 published documents to map trends and issues related to Arabic language learning and teaching. . The data analysis method in this research uses the biblioshiny application, biblioshiny is one of the applications intended for bibliometrics, has several advantages compared to other applications which provide a complete range of statistics, techniques and visualizations, tables, network graphs or maps about authors, institutions and journals most productive, enabling performance analysis and conceptual mapping of a single field of study.[20], [21], [16]

### **Result and Discussion (Yahya)**

#### **Type of Publication Source**

In this research, there were 311 published documents consisting of 6 types of documents, namely 248 articles (99.37%), 5 books (0.05%), 13 book chapters (0.13%), 29 conference papers (0.29) , 7 Conference Reviews (0.07%), and 9 reviews (0.09%).

#### **Three Fields Plot**

Three fields plot under this describes an illustration regarding the three crucial elements that will be analyzed in this research, consisting of the name of the journal publisher, author and topic (Figure 1). The three elements are linked by a gray line which shows the relationship between the three elements and each other. The size of the box next to each topic sequence shows how much that topic is related to the other topics of the three elements.

The first element on the left is the name of the journal publisher, there are eleven journals indexed as journals that publish articles and other forms of published documents related to "Arabic language Learning and Teaching", and the top journal in order of topic is the journal "universal journal of educational research" which has a dark red box next to it and is connected to several authors located in the middle of the three elements, namely Ghani Mta, Daud Waaw, Ismail Z., Ramli S., Ritonga M., al-Khresheh MH.

Next, The second is located between these three elements which consists of various names of authors from various articles published in various journals connected to the previous element, and there are 19 names of authors in this element, such as Ghani Mta who published articles from two journals, namely Journal of language and linguistic studies and Universal Journal of educational research, but the name of the author most associated with the other two elements is Ismail Z who is connected to the first element as many as four journals (universal journal of educational research, theory and practice in language studies, international journal of language education, international journal of innovation, creativity and Change) and also connected to the elements on the right, namely keyword topics relevant to "Arabic language Learning and Teaching" as many as 3 topics (Arabic language, motivation and Arabic vocabulary).

The elements on the right, which consist of the keyword topics that appear most often in articles and other documents, each keyword is connected to the author's name element located in the middle. There are 15 keywords that often appear when these authors publish their articles in various journals, and the most dominant word among these 15 words is the word Arabic which is indicated by a light green box and is the largest in the sequence. So this shows that the word "Arabic Language" is a word most widely used by the majority of authors of scientific papers related with the topic "Arabic Language Learning and Teaching", besides the word "Arabic Language" several words which are dominantly used by writers also appear, such as the words "Arabic" and "Motivation".

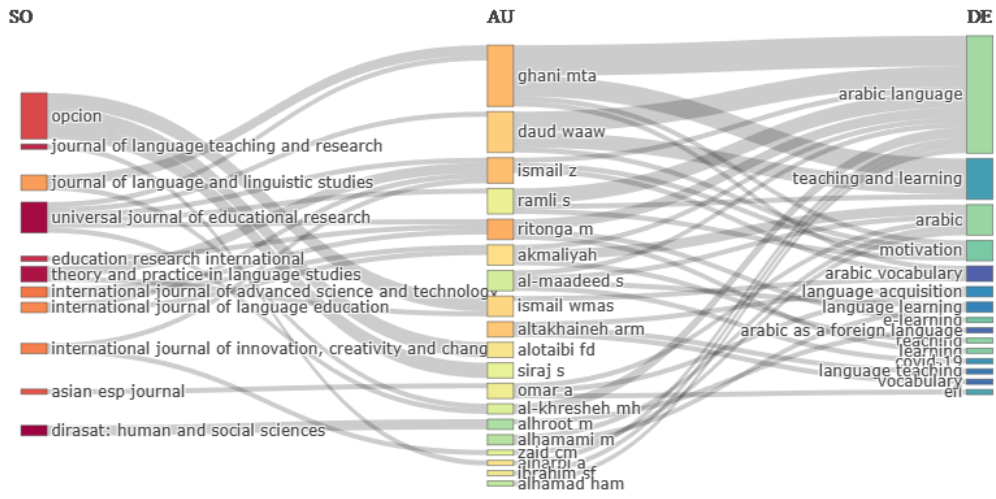
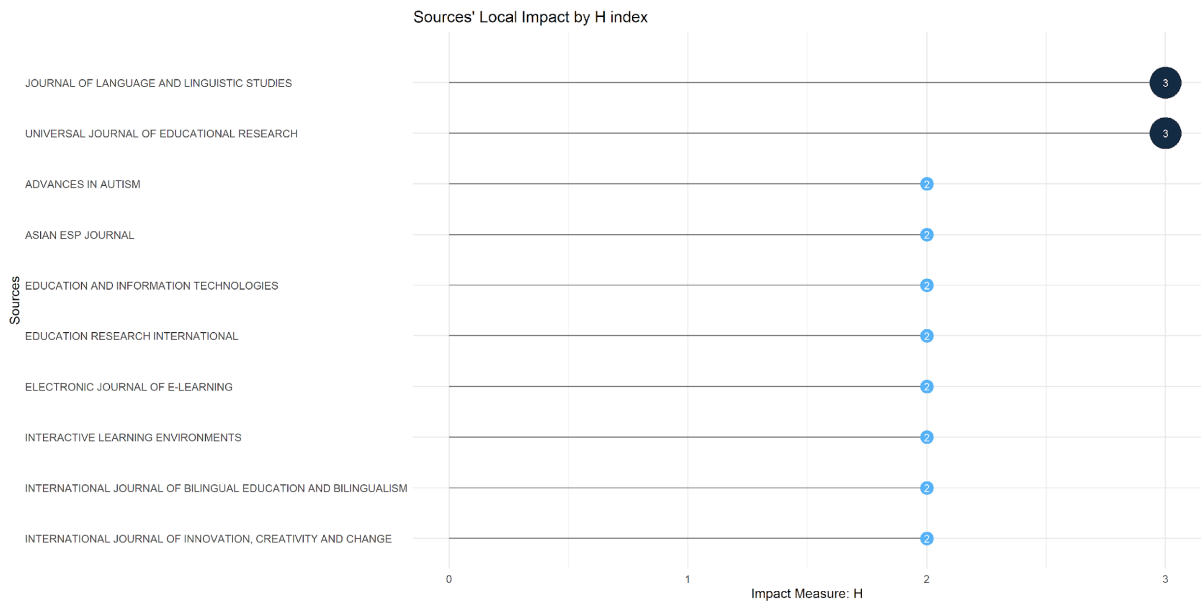


Figure 1. Illustration of Three Elements consisting of Journal Name, Author and Keywords

**Source Impact**

If we refer to the quantity and relevance of publications, this research will also analyze the impact of each journal that publishes papers related to the topic "Arabic Language Learning and Teaching" based on the h-Index measurement, which will display an illustration to present the impact of each journal on Figure 2. In the illustration, there are how many h-indexes for each journal, categorized by color.

In the picture, there are 10 journals related to the topic "Arabic Language Learning and Teaching". The dark blue color shows that the h-index of a journal has the highest h-index quantity compared to the number of other journals that cite every scientific work mentioned. published in these journals with a minimum of three citations, such as the Journal of language and linguistic studies and the Universal journal of educational research. Meanwhile, 8 other journals achieved a score of two on the h-index scale measurement.



Gambar 2. Impact of Journal Based on h-index

### Word Cloud

The illustration in Figure 3 presents a visualization of several words that appear most frequently in scientific papers related to "Arabic Language Learning and Teaching". The first word that dominates most is the word "Teaching" and in second place is the word "Human" and in third place is "language". This visualization displays words in varying sizes based on their frequency. Although the words are placed randomly, the most numerous words are located in the center to make them more visible due to their large size.



Figure 3. Word Cloud

### Thematic Map

In the thematic map section in Figure 4, we see that this conceptual map is outlined based on density and centrality. Density indicates that a topic has begun or is being studied by a large number of researchers, while centrality indicates that a topic has had a significant impact on the field of study of Arabic Language Learning and Teaching. We also see that this conceptual map is divided into four parts

(Motor Themes, Niche Themes, Emerging or Declining Themes and basic Themes) automatically based on the app's algorithm.

On the top right, which consists of two topics, namely "teaching, human, articles and Arabic language, e-learning, students" which indicates high density and high centrality for research developments in the topic "Arabic Language Learning and Teaching", then on the left those which include the words "learning difficulties search engines" are classified as high density but have low centrality.

In the lower left part which contains the word "translation" is a topic with low density and low centrality which indicates that this topic is not discussed enough because there are few studies on this topic and also the small influence of this topic on the field of study, and finally is the lower right part which contains the words "artificial intelligence" which is classified as a low density but high centrality topic.



Figure 4. Thematic Map

From the presentation of the research results above with a bibliometric analysis approach using the biblioshiny application by entering the keyword "Arabic Language Learning and Teaching" in the Scopus database. Since the development of studies regarding Arabic language learning, especially in the last five years, to see a research trend in this field of study.

Based on the data above, it is known that the topic of Arabic Language Learning and Teaching has experienced great development over a period of five years in the field of Arabic Language Learning and Teaching with various types of journals, many authors and the breadth of certain topics that have developed. The Three fields plot chart visualizes the relationship between three parameters (journal name, author and keywords), which we can analyze how the relationship between these variables is, and see what topics are widely discussed by authors in various journals by presenting the number of sequences of each element, so that we know the most productive journals and authors as well as the most relevant topics for further study.

Journal of language and linguistic studies and Universal journal of educational research are the most productive journals on the h-index scale with 3 h-indexes while other journals only have 2 h-indexes by looking at Figure 2, as this journal also publishes many articles written by several authors

related to the topic of Arabic language learning and teaching in Figure 1, the Universal Journal of Educational Research dominates other journals in terms of quantity and impact of research on this topic.

The keywords that are most often used in articles related to "Arabic language learning and teaching" are the words "Teaching, Human, Language". This shows that many articles with the theme "Arabic language learning and teaching" discuss these three key words in their scientific studies, then there are also several words that are also widely discussed, such as the words "article, humans, Arabic language, deep learning, e- learning, female, learning". Through these keywords, it can be traced how the topics in this theme have developed and can show that this theme is developing comprehensively in various sectors of Arabic language learning and teaching.

Interestingly, there are two country names that appear in the most discussed keyword category, indicating the fact that these two countries are often used as objects of study in research that focuses on Arabic language learning and teaching, or it could also be said that the study of Arabic language learning and teaching This is currently experiencing rapid development in both countries. And no less interesting, many words have emerged that are related to technology, such as augmented reality, e-learning, machine learning, computer aided instruction, which also indicates that many of these themes are also associated with the topics in these words.

Furthermore, the developing topics can be visualized by the thematic map in Figure 4, which compares several topics by looking at the density line and centrality line. In the Niche themes section located at the top left, which consists of the words "learning difficulties search engine" indicates that this word is experiencing quite a big development in this field of study with the increasing number of articles written with this keyword, but in terms of In effect, this word does not have a significant influence considering how far this word is from the centrality line.

In the motor themes column at the top right, two words appear, namely "teaching, human, article" and "arabic language, e-learning, students" which are topics that are currently developing and also have a significant impact of research on the topic. "Arabic language learning and teaching". And the basic themes column located at the bottom left which consists of the word "artificial intelligence" shows that this word has had a significant influence in the development of the topic of Arabic language learning and teaching, but is not widely discussed by scientific reviewers in this field. And in the last column, emerging or declining themes which consist of the word "translation" indicate that this word is currently in the midst of a period of rise or decline for this topic in the Arabic language learning and teaching theme, this is indicated by the word translation not being close to the density line. as well as the centrality line. And if we compare thematic maps and word clouds, we can see that the words "teaching, human, article, Arabic language, e-learning, students" are the keywords most frequently researched by scientific reviewers in this field and also have an impact of significant research.

## Conclusion

The number of articles in the field of Arabic language learning and teaching published by several journals turns out to be quite large and has the potential to continue to increase scientific studies in this field of study. Several popular topics and keywords are used in this theme and have the potential to continue to be developed further. Apart from that, by knowing what topics are most studied by researchers, we can also find out what topics are still less to be studied and it is necessary for other researchers to study more on these topics in the field of Arabic language learning and teaching.

Thus, this research contributes a mapping to see topics that are trending among researchers and enthusiasts of Arabic language learning and teaching and becomes a guide for other researchers in finding research gaps to conduct other research in the future.

## Reference

- [1] E. Gazali, "Measuring the Challenges and Potential of the Arabic Language and Literature (BSA) Department of IAIN Syekh Nurjati Cirebon in the Era of Education 4.0,"*Arab. J. Bhs. Arab*, vol. 3, no. 2, p. 229, Nov. 2019, doi: 10.29240/jba.v3i2.857.
- [2] N. R. A.-Z. Ibrahim, "E-LEARNING PROBLEMS IN ARABIC LANGUAGE AND ISLAMIC COURSES DURING THE CORONA PANDEMIC," 2020.

- [3] B. Kamorudeen, "The Impact of Information and Communication Technology on the Teaching and Learning of Arabic in Nigeria," *J. Muslim Minor. Aff.*, vol. 41, no. 4, pp. 608–614, Oct. 2021, doi: 10.1080/13602004.2022.2029011.
- [4] N. Osman and M. I. Hamzah, "Student Readiness in Learning Arabic Language based on Blended Learning," *Int. J. Appl. Linguist. Engl. Lit.*, vol. 6, no. 5, p. 83, Jul. 2017, doi: 10.7575/aiac.ijalel.v.6n.5p.83.
- [5] R. J. Razem and J. Pandor, "The Motivational Orientations of Undergraduate Students to Learn Arabic in a Dubai Private University," *J. Lang. Teach. Res.*, vol. 14, no. 1, pp. 96–107, Jan. 2023, doi: 10.17507/jltr.1401.11.
- [6] W. Ab AziZ BiN Wan Daud, K. T. Wong, M. T. A. Ghani, and S. B. Ramli, "Gender differences in Learning Arabic Language Proficiency via M-learning among Malaysia University Students," *Journal of Language and Linguistics Studies.*, flight. 17, no. 2, pp. 1069–1082, Mar. 2021, doi: 10.17263/jlls.904123.
- [7] D. A. Shaalan, B. B. Al-onazi, and A. K. Alshammari, "Instrument to Measure Identity Motivation in Arabic Second-Language Learners," *Theory Pract. Lang. Stud.*, vol. 13, no. 5, pp. 1105–1114, May 2023, doi: 10.17507/tpls.1305.03.
- [8] A. M. Ritonga, M. Suib, and A. Zaky, "Challenges and Obstacles: Analysis of the Problems of Learning Arabic in the Era of Society 5.0 at Islamic Higher Education in Indonesia," *SLJIL*, vol. 8, no. 5, hlm. 3272–3280, Mei 2023, doi: 10.36418/syntax-literare.v8i5.11540.
- [9] A. Ismail, "DYNAMICS OF DEVELOPMENT OF ARABIC LANGUAGE LEARNING; BETWEEN THEORY AND PRACTICE".
- [10] S. Haq, "Arabic Language Learning in the Digital Era: Problems and Solutions in Media Development," *Preface*, vol. 7, no. 1, hlm. 211–222, Apr 2023, doi: 10.30743/mkd.v7i1.6937.
- [11] Keshav, Masahiko Julien, Miezal, Jessica Laura, "The Role of Technology in Era 5.0 in the Development of Arabic Language in the World of Education.," *JILTECH: Journal International of Lingua & Technology; Aug2022, Vol. 1 Issue 2, p79-98, 20p, 2022*, doi: 10.55849/jiltech.v1i2.85.
- [12] S. Karagiannopoulou, N. Sariannidis, K. Ragazou, I. Passas, and A. Garefalakis, "Corporate Social Responsibility: A Business Strategy That Promotes Energy Environmental Transition and Combats Volatility in the Post-Pandemic World," *Energies*, flight. 16, no. 3, pp. 1–21, 2023.
- [13] G. Parker, S. Hunter, S. Hogarth, and F. A. Miller, "Industry involvement in evidence production for genomic medicine: A bibliometric and funding analysis of decision impact studies," *PLoS One*, vol. 18, no. 4, p. e0285122, 2023, doi: 10.1371/journal.pone.0285122.
- [14] U. U. Gronthy, U. Biswas, S. Tapu, M. A. Samad, and A.-A. Nahid, "A Bibliometric Analysis on Arrhythmia Detection and Classification from 2005 to 2022," *Diagnostics*, vol. 13, no. 10, p. 1732, May 2023, doi: 10.3390/diagnostics13101732.
- [15] O. Hernández-González, A. Fresno-Rodríguez, R. E. Spencer-Contreras, R. Tárraga-Mínguez, D. González-Fernández, and F. Sepúlveda-Opazo, "Research Mapping of Trauma Experiences in Autism Spectrum Disorders: A Bibliometric Analysis," *Healthc. Basel Switz.*, vol. 11, no. 9, p. 1267, Apr. 2023, doi: 10.3390/healthcare11091267.
- [16] P. Thangavel and B. Chandra, "Two Decades of M-Commerce Consumer Research: A Bibliometric Analysis Using R Biblioshiny," *Sustainability*, vol. 15, no. 15, Art. no. 15, Jan. 2023, doi: 10.3390/su151511835.
- [17] F. de O. Dias, H. dos S. Bonfim, G. B. da C. Matos, and J. Bombardelli, "BIBLIOMETRIC ANALYSIS OF SCIENTIFIC PRODUCTION ON CARBON CREDITS (2012-2021)," *Rev. Gest. Soc. E Ambient.*, vol. 17, no. 1, Art. no. 1, Feb. 2023, doi: 10.24857/rgsa.v17n1-026.
- [18] A. Coffeet *et al.*, "Meta-analysis of food supply chain: pre, during and post COVID-19 pandemic," *Agric. Food Secur.*, vol. 12, no. 1, p. 27, Aug. 2023, doi: 10.1186/s40066-023-00425-5.
- [19] M. S. Satar, D. Aggarwal, R. Bansal, and G. Alarifi, "Mapping the Knowledge Structure and Unveiling the Research Trends in Social Entrepreneurship and Inclusive Development: A Bibliometric Analysis," *Sustainability*, flight. 15, no. 7, pp. 1–28, 2023.
- [20] A. Alviz, D. Parada Quinayá, A. Alviz-Meza, and J. Orozco-Agamez, "Citation: Bibliometric Analysis of Fourth Industrial Revolution Applied to Material Sciences Based on Web of Science

- and Scopus Databases from 2017 to 2021,” *ChemEngineering*, Vol. 7, p. 2, John. 2023, doi: 10.3390/chemengineering7010002.
- [21] K. Kristia, S. Kovács, Z. Bács, and M. F. Rabbi, “A Bibliometric Analysis of Sustainable Food Consumption: Historical Evolution, Dominant Topics and Trends,” *Sustainability*, vol. 15, no. 11, p. 8998, Jun. 2023, doi: 10.3390/su15118998.