

Comparative Analysis of Arabic Digital Dictionaries: a Study on Al-Ma'any and the Arabic-Indonesian Dictionary

Mauli Maia Alsayyida^{1*}

¹ Pendidikan Bahasa Arab, Fakultas Tarbiyah, UIN Mataram, Indonesia.

Received: January 12, 2025

Revised: March 17, 2025

Accepted: December 16, 2025

Published: January 31, 2026

Corresponding Author:

Mauli Maia Alsayyida

alsayyida@gmail.com

© 2026 The Authors. This open access article is distributed under a (CC-BY License)



Abstract: The rapid development of digital technology has transformed Arabic dictionaries from printed formats into interactive digital platforms. This study aims to compare two widely used digital Arabic dictionaries, Al-Ma'any (Arabic-Indonesian) and the Arabic-Indonesian Dictionary developed by Ristek Muslim, in order to identify their strengths and weaknesses in supporting Arabic learning. Using a qualitative descriptive-comparative method, data were collected through document analysis and interviews with university students who regularly use both dictionaries. The findings show that Al-Ma'any excels in accessibility, the availability of multiple lexical equivalents, and voice pronunciation features, making it more practical for daily needs and contextual translation. In contrast, the Arabic-Indonesian Dictionary is more effective for grammar studies due to its root-word search and morphological analysis, although its interface is less interactive and it lacks many modern vocabularies such as "globalization" or "technology." Al-Ma'any is more suitable for beginners and practical daily translation, while the Arabic-Indonesian Dictionary supports advanced learners focusing on *nahwu* and *sharaf*. This study highlights the need for the development of an integrated digital dictionary that combines the lexical breadth of Al-Ma'any with the grammatical depth of the Arabic-Indonesian Dictionary, in order to better meet the needs of contemporary Arabic language learning.

Keywords: Al-Ma'any; Arabic dictionary; Digital dictionaries

Introduction

The advancement of digital technology has significantly transformed the role of humans in education, making it a primary tool in supporting the learning process by providing quick and efficient access to various learning resources. Technology has made teaching and learning easier, including the use of Arabic dictionaries, which are now more practical and accessible through digital platforms (Yulianti et al., 2025). The development of digital technology has brought a significant transformation in the field of lexicography, particularly in the compilation and utilization of Arabic dictionaries. Digital dictionaries have now become a primary tool in Arabic language learning and translation, replacing the role of traditional printed dictionaries (Nuha, 2024). However, this shift raises questions about the quality, accuracy, and

effectiveness of digital dictionaries compared to printed ones (Saleh et al., 2023).

Research shows that although digital dictionaries offer ease of access and quick updates, they often provide shorter and less in-depth definitions compared to printed dictionaries. In contrast, printed dictionaries tend to offer a higher level of meaning accuracy and more comprehensive definitions, often accompanied by example sentences that aid contextual understanding (Arifin & Mulyani, 2021).

One of the popular digital dictionaries is Al-Maany, an online platform that provides translations and definitions of words in various languages, including Arabic-Indonesian. Al-Maany is known for its lexical completeness, covering more than thirty search domains such as law, agriculture, and technology, and offering synonyms, antonyms, and morphological analysis (Agussalim et al., 2019).

How to Cite:

Alsayyida, M. M. (2026). Comparative Analysis of Arabic Digital Dictionaries: a Study on Al-Ma'any and the Arabic-Indonesian Dictionary. *EDUCA: Jurnal Pendidikan Indonesia*, 1(1), 5-12. Retrieved from <https://journals.balaipublikasi.id/index.php/educa/article/view/406>

In the context of Arabic language education, digital dictionaries have proven to be significant tools in developing students' vocabulary. A study conducted by Siregar et al. (2025) shows that the Al-Ma'any Online Dictionary effectively helps students expand their vocabulary, especially in understanding word meanings and variations of usage in different contexts. Features such as synonyms, antonyms, morphological forms (past tense verbs, present tense verbs, verbal nouns), as well as flexible access through both applications and the web, make Al-Ma'any the preferred choice for students in completing assignments or deepening their understanding of language structure. However, the study also reveals that the effectiveness of using this dictionary is highly influenced by the user's level of understanding of Arabic language structure, indicating the need for guidance or further training in its use (Taufiqurrochman, 2019).

On the other hand, the widely available Arabic-Indonesian digital dictionaries are designed to facilitate the understanding of the Arabic language, especially for beginners. Some of them are equipped with features such as root-word-based searches, contextual translations, and even image integration to support visual comprehension, particularly for elementary-level learners. However, these dictionaries still do not demonstrate an adequate level of accuracy and depth of meaning. As revealed in several previous studies, the selection of digital dictionaries needs to take into account aspects such as database completeness, translation precision, and contextual relevance in order to truly support an effective learning process (Fadhilah, 2021).

The presence of digital dictionaries has made the process of searching for word meanings faster, more practical, and more efficient; however, there are currently various versions of digital dictionaries available. Among the most frequently used are the Al-Maany dictionary application and the Arabic-Indonesian digital dictionary. Previous studies have mostly highlighted the general effectiveness of digital dictionaries. Some have also emphasized their practicality, but few have specifically conducted an in-depth comparative analysis between Al-Maany and the Arabic-Indonesian digital dictionary.

Therefore, the novelty of this research lies in its systematic comparison of the two dictionaries, not only in terms of their strengths and weaknesses but also in terms of their relevance in supporting Arabic language learning in the digital era.

This study is important because, in the digital age, students and learners tend to rely more on online dictionaries such as Al-Maany without fully understanding their limitations in terms of depth of meaning and contextual accuracy. Conversely, the

Arabic-Indonesian digital dictionary is often considered to still employ outdated vocabulary.

Through this comparative analysis, the research is expected to provide a more comprehensive understanding of the position and role of each dictionary, enabling users to make more informed choices in selecting and utilizing them according to their needs. Thus, the results of this research are not only valuable for the development of digital lexicography but also offer practical contributions to Arabic language learning and the translation of Arabic texts in Indonesia.

Method

This study employs a qualitative method with a descriptive-comparative approach. This approach was chosen to explore and compare the features, content, and benefits of two digital dictionaries, namely the Al-Maany Dictionary and the Arabic-Indonesian digital dictionary. These two dictionaries were selected as the main objects of research because they represent digital dictionary models that are widely used by students and learners.

Data collection was carried out through document analysis and in-depth interviews. Document analysis was conducted by directly accessing the applications of both dictionaries, then examining their content, features, and user interface. Meanwhile, in-depth interviews were conducted with students who regularly use both dictionaries in their Arabic language learning activities, in order to gain real insights into their experiences, perceptions, and the level of effectiveness of each dictionary.

The descriptive-comparative qualitative method aims to provide an in-depth description of the characteristics of the research objects while identifying the significant similarities and differences between them. This approach emphasizes understanding phenomena within their natural context and complexity, and it prioritizes the meaning and interpretation of data rather than mere generalization (Citriadin, 2020). Data analysis was carried out inductively, starting with the process of reducing data obtained from document studies and interviews, then categorizing the findings based on key themes such as lexical completeness, translation accuracy, ease of access, and relevance of use. Furthermore, the results of the analysis from both data sources were compared to identify similarities, differences, and the practical implications of using the two dictionaries in Arabic language learning.

Result and Discussion

Introduction to the Features of the Al-Ma'any Dictionary

The Al-Ma'any Dictionary application is one of the popular digital Arabic dictionaries that can be accessed online. This dictionary provides vocabulary translations from Arabic into various languages, including Indonesian. Users can type a word in Arabic to get its equivalents in other languages along with the contextual meanings. In general, a dictionary functions as a tool to help understand and explain the meanings of vocabulary, as well as to organize linguistic information so that readers can grasp the precise meaning of a word. One of the main functions of a dictionary is to provide correct spelling and pronunciation guidance. In languages with non-phonetic spelling systems, such as English, phonetic spelling is usually provided. However, in the Arabic Indonesian version of the Al-Ma'any Dictionary, there is no pronunciation guide or clarification of pronunciation errors, making it less effective for correcting speech mistakes (Syaifiji et al., 2021).

This dictionary presents several vocabulary features in both Arabic and Indonesian languages, with a simple layout that offers many vocabulary options for users searching for words. In the App Store/Play Store, there are various versions available, including the dictionary "Mu'jam Al-Ma'any Arabi Arabi." This digital Ma'any dictionary is specifically for Arabic-to-Arabic synonyms and does not include Indonesian translations.



Figure 1. The digital Al-Ma'any dictionaries (Mu'jam Al-Ma'any Arabi Arabi).

There is also the Al-Ma'any dictionary called "Mu'jam Al-Ma'any Arabi Urdu," which specifically connects Arabic vocabulary with Urdu, the language spoken in Pakistan and parts of India. Thus, in the digital Al-Ma'any dictionaries available on the Play Store, there are many variations.

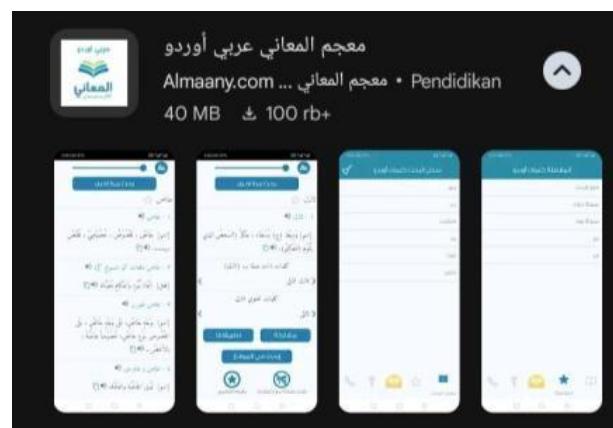


Figure 2. The digital Al-Ma'any dictionaries (Mu'jam Al-Ma'any Arabi Urdu)

Similarly, there is also the Al-Ma'any dictionary for Arabic-English and others. This dictionary is indeed an online Arabic digital dictionary developed to facilitate the understanding of the meanings of Arabic words contextually and interactively in various languages. The dictionary was developed by a team of Arabic language experts in Jordan and has become one of the most widely used digital dictionaries in the Arab world and internationally due to its ability to present various meanings, synonyms, antonyms, and tashrif (verb conjugations) in a single entry. The main function of the Al-Ma'any Dictionary is to assist students, researchers, and translators in understanding the meanings of words more deeply and contextually, making it very useful for modern Arabic language learning and Arabic text translation, especially in vocabulary.

In this writing, the main focus is on the Al-Ma'any Arab-Indonesian Dictionary, which is a digital dictionary accessible via the App Store and Play Store. This dictionary is specifically designed to translate vocabulary from Arabic to Indonesian and vice versa. Its use is quite flexible as users can search using keywords in either Arabic or Indonesian.

This dictionary does not offer many additional features like other similar applications. Its main feature is a simple yet quite effective vocabulary search function. When users type a word, the dictionary displays various related words or words with different meanings. This function makes it easier for users to understand the various contexts of the searched word, although supporting features such as example sentences or grammatical classifications are not widely provided.

For example, when a user searches for the word "belajar" (to study/learn), the dictionary will show several Arabic equivalents such as "ملعنى" (yata'allam), "سرد" (darasa), and others. Moreover, the dictionary also links that word with other relevant vocabulary, such as "in-depth learning," "independent learning," or "advanced learning" in Arabic. This broad search feature

greatly helps enrich the understanding of the meaning and usage of a word in more complex contexts.



(a)



(c)



(b)



(d)

Figure 3. The Al-Ma'any digital dictionaries display (a) the Play Store; (b) Al-Ma'any dictionary homepage; (c) menu item; and (d) Vocabulary in the Al-Ma'any dictionary

This dictionary is quite good at providing annotations or meanings of words, including vocabulary that has more than one meaning. The explanations of meanings in the Al-Ma'any Dictionary are often accompanied by several synonyms or contextual phrases, although the factual illustrations for each meaning are still limited. Thus, the dictionary functions as a tool to help understand and explain the meanings of vocabulary, as well as organize linguistic information so that readers can grasp the exact meaning of a word. One of the main functions of the dictionary is to provide guidance on the correct spelling and pronunciation of words, or the meaning of words as well in this dictionary. The dictionary aims to explain the meaning of a word, including words that have multiple meanings. To achieve this, explanations are usually supplemented with factual illustrations so that users can accurately understand the context of its use (Zahrah et al., 2021).

Arabic-Indonesian Dictionary Application

One of the first digital Arabic dictionary applications available on Android is the Arabic-Indonesian dictionary app. This application can translate words from Indonesian to Arabic and vice versa. It was developed by the Muslim Ristek Team from Surabaya and was first released to the public on November 8, 2012, with ongoing development planned. This application is freeware, meaning it is free to use, and can be accessed both online and offline (so it does not require an internet connection for usage) (Fadhlilah 2021).



Figure 4. Arabic-Indonesian Dictionary

This Arabic-Indonesian dictionary application is designed to facilitate the translation of words from Indonesian to Arabic and vice versa. The application is very useful for students, santri, university students, as well as the general public who want to understand the meaning of words in both languages practically and efficiently. With a fast search feature and a simple interface, this application can be easily used by both beginners and experienced users. Additionally, the application provides information about verbs, such as the forms of *fi'l madhi* and *mudhari'*, as well as verb conjugation (*tasrif*), helping users better understand Arabic grammar.



Figure 5. Display of an item in the Arabic-Indonesian dictionary application

One of the additional features available in the Al-Ma'any Arabic-Indonesian Dictionary is the presentation of simple sentences (jumlah mufidah) using the searched vocabulary. This feature is very helpful for users, especially beginner students or researchers, to understand how a word is used in the context of a sentence. With this feature, users not only get the lexical meaning of a word but also examples of its usage in easily understandable sentences. For example, when a researcher searches for the word "belajar" (to learn) in Arabic, the dictionary displays several simple sentences containing the word, such as "فَيَرِ عَلَّا ةَعَلَّا مَلَعَنَّا آن" (I am learning the Arabic language) or "فَسَرَدَمَلَا يَفِ سَرَدِي بَلَاطَلَا" (The student studies at school). These sentences are presented in the "lam" feature section, which is an additional feature in the application. With this feature, the language learning process becomes more contextual because users can directly see the application of vocabulary in everyday sentences.



Figure 6. Dictionary application item display

In addition to the main search feature, the Al-Ma'any Arabic-Indonesian Dictionary application also provides a thematic dictionary feature that displays various forms and derivatives of the searched vocabulary. For example, when a user types the word "belajar" (to learn), not only the basic meaning is shown, but also other related variations such as "belajar dari" (learning from), "belajar daripadanya" (learning from him/her), "belajar bicara" (learning to speak), and so on. This feature offers convenience and flexibility for users to understand the different contexts of using the word "belajar" in Arabic, making the vocabulary search process more efficient and informative.

There is a feature called the "Mu'jam Al- Ghoni" dictionary related to the wazan (morphological pattern) of the searched vocabulary, but to use this feature, users must search directly using Arabic root word of the word whose wazan they want to find.



Figure 7. Display of Arabic-Indonesian dictionary item

In the main feature, the Arabic-Indonesian dictionary, users can find various Arabic vocabulary derived from the root word or basic meaning being searched. For example, when searching for the word "belajar" (to learn), the application displays several Arabic equivalents such as "سَرَد" (darasa), which means "to study" in the formal sense of learning something, and "مَلَعْتِي - مَلَعَتْ" (ta'allama - yata'allamu), which conveys the meaning of "the process of learning" or "currently learning." These vocabulary items are presented comprehensively and variably, enabling users to understand the differences in meaning and their contextual usage in sentences. Thus, this feature greatly assists in deepening the understanding of Arabic through root words and their derived forms.



Figure 8. Display of the Arabic-Indonesian dictionary

Technically, this application can be used for free and can operate without an internet connection, making it suitable for use anywhere, including places without network access. When connected to the internet, the application offers more complete additional features, such as integration with the Qur'an that shows the location of words within the holy verses. Thus, this

application not only supports independent Arabic language learning but also enriches religious understanding through Qur'anic references. Due to its practicality and advantages, this application is highly suitable for use in educational environments such as pesantren (Islamic boarding schools), schools, universities, as well as by individuals who wish to deepen their knowledge of language and religion.



Figure 9. Display of the Qur'an dictionary feature in the Arabic-Indonesian dictionary application.

Table 1. Strengths and Weaknesses of Both Dictionaries

Dictionary	Advantages	Disadvantages
Al-Ma'any Digital Dictionary	It presents a variety of vocabulary equivalents for a single keyword, allowing users to have many meaning options that fit the context. In addition, this dictionary also provides audio pronunciation for each vocabulary word (mufradat), which is very helpful for users in learning the correct pronunciation of Arabic words.	This dictionary provides limited support for searching root words in Arabic, which makes it difficult for users who wish to study word structures or explore deeper grammatical meanings. In addition, Al-Ma'any does not place significant emphasis on the aspects of <i>nahwu</i> (syntax) and <i>sharaf</i> (morphology), making it less suitable for use in learning Arabic grammar in depth.
Arab- Indonesia	Kamus bahasa Arab-Indonesia It features a root-word or morpheme search function that is highly useful for understanding grammatical structures in <i>nahwu</i> (syntax) and <i>sharaf</i> (morphology). This dictionary is also suitable for intermediate to advanced learners who wish to deepen their analysis of words from both linguistic and morphological perspectives.	Its interface and navigation are generally less interactive compared to modern applications such as Al-Maany, especially for novice users. In addition, this dictionary does not include much modern vocabulary or contemporary terminology, such as "globalization," "technology," "internal," and others, which makes it less relevant for present-day texts or conversations.

Based on the comparison between two digital dictionaries commonly used in Arabic language learning, namely the Al-Ma'any Digital Dictionary and the Arabic-Indonesian Dictionary, each has its own strengths and limitations that should be considered according to the user's needs. Al-Ma'any excels in ease of access and the completeness of varied vocabulary equivalents. When a user types a keyword, this dictionary displays multiple meanings according to context, complete with a pronunciation feature for each

Feature Differences: Strengths and Weaknesses of Al- Ma'any Dictionary and Arabic-Indonesian Dictionary

In using digital dictionaries to support Arabic language learning, it is important for users to understand strengths and weaknesses of each application to suit their needs. The Al-Ma'any Digital Dictionary is for searching everyday vocabulary (mufradat) because of its simple interface and the provision of pronunciation for each word. This dictionary also offers many options for word equivalents, which greatly helps in enriching vocabulary. However, its drawback lies in the limited feature for searching root words in Arabic, which is quite important for advanced learners.

Meanwhile, the Arabic-Indonesian Dictionary is more appropriate for deepening knowledge of *nahwu* (syntax) and *sharaf* (morphology) because it provides detailed search features related to word origins, word forms, and grammatical structures (Hamid et al., 2024; Taufiqurrochman, 2020). Nonetheless, this dictionary still has shortcomings, namely its incompleteness in including modern vocabulary or new terms as "globalization" or "internal," making it less relevant for contemporary translation needs.

vocabulary item. This feature is very helpful for practicing pronunciation and enriching the user's daily vocabulary. However, its drawback lies in the limited support for root word searches and grammatical structure, making it less suitable for in-depth Arabic language learning, especially in the areas of *nahwu* (syntax) and *sharaf* (morphology).

Meanwhile, the Arabic-Indonesian Dictionary is more suitable for intermediate to advanced learners who wish to deepen their understanding of grammatical and

morphological aspects of Arabic. This dictionary has the advantage of searching for word elements, such as root words and patterns (wazan), which are crucial for understanding word structure and patterns. This makes it an effective tool for studies in nahwu and sharaf. However, its interface tends to be less interactive and less user-friendly for beginners, which is a disadvantage. Additionally, this dictionary does not yet cover modern vocabulary or contemporary terms, such as "globalization" or "internal," making it sometimes less relevant for current texts.

From the interview conducted on Wednesday, June 4, 2025, with two female students from the Arabic Language Study Program at UIN Mataram, insights were obtained that reinforce these findings. Layuza, a student who has long used the Arabic-Indonesian Dictionary, revealed that this dictionary is very suitable for learning Arabic it root of words, patterns (wazan), and even vocabulary frequently found in the Qur'an. However, she also lamented that many modern terms like "globalization" are not available, so she prefers to use Google Translate to look up such terms. Meanwhile, Tibatul Amdina, a sixth-semester student who has been using the Al- Ma'any Dictionary since her first semester, stated that she finds this dictionary very helpful because it can be used for searches from Arabic to Indonesian and vice versa, it provides many vocabulary equivalents. She said she started using this dictionary based on a recommendation from her ustazah (female teacher). Nevertheless, she also mentioned that a weakness of this dictionary is that not all vocabulary entries include the wazan or root word, so it still needs supplementation when used for grammatical studies.

Conclusion

This study demonstrates that the Al-Ma'any Digital Dictionary and the Arab-Indonesian Dictionary each possess complementary strengths and limitations. Al-Ma'any excels in practicality, the availability of modern vocabulary, pronunciation features, and the ease of bidirectional translation searches, making it more suitable for everyday learning needs and practical communication. However, its limitations in root word search and morphological analysis make it less optimal for in-depth studies of Arabic grammar. Conversely, the Arab-Indonesian Dictionary offers greater linguistic depth, particularly through root word searches, wazan, and classical vocabulary relevant to Qur'anic studies and traditional texts, although its interface is less interactive and lacks contemporary terminology. In general, the findings of this research can be generalized as follows: the use of digital dictionaries should be aligned with the users' needs. For students or researchers focusing on linguistic and grammatical

analysis, the Arab-Indonesian Dictionary is more appropriate, whereas for university students and beginner learners requiring practical and contextual vocabulary, Al-Ma'any is the preferred option. The practical implication of this study is the urgency of developing an integrated digital dictionary that combines the strengths of both—namely, the speed and modern vocabulary coverage of Al-Ma'any with the linguistic depth of the Arab-Indonesian Dictionary thus supporting Arabic language learning in a more effective, holistic, and adaptive manner in the digital era.

Acknowledgments

The author team would like to express its deepest gratitude to all parties who have been directly or indirectly involved in this research so that this research was completed as planned.

Authors contributions

This article was written by single authors i.e M. M. A.

Funding

The authors declare no external funding.

Conflict of Interest

The authors declare that they have no conflict of interest related to this study.

References

Agussalim, A., Baso, Y. S., & Zuhriah, Z. (2019). Perancangan kamus digital linguistik-arab berbasis windows dan android. *Nady Al-Adab: Jurnal Bahasa Arab*, 16(2), 75-88. <https://doi.org/10.20956/jna.v16i2.6657>

Arifin, A., & Mulyani, S. (2021). Persepsi Mahasiswa Terhadap Penggunaan Kamus Digital Bahasa Arab Di Era Society 5.0. *An Nabighoh*, 23(2), 235-250. <https://doi.org/10.32332/an-nabighoh.v23i2.4478>

Citriadin, Y. (2020). *Metode Penelitian Kualitatif: Suatu Pendekatan Dasar*. Mataram: Sanabil.

Fadhilah, M. A. (2021). Analisis Karakteristik Aplikasi Kamus Arab-Indonesia Karya Tim Ristek Muslim. *Alsina: Journal of Arabic Studies*, 3(2), 201-218. Retrieved from <https://journal.walisongo.ac.id/index.php/alsina/article/download/5938/pdf>

Hamid, A., Garancang, S., Kasim, A., & Nawas, K. A. (2024). Absorption of Arabic Vocabulary into Indonesian (Analysis of Phonology, Morphology and Meaning in the Kbvi V Dictionary). *Journal of World Science*, 3(1), 116-125. <https://doi.org/10.58344/jws.v3i1.549>

Nuha, U. (2024). Penggunaan Kamus Arab-Indonesia Sebagai Penunjang Proses Pembelajaran Bahasa Arab Pada Madrasah'Aliyah Al-L'anah Playen Gunun Kidul. *Jurnal Ilmiah Al-Mashadir*, 4(1).

https://doi.org/10.30984/almashadir.v4i1.914

Saleh, M., Nur, M. A., Ahmad, F., & Ilham, M. (2023). Development of Arabic-Indonesia Pocket Dictionary to Improve Speaking Skills of Iqro'Stabat Disdit. *Journal Of Education And Teaching Learning (JETL)*, 5(3), 325-335. <https://doi.org/10.51178/jetl.v5i3.1553>

Siregar, L. R., Chandra, R. R., Siregar, S. A., & Nasution, S. (2025). Analisis Penggunaan Kamus Online Al-Ma'any Untuk Pengembangan Kosakata Mahasiswa Pendidikan Bahasa Arab Di Universitas Islam Negeri Sumatera Utara Medan. *Edukasi Elita: Jurnal Inovasi Pendidikan*, 2(1), 316-333. <https://doi.org/10.62383/edukasi.v2i1.1056>

Syaifuji, A., Istiqomah, I. N., & Alfan, M. (2021). Analisis Morfosintaksis Buku Ajar Digital Bahasa Arab Kelas X Madrasah Aliyah Kementerian Agama Tahun 2020. *Jurnal Pendidikan: Teori, Penelitian, Dan Pengembangan*, 6(6). <https://doi.org/10.17977/jptpp.v6i6.14881>

Taufiqurrochman, R. (2019). Advantages and disadvantages of Arabic dictionary applying morphological system for learning Arabic in Indonesia. *LiNGUA*, 14(2), 272-281. Retrieved from <https://repository.uin-malang.ac.id/5020/>

Taufiqurrochman, R. (2020). The transformation of the Arabic Dictionary in Indonesia from the morphological system to the alphabetic system and its effect on Arabic language learning. *International Journal of Innovation, Creativity and Change*, 13. Retrieved from <https://repository.uin-malang.ac.id/6385/>

Yulianti, L., Trimurtini, T., Subali, B., & Ellianawati, E. (2025). Research Trends in Digital Media Development for Mathematics Subjects in Primary Schools Between 2015-2025. *Edunesia: Jurnal Ilmiah Pendidikan*, 6(3), 1482-1504. <https://doi.org/10.51276/edu.v6i3.1342>

Zahrah, H., Wargadinata, W., & Barry, N. A. (2021). Analisis E-dictionarry" Arab-Indonesia" yang tersedia di Play Store dengan pendekatan leksikolog. *Shaut Al-'Arabiyah*, 9 (1). *Shaut Al-'Arabiyah*, 9(1). Retrieved from <https://shorturl.asia/c7En3>