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Memory Optimization in Arabic Language Learning: A Literature Review

Siti Amelia Sriyono[1*], Abdul Kahfi Amrulloh[2], Zainal Arifin Ahmad[3], Dwichandra Setyorini[4]

[1,3,4] Universitas Islam Negeri Sunan Kalijaga Yogyakarta, Indonesia
[2] Sekolah Tinggi Agama Islam Masjid Syuhada Yogyakarta, Indonesia
**Corresponding E-mail: ameliasriyono@gmail.com*

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Abstract

Learning Arabic for non-Arabic speakers faces complex linguistic, cognitive, and affective challenges, particularly related to working memory limitations, cognitive load, and difficulties in retaining vocabulary and linguistic rules. Differences in the phonological, morphological, syntactic, and writing systems of Arabic often complicate the process of encoding and storing information in long-term memory. Therefore, learning strategies that optimize memory function and strengthen learners' memory are needed. This study aims to examine the role of mnemonic method and multisensory approach in strengthening memory in Arabic language learning. The method used is a narrative review of scientific articles from 2020 to 2025 obtained through Google Scholar and ResearchGate. The results show that mnemonic techniques—such as rhymes, acronyms, keywords, and chunking—are effective in helping to encode, store, and recall Arabic language information, especially vocabulary and grammar. In addition, a multisensory approach involving visual, auditory, and kinesthetic components has been proven to enrich the information encoding process, increase learning motivation, and strengthen material retention. The integration of mnemonic method and multisensory learning contributes significantly to creating Arabic language learning that is more effective, engaging, and adaptive to the memory mechanisms of learners.

Kata kunci:
Memori;
Pembelajaran Bahasa Arab;
Strategi Pembelajaran.

Abstrak

Pembelajaran bahasa Arab bagi penutur non-Arab menghadapi tantangan linguistik, kognitif, dan afektif yang kompleks, terutama terkait keterbatasan memori kerja, beban kognitif, serta kesulitan retensi kosakata dan kaidah kebahasaan. Perbedaan sistem fonologi, morfologi, sintaksis, dan penulisan bahasa Arab sering kali memperberat proses pengodean dan penyimpanan informasi dalam memori jangka panjang. Oleh karena itu, diperlukan strategi pembelajaran yang mampu mengoptimalkan kerja memori dan memperkuat daya ingat peserta didik. Penelitian ini bertujuan mengkaji peran metode mnemonik dan pendekatan multisensori dalam menguatkan memori pada pembelajaran bahasa Arab. Metode yang digunakan adalah *literature review* jenis *narrative review*

terhadap artikel ilmiah dari tahun 2020–2025 yang diperoleh melalui Google Scholar dan ResearchGate. Hasil kajian menunjukkan bahwa teknik mnemonic, seperti rima, akronim, keyword, dan chunking efektif membantu pengodean, penyimpanan, dan pemanggilan kembali informasi bahasa Arab, khususnya kosakata dan tata bahasa. Selain itu, pendekatan multisensori yang melibatkan komponen visual, auditori, dan kinestetik terbukti memperkaya proses pengodean informasi, meningkatkan motivasi belajar, serta memperkuat retensi materi. Integrasi metode mnemonik dan pembelajaran multisensori memberikan kontribusi signifikan dalam menciptakan pembelajaran bahasa Arab yang lebih efektif, menarik, dan adaptif terhadap mekanisme kerja memori peserta didik.

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INTRODUCTION

Arabic language learning for non-Arabic speakers involves complex and multifaceted challenges (Yudhiantara & Syihabuddin, 2023). These challenges are not limited to linguistic aspects, but also involve cognitive, psychological, and pedagogical factors of learners. From a linguistic perspective, Arabic has a phonological, morphological, syntactic, and semantic system that differs significantly from the native languages of most learners, especially those from different language families such as Austronesian, Indo-European, or Sino-Tibetan (Irawan et al., 2025). The existence of Arabic letters with their distinctive articulation points, complex word formation system (ṣarf), and relatively flexible sentence structure often causes initial difficulties in the learning process (Sulaiman, 2023).

In addition, differences in right-to-left writing systems and variations in letter forms in certain contexts require a high level of attention and practice. For beginners, especially in writing skills (*maharah al-kitābah*), this complexity can cause significant cognitive load (Pradana et al., 2024). When learning materials are presented without the right teaching strategies, the linguistic information received tends to be difficult to process and store optimally in long-term memory (Yakin, 2022).

From a cognitive perspective, the language learning process is closely related to the human memory system. Working memory plays an important role in processing newly learned linguistic information, such as vocabulary, sentence structure, and grammar rules. However, working memory capacity is limited (Nasrullah, 2025). Limited working memory capacity makes it a bottleneck in knowledge formation. When

learners receive excessive information at the same time, cognitive overload can occur and result in information loss during processing (Nooijen et al., 2024).

In addition, challenges in learning Arabic are also related to the process of transferring information from short-term memory to long-term memory. In order for linguistic information to be stored permanently, meaningful repetition, connections to prior knowledge, and relevant contexts of use are necessary (Komariah et al., 2025). Learning by memorization without meaningful understanding and contextual practice often leads to rapid forgetting of information. This explains why many Arabic learners can memorize certain vocabulary or rules in the short term, but have difficulty applying them in real-life situations (Faridah & Fajar, 2022).

Affective factors such as motivation, interest, and learning anxiety also affect memory performance. Anxiety or lack of confidence in learning Arabic can hinder the process of storing information in memory (Zheng & Cheng, 2018). Conversely, engaging and interactive learning that involves multiple senses can strengthen memory traces, thereby improving students' ability to remember and understand the material (Lina et al., 2025).

Therefore, the challenges of learning Arabic for non-native speakers cannot be separated from memory mechanisms. Therefore, an instructional approach is needed that can manage cognitive load, optimize working memory, and strengthen information storage in long-term memory. One relevant solution is the use of mnemonic techniques. Mnemonic devices, also known as memory strategies, aim to help learners arrange and organize new data mentally, keep it in their mind, and retrieve it more easily when needed (Sarıoğlu & Karatepe, 2024). Another mutually reinforcing solution is the multisensory approach, which involves presenting material through more than one sensory channel, such as visual, auditory, and tactile or kinesthetic, so that the process of encoding information becomes richer. Empirical analysis based on the Global Learning Assessment Database (GLAD) shows that the integration of multisensory stimuli (e.g., visual-auditory-tactile) is associated with changes in psychological conditions related to learning (such as anxiety, motivation, and self-confidence) and improved language skills (listening, speaking, reading, writing), with the effect size potentially varying depending on the combination of stimuli used (Zhan & Cheng, 2025).

Therefore, this study is expected to contribute to the development of more effective and adaptive Arabic language learning strategies to optimize learners' memory in the process of mastering vocabulary, grammar, and language skills. In addition to serving as a practical reference for teachers and education practitioners in designing learning activities that strengthen the processes of encoding, storing, and retrieving information, the results of this study are also expected to enrich Arabic language learning research in Indonesia, particularly regarding the role of cognitive processes and memory-based strategies in supporting successful language acquisition.

METHOD

This study uses a literature review method, which involves scientific examination of a specific topic through the process of collecting, analyzing, synthesizing, and critically evaluating relevant written sources (Cahyono et al., 2019). Through a literature review, researchers aim to obtain the latest information, identify research gaps, and build a solid theoretical foundation so that the solutions formulated are more accurate in accordance with the problems being studied. The type of literature review used is a narrative review, which presents findings from articles related to strategies for optimizing memory in Arabic language learning. The selected articles are limited to publications from 2020 to 2025 and were obtained through Google Scholar and ResearchGate using the keywords: “memory strategies in Arabic language learning,” “mnemonic techniques in Arabic language learning,” and “multisensory approaches in Arabic language learning.”

RESULTS AND DISCUSSION

This section presents findings from the literature on the most commonly used strategies for optimizing memory in Arabic language learning, particularly in the context of non-Arabic speakers. In general, the studies described show that memory reinforcement occurs when new material is not only repeated, but also linked to familiar knowledge and presented through learning experiences that are interesting, structured, and meaningful to students**.** The two most dominant strategies that emerged were the mnemonic method and the multisensory approach.

The Use of Mnemonic Method In Arabic Language Learning

Mnemonic method are techniques designed to help students remember material by utilizing the brain's mechanisms of encoding, reinforcement, and recall, so that information is more easily stored in long-term memory. Its application involves linking new material to familiar information, for example through stories, rhymes/rhythms, or images, and can be supported by grouping techniques that organize material into smaller, more manageable units (Amila Sholiha & Asa Ismia Bunga Aisyahrani, 2023). The main objective is to help students memorize more quickly, easily recall previously learned material when needed, and transfer information from short-term memory to long-term memory (Munir et al., 2023). In Arabic language learning, mnemonic strategies are also used to overcome boredom and low motivation caused by conventional methods, and have been proven to significantly improve vocabulary mastery. For example, a study involving seventh-grade students reported an average pre-test score of 41.67, which increased to a post-test score of 77.22 after mnemonic strategies were applied, with a significance value of p = 0.000 and a moderate N-Gain score (0.6288) (Mahendra & Nasir, 2025).

Some types of mnemonic techniques commonly used in Arabic language learning include:

1. Rhyme

Various types of songs can be used as a medium for applying rhyming mnemonic techniques. Through the repetition of rhymes and easy-to-follow sound patterns, students tend to be more enthusiastic about learning Arabic. In addition, presenting material in an interesting way through songs helps students remember the information conveyed by the teacher more quickly and retain it for longer (Amila Sholiha & Asa Ismia Bunga Aisyahrani, 2023). In Arabic vocabulary learning, rhyme can be applied by having the teacher recite new vocabulary in a singing or chanting style, while the students repeat after them. Then, repetition is done together until the words are thoroughly memorized, after which the vocabulary is used in sentences (Ningsih et al., 2024).

2. Acronym

Acronym technique is a method of creating abbreviations from the initial letters of several words or phrases to form new, more concise words, thereby reducing the burden of memorization and facilitating faster recall (for example, summarizing several items into a single code) (Firdaus & Hafidah, 2020). In Arabic language learning,

acronyms are useful for summarizing lists of rules, categories, or patterns (nahwu/sharaf) so that students are not overwhelmed by details. This is in line with research findings on sharaf learning, which show that mnemonics improve memory through creative associations such as acronyms, visualization, and storytelling, while repetitive motor exercises reinforce pattern automation (Hanifansyah, 2025).

3. Keyword

The keyword mnemonic technique is a widely used mnemonic technique for memorizing foreign vocabulary, phrases, and even abstract concepts by utilizing verbal and visual abilities. Students choose keywords that sound similar to the target word or concept, then reinforce them through association so that they are easier to store in long-term memory (Ferdinand & Yasry, 2023). Similarly, the keyword technique can also be interpreted as a variation of the Mnemonic Learning Model, which works by associating new terms with familiar words/concepts in another language; for example, in Arabic vocabulary, the word بيت (house) is associated with the sound "bayt," which is similar to "bet." This is then reinforced with visualization (imagining the shape of a house roof on the letter "T") to facilitate recall (Suroiyah et al., 2024).

4. Chunking

Chunking is a memorization technique that involves breaking down or grouping long pieces of information into smaller units that are easier for working memory to hold (Firdaus & Hafidah, 2020). In Arabic language learning, chunking can be applied through memorization of short meaningful phrases (rather than individual words), because phrases provide "ready-to-use units" for speaking, making the process of speech production more automatic and not burdening students with having to construct sentences from scratch. Empirically, the Short-Phrase Memorization study showed that the experimental group achieved a post-test mean of 91.42 compared to the control group's 65.71, with a significant difference ($t = 5.691$, $p < .01$), as well as increased participation and confidence during the intervention—these results support the chunking theory that learning language in functional units accelerates retrieval and improves fluency (Zarkasi, 2025).

Multisensory Approach in Strengthening Arabic Language Memory

The multisensory approach is a learning strategy that involves various senses such as sight, hearing, touch, and movement to help students better understand and remember information (Auliya Ainul Jannah et al., 2025).

In Arabic language learning, the multisensory approach can be implemented through the following strategies:

1. Visual

Visual components can be positioned as "coding enhancers." Visual media such as flashcards are designed as picture cards that combine images with words or combinations of words, so that students have visual cues (pictures) to link and recall vocabulary when they forget. This media is also considered easy to remember and enjoyable, making it easier to spark attention and engagement in learning (Rahman et al., 2021). In line with this, the use of flashcards in Arabic vocabulary learning has been proven to help students retain and remember vocabulary more effectively, while also encouraging motivation to learn because the learning process becomes more active, interactive, and enjoyable (Dzulfirda & Syafi'i, 2025).

2. Auditory

The auditory component in Arabic language learning plays an important role because listening activities expose students to sounds that help them recognize vocabulary and strengthen their memory through repeated listening exercises. Mardhatillah & Muhtadi emphasize that involving the auditory modality from the beginning of vocabulary learning is an effective strategy because exposure to sounds can improve vocabulary retention, listening skills, and pronunciation accuracy (Mardhatillah & Muhtadi, 2025). One example of the application of auditory components is the use of AI Text-to-Speech (TTS), a technology that converts text into sound. Yuliani & Sopian explain that TTS supports the development of maharah istima' because it provides audio material that students can use for more focused listening and pronunciation practice (Yulia Yuliani & Sopian, 2025).

3. Kinesthetic

Kinesthetic components help optimize memory because students not only hear vocabulary, but also associate it with relevant body movements, so that vocabulary is stored as sound-meaning-action associations (motor memory) and is easier to recall when needed. In the article by Afiah & Musyafa'ah, the Total Physical Response (TPR)

method is applied by the teacher giving verbal instructions and the students responding through physical movements (demonstration → group practice → independent practice); this pattern allows students to internalize vocabulary and sentence structures more quickly than traditional methods that are only text-based (Afiah & Musyafa'ah, 2024).

4. Multisensory Combination

The multisensory combination in Arabic language learning utilizes visual, auditory, and kinesthetic integration to make it easier for students to grasp the material and retain vocabulary in their memory. Yunanta explains that the use of interactive digital media that contains multimedia elements, provides interactive exercises, and is equipped with immediate feedback can increase learning engagement and support long-term vocabulary retention through multisensory stimulation and immediate reinforcement (Yunanta, 2022). In line with this, Mabruroh, Nurfadlilah, Zarkasyi, and Nufus emphasize that the application of the Visual–Auditory–Kinesthetic (VAK) model has an effect on mufradāt mastery, because the learning process involves seeing, hearing, and moving simultaneously, thereby helping students master vocabulary more effectively (Mabruroh et al., 2024).

CONCLUSION

Mnemonic techniques in Arabic language learning play a role in strengthening memory because they help students encode material, reinforce it through repetition, and then facilitate the recall process when needed. The use of rhymes, acronyms, keyword, and chunking makes information more structured, interesting, and easier to remember than conventional memorization. In general, mnemonics help reduce the burden of memorization, reduce boredom, increase motivation, and support the improvement of vocabulary and Arabic language comprehension.

The multisensory approach is an effective learning strategy for strengthening memory in Arabic language learning because it involves various senses in an integrated manner so that the process of remembering becomes stronger and more durable. Through visual support, students find it easier to recognize and recall vocabulary because they have clues in the form of attractive images or shapes. The auditory component helps students understand the sounds of the language more accurately through repeated listening exercises, thereby improving vocabulary retention and pronunciation. Meanwhile, kinesthetics make learning more meaningful because

vocabulary is not only understood theoretically, but also linked to body movements, making it easier to remember. When these three components are combined in interactive learning, students become more active, focused, and motivated, and are able to master vocabulary more quickly and retain it in their long-term memory.

Further research needs to empirically test the effectiveness of memory enhancement strategies—including variations in mnemonic techniques and multisensory designs—at various levels of education, socio-cultural backgrounds, and a range of students' initial abilities and learning needs. The development of specialized memory-enhancement-based learning media (e.g., interactive digital media, multisensory worksheets, or thematic mnemonic devices) and teacher training programs is also important to ensure that these strategies can be implemented consistently and adaptively. Through the strengthening of empirical evidence, the results of this study are expected to form the basis for the development of a more effective, inclusive, and responsive Arabic language learning model that supports students' retention and recall of material.

REFERENCES

Afiah, S., & Musyafa'ah, L. (2024). Penerapan Metode Total Physical Respon dalam Pembelajaran Bahasa Arab. *KOLEKTIF: Jurnal Pendidikan, Pengajaran, Dan Pembelajaran*, *1*(1), 50–58. https://doi.org/10.70078/kolektif.v1i1.14

Amila Sholiha, & Asa Ismia Bunga Aisyahrani. (2023). The Use of Mnemonic Method and Its Implications for Arabic Learning. *Studi Arab*, *14*(1), 29–42. https://doi.org/10.35891/sa.v14i1.3751

Auliya Ainul Jannah, I., Erlina, E., & Ghazi, F. (2025). Implementation of Multisensory Strategies in Arabic Language Learning for Students with Phonological Disorders: A Literature Review. *Kalamuna: Jurnal Pendidikan Bahasa Arab Dan Kebahasaaraban*, *6*(2), 243–259. https://doi.org/10.52593/klm.06.2.03

Cahyono, E. A., Sutomo, & Hartono, A. (2019). LITERATUR REVIEW ; PANDUAN PENULISAN DAN PENYUSUNAN. *Jurnal Keperawatan*, *12*(2), 1–6.

Dzulfirda, S., & Syafi'i. (2025). Visual Memory and Vocabulary Growth: The Use of Flashcards in Arabic Language Learning. *AL-IRFAN: Journal of Arabic Literature and Islamic Studies*, *8*(2), 509–526. https://doi.org/10.58223/al-irfan.v8i2.556

Faridah, S. N., & Fajar, A. (2022). Peningkatan Hafalan Mufradat Bahasa Arab dengan Metode Bernyanyi pada Santri di Pondok Pesantren Fajrul Islam Karang Hegar Subang. *Satwika: Jurnal Pengabdian Kepada Masyarakat*, *2*(1), 29–40.

Ferdinand, I., & Yasry, F. A. (2023). Implementation Of The Keyword Mnemonic Method And Its Effectiveness To Improve Arabic Vocabulary Mastery. *Tadris Al-'Arabiyyah: Jurnal Pendidikan Bahasa Arab Dan Kebahasaaraban*, *2*(1), 16–29. https://doi.org/10.15575/ta.v2i1.22966

Firdaus, S., & Hafidah, S. (2020). Mnemonik: Solusi Kreatif untuk Meningkatkan Kemampuan Menghafal Kosa Kata Bahasa Arab Siswi Madrasah Aliyah Nurul Jadid. *Palapa:Jurnal Studi Keislaman Dan Ilmu Pendidikan*, *8*(1), 81–96. https://doi.org/10.36088/palapa.v8i1.700

Hanifansyah, N. (2025). Mnemonic dan Muscle Memory dalam Inovasi Pembelajaran Marfologi Bahasa Arab (Sharaf) sebagai INSTING. *TADRIS AL-ARABIYAT Jurnal Kajian Ilmu Pendidikan Bahasa Arab*, *5*(1), 105–126. https://doi.org/10.29240/jba.v8i2.8934

Irawan, K., Agustina, N., Zulhannan, Z., Ghazi, F., & Hijriyah, U. (2025). Karakteristik Bahasa Arab dan Relevansinya dalam Konteks Pendidikan Bahasa Asing. *Naskhi: Jurnal Kajian Pendidikan Dan Bahasa Arab*, *7*(2), 207–214. https://doi.org/10.47435/naskhi.v7i1.3862

Komariah, N. S., Zainuri, S. M., & Muinuddin. (2025). Strategi Pembelajaran Berbasis Teori Memori Untuk Peningkatan Kognitif Siswa. *CONS-EDU Islamic Guidance and Counseling Journal*, *5*(1), 118–130. https://doi.org/10.51192/cons.v5i1.1228

Lina, L., Luthfi, T., Fajar, A., Munir, D. R., & Raihan, U. (2025). Pendampingan Pembelajaran Kosakata Bahasa Arab Melalui Metode Interaktif bagi Anak-Anak di Desa Wanayasa. *Sivitas: Jurnal Pengabdian Dan Pemberdayaan Masyarakat*, *5*(2), 103–110.

Mabruroh, H., Nurfadlilah, S., Zarkasyi, A. H., & Nufus, N. H. (2024). Implementation of Visual Auditory Kinesthetic Learning Model in Mastering Arabic Vocabulary at MTsN 5 Pandeglang. *Al Mahara: Jurnal Pendidikan Bahasa Arab*, *10*(2), 228–243. https://doi.org/10.14421/almahara.2024.0102-02

Mahendra, G., & Nasir, A. (2025). The Effectiveness of an Assistive Memory Strategy (Mnemonic) in Enhancing Arabic Vocabulary Proficiency at the Source of Science Middle School. *EL-MAQALAH: Journal of Arabic Language Teaching and Linguistics*, *6*(2), 12–28. https://doi.org/10.22373/maqalah.v6i2.8249

Mardhatillah, M., & Muhtadi, A. (2025). The Use of Sound Book To Enhance Students' Arabic Vocabulary Mastery. *Jurnal Eduscience*, *12*(4), 921–929. https://doi.org/10.36987/jes.v12i4.6924

Munir, D. R., Fajar, A., Lina, L., & Maftuhah, M. (2023). *Mime Techniques of Students in Learning Arabic Vocabulary*. https://scholar.google.com/scholar?cluster=7618549840714437748&hl=en&oi=scholarr

Nasrullah, R. (2025). Working Memory and Second Language Acquisition: Effects on Vocabulary, Grammar, Reading, and Writing. *GEMA Online Journal of Language Studies*, *25*(1), 102–118. https://doi.org/10.17576/gema-2025-2501-06

Ningsih, W. P., Hamid, M. A., Rosyidi, A. W., & Hamdy, M. Z. (2024). The Designing of Teaching Materials by Using Mnemonic Music Techniques to Strengthen Vocabularies Memorizing. *Arabiyatuna: Jurnal Bahasa Arab*, *8*(2), 753–773. https://doi.org/10.29240/jba.v8i2.8934

Nooijen, C. C. A. Van, Koning, B. B. De, Bramer, W. M., Isahakyan, A., Asoodar, M., Kok, E., Merrienboer, J. J. G. Van, & Paas, F. (2024). A Cognitive Load Theory Approach to Understanding Expert Scaffolding of Visual Problem - Solving Tasks: A Scoping Review. In *Educational Psychology Review* (Vol. 36, Issue 1). Springer US. https://doi.org/10.1007/s10648-024-09848-3

Pradana, M. R. A. A., Rahmawati, N., & Amrullah, N. A. (2024). Keefektifan Model Pembelajaran Cooperative Learning Berbantuan Media Komik Strip Untuk Maharah Kitabah Pada Siswa Kelas VIII Mts Negeri 2 Kendal. *LISANUL ARAB: Journal of Arabic Learning and Teaching*, *13*(1), 57–70.

Rahman, N. H., Mayasari, A., Arifudin, O., & Ningsih, I. W. (2021). Pengaruh Media Flashcard Dalam Meningkatkan Daya Ingat Siswa Pada Materi Mufrodat Bahasa Arab. *Jurnal Tahsinia (Jurnal Karya Umum Dan Ilmiah)*, *2*(2), 99–106. https://doi.org/10.57171/jt.v2i2.296

Sarıoğlu, M., & Karatepe, Ç. (2024). The Use of Mnemonics to Minimize the Interfering Effects of Teaching New Words in Semantic Sets to Learners of English as a Foreign Language. *Applied Cognitive Psychology*, *38*(5), 1–15. https://doi.org/10.1002/acp.4251

Sulaiman, E. (2023). Membumikan Bahasa Arab Sejak Dini (Analisis Kesulitan dan Tantangan dalam Pembelajaran Bahasa Arab untuk Pemula). *Edu Journal Innovation in Learning and Education*, *1*(2), 142–151. https://doi.org/10.55352/edu.v1i2.761

Suroiyah, E. N., Ma'arif, A. S., Wijaya, M., & Sholihah, L. (2024). Activating the Mnemonic Learning Model to Enhance Student Motivation o Enhance Student Motivation in MTs Miftahul Ulum Situbondo. *Mantiqu Tayr: Journal of Arabic Language*, *4*(1), 91–104. https://doi.org/10.25217/mantiqutayr.v4i1.4039

Yakin, A. (2022). Problematika Pembelajaran Bahasa Arab di Indonesia dan Implikasinya terhadap Pengembangan Bahasa Arab. *DIROSAT, Jurnal of Islamic Studies*, *7*(1), 57–67. https://doi.org/10.28944/dirosat.v7i1.699

Yudhiantara, R. A., & Syihabuddin, S. (2023). Arabic Extensive Listening and its Language Learning Benefits. *Kalamuna: Jurnal Pendidikan Bahasa Arab Dan Kebahasaaraban*, *4*(2), 233–247. https://doi.org/10.52593/klm.04.2.08

Yulia Yuliani, S., & Sopian, A. (2025). Integration of AI-Based Text-to-Speech Technology in Arabic Listening Skills Learning. *Aphorisme: Journal of Arabic Language, Literature, and Education*, *6*(1), 85–96. https://doi.org/10.37680/aphorisme.v6i1.7144

Yunanta, I. R. (2022). Transforming Arabic Vocabulary Learning for Beginners through Interactive Digital Media. *IJ-ATL: International Journal of Arabic Teaching and Learning*, *06*(02), 240–252. https://doi.org/10.33650/ijatl.v6i2.2528

Zarkasi, L. (2025). Enhancing Arabic Speaking Skills through Short-Phrase Memorization in an Islamic Boarding School. *Al-Muhawarah: Jurnal Pendidikan Bahasa Arab*, *02*(01), 70–81. https://doi.org/10.38073/almuhawaroh.v2i1.3670

Zhan, L., & Cheng, J. (2025). The relationship between multisensory stimulus-integrated foreign language learning models and students' psychological states and language skill development-an empirical analysis using the global learning assessment database. *Frontiers in Psychology*, *16*(August), 1–11. https://doi.org/10.3389/fpsyg.2025.1639885

Zheng, Y., & Cheng, L. (2018). How does anxiety influence language performance? From the perspectives of foreign language classroom anxiety and cognitive test anxiety. *Language Testing in Asia*, *8*(1), 1–19. https://doi.org/10.1186/s40468-018-0065-4