



Enhancing Arabic Vocabulary Acquisition: Development of Learning Apps Based Interactive Learning Media

Hermiwati ^{a,1}, Muhammad Thahilal Jahidul Hasyib ^{b,2},

Umi Machmudah ^{c,3}, Meidias Abror Wicaksono ^{d,4}

^{a) b) c)} Universitas Islam Negeri Maulana Malik Ibrahim Malang,

^{d)} Institut Pesantren Mathali'ul Falah Pati

¹ 230104220033@student.uin-malang.ac.id, ² 230104220054@student.uin-malang.ac.id,

³ machmudah@pba.uin-malang.ac.id, ⁴ meidiaspba@gmail.com

Abstract

This study aims to support the mastery of Arabic vocabulary through the development of interactive learning media based on Learning Apps for seventh grade student's junior high school. The background of this research is the limited use of technology based learning media, which causes Arabic vocabulary learning to be less engaging and ineffective. This study employed a Research and Development (R&D) approach using the ADDIE model, which consists of five stages: analysis, design, development, implementation, and evaluation. At the analysis stage, learning problems, student needs, and relevant materials were identified. The design stage involved planning vocabulary themes, learning objectives, and interactive activities using the Learning Apps platform. The development stage focused on creating interactive vocabulary learning media and validating the product through media and content experts. The validation results showed that the developed media obtained an average feasibility score of 82.1%, categorized as highly feasible. The implementation stage involved applying the media in Arabic learning activities, followed by an evaluation stage through student response questionnaires. The results indicated that 89% of students gave positive responses, stating that the media was attractive, easy to use, and helpful in improving vocabulary mastery and learning motivation. The Learning Apps based interactive learning media developed through the ADDIE model is feasible and effective in enhancing the quality of Arabic vocabulary learning. This study provides an innovative and practical contribution to technology integrated Arabic language instruction.

Keywords: Arabic vocabulary learning, Learning Apps, Interactive Learning Media

تعزيز اكتساب مفردات اللغة العربية: تطوير وسائل تعليمية تفاعلية قائمة على تطبيقات التعلم الرقمية

*¹ حيرميواتي ، محمد تهليل جهيد الحبيب²، أمي محمودة³ ميدياس أبرار⁴ ويتاكسونو⁴

^أ^ج جامعة مولانا مالك إبراهيم الإسلامية الحكومية مالانج، ^ج جامعة مطالع الفلاح الإسلامية باطى

1230104220033@student.uin-malang.ac.id, 2230104220054@student.uin-malang.ac.id,
3machmudah@pba.uin-malang.ac.id, 4meidiaspba@gmail.com
* watihermi24@gmail.com

الملخص

تهدف هذه الدراسة إلى دعم إتقان مفردات اللغة العربية من خلال تطوير وسائل تعليمية تفاعلية قائمة على تطبيقات التعلم لطلاب الصف السابع في المرحلة المتوسطة. تتعلق هذه الدراسة من محدودية استخدام الوسائل التعليمية المعتمدة على التكنولوجيا، مما يجعل تعلم مفردات اللغة العربية أقل جاذبية وفاعلية. استخدمت الدراسة منهج البحث والتطوير (R&D) بالاعتماد على نموذج ADDIE الذي يتكون من خمس مراحل، وهي: التحليل، والتصميم، والتطوير، والتطبيق، والتقويم. تم تحديد مشكلات التعلم واحتياجات الطلاب وتحليل المواد التعليمية المناسبة في مرحلة التحليل. أما مرحلة التصميم فقد شملت تخطيط موضوعات المفردات، وأهداف التعلم، والأنشطة التفاعلية باستخدام منصة تطبيقات التعلم. وركزت مرحلة التطوير على إنشاء وسائل تعليمية تفاعلية لتعلم المفردات والتحقق من صلاحية المنتج من خلال تحكيم خبراء الوسائل والمحظى. وأظهرت نتائج التحكيم أن الوسائل المطورة حصلت على متوسط درجة صلاحية بلغ 82.1%، وصنفت ضمن فئة صالحة جداً للتطبيق. وشملت مرحلة التطبيق توظيف الوسائل التعليمية في أنشطة تعلم اللغة العربية، تلتها مرحلة التقويم من خلال استبيانات استجابات الطلاب. وأشارت النتائج إلى أن 89% من الطلاب قدمووا استجابات إيجابية، حيث أكدوا أن الوسائل التعليمية جذابة، وسهلة الاستخدام، وفُسّهم في تحسين إتقان المفردات وزيادة دافعية التعلم. وتخلص الدراسة إلى أن الوسائل التعليمية التفاعلية القائمة على تطبيقات التعلم والمطورة وفق نموذج ADDIE صالحة وفعالة في تحسين جودة تعلم مفردات اللغة العربية، كما تقدم إسهاماً ابتكارياً وتطبيقياً في توظيف التكنولوجيا في تعليم اللغة العربية.

الكلمات الرئيسية: تعلم مفردات اللغة العربية، تطبيقات التعلم، الوسائل التعليمية التفاعلية

Introduction

Multimedia must be carefully designed and thoughtfully evaluated before implementation. The prime message of multimedia instruction is to help learners to learn meaningfully¹. Effective learning requires the existence of interrelated elements, such as goals, materials, methods or strategies, media, and evaluation². Of these elements, learning media has an important role in supporting the success and effectiveness of the learning process³. Media can help convey information in a way that is more interesting and easily understood by students, thereby increasing their involvement and learning outcomes⁴. Learning media is divided into several types, such as human-based media, print media, images, audio visual, and technology such as laptops or computers⁵. This variety of media provides many options for educators to adjust learning strategies to the needs and characteristics of students⁶. The use of information technology, such as learning apps and online platforms, enriches the learning process and makes it more interactive⁷. In this way, students

¹ Qais Faryadi and Candidate Date, “Performance Evaluation of the Arabic Language Multimedia Instruction : Malaysian Perspective Performance Evaluation of the Arabic Language Multimedia Instruction : Malaysian Perspective Introduction Criteria for a Feasible Multimedia Instructional Design ” 40 (2008): 1–27.

² Muhammad Miftah, “Fungsi, Dan Peran Media Pembelajaran Sebagai Upaya Peningkatan Kemampuan Belajar Siswa,” *Jurnal Kwangsan* 1 no 2 (2013): 95, <https://doi.org/https://doi.org/10.31800/jtpk.v1n2.p95--105>.

³ Anju Deliana, “Efektivitas Pemanfaatan Canva Sebagai Media Pembelajaran Luring,” *Multiverse: Open Multidisciplinary Journal* 2 no 2 (2023): 298–303, <https://doi.org/https://doi.org/10.57251/multiverse.v2i2.1258>.

⁴ Wahyudi, “Hubungan Penggunaan Multimedia Dalam Pembelajaran Terhadap Peningkatan Hasil Belajar Peserta Didik,” *Journal on Education* 6 no 1 (2023): 25–34, <https://doi.org/https://doi.org/10.31004/joe.v6i1.2910>.

⁵ Sri Anitah dkk, “Penggunaan Media Audio-Visual Pada Mata Pelajaran Ilmu Pengetahuan Alam Di Sekolah Menengah Pertama Negeri 1 Pacitan.,” *Jurnal Teknologi Pendidikan Dan Pembelajaran* 2 no 2 (2014).

⁶ Dkk Husnul Khatimah, “Meningkatkan Attensi Belajar Siswa Kelas Awal Melalui Media Visual,” *Jurnal Pendidikan Anak* 8 no 1 (2019): 17–28, <https://doi.org/https://doi.org/10.21831/jpa.v8i1.22657>.

⁷ Afrilys Sumantri, Tamayis, and Endang Ekowati, “Penerapan Metode Pembelajaran Berbasis Teknologi Terhadap Peningkatan Pemahaman Materi Pendidikan Agama Islam,” *Unisan Jurnal* 3, no. 1 (2024): 299–311.

not only learn Arabic in an academic context, but they can also apply it in real-life situations, thus improving their communication skills⁸.

In addition, the proper utilization of learning media can also increase students' creativity and strengthen their attention during the learning process⁹. In learning Arabic, the existence of supporting learning media is very important¹⁰. Arabic as one of the subjects that has high complexity, requires a creative and innovative approach so that students are able to understand the material well. Therefore, the use of appropriate and varied learning media is one of the key factors to optimally achieve Arabic learning objectives¹¹.

However, in its implementation, grade seventh grade students at Tsurayya Junior High School face a number of problems that hinder Arabic language learning¹². Teacher rarely utilize learning media, so the Arabic learning process feels monotonous and less interesting for students. In addition, learning often focuses only on memorization and theory without the involvement of interactive media, which makes it difficult for students to understand the context of practical language use. The difference in students' ability levels in Arabic is also a challenge for teachers in choosing learning media that suits the needs of all students¹³. In addition, the tight schedule of boarding

⁸ تيير علا ةغل لا زكرم بف تيير علا ةغللا م ي لعث جمانرب ذيفنت فرادا ارودام،“، ملاسلا راد كاجنوف ب“ 11 Aidah Fithriyah et al., (2024): 53–78.

⁹ dkk Nurul Halimah, “Analisis Pembelajaran Berdiferensiasi Sebagai Bentuk Implementasi Kebijakan Kurikulum Merdeka,” *Pendas: Jurnal Pendidikan Dasar* 8 no 1, no. 1–15 (2023).

¹⁰ Syifa Rembulan, Intan & Fauziah, “Pemanfaatan Feeds Dan Fitur Instagram Stories Dalam Pembelajaran Bahasa, Sastra, Dan Budaya Arab,” *Semnasbama* 4 no 0 (2020).

¹¹ Muhammad Asep, “Asep Muhammad Saepul Islam, “Faktor Demotivasi Pembelajaran Bahasa Arab Dalam Perspektif Siswa Madrasah,” *ARABIYAT : Jurnal Pendidikan Bahasa Arab Dan Kebahasaaraban* 2 no 1 (2015), <https://doi.org/https://doi.org/10.15408/a.v2i1.1511>.

¹² Muhammad Khalilullah, “Permainan Teka-Teki Silang Sebagai Media Dalam Pembelajaran Bahasa Arab (Mufradat),” *Jurnal Pemikiran Islam* 37 no 1 (2012): 15–26.

¹³ Dwi Arian and Putra Mandaka, “Problems of Learning Arabic for Non-Islamic School Graduate Students at the Arabic Language Education Program at Sultan Thaha Saifuddin State Islamic University Jambi” 7, no. 2 (2023): 148–58.

school activities often makes it difficult for teachers to allocate sufficient time for interactive deepening of the material¹⁴. These problems show the importance of innovation in the use of learning media that are more varied, interactive, and in accordance with the needs of students to improve the quality of Arabic language learning in grade seventh students of Tsurayya Islamic Boarding School.

To overcome these problems, the Multimedia Learning theory developed by Richard Mayer can be the foundation in designing effective learning media¹⁵. This theory integrates cognitive psychology and learning theory to explain how the use of multimedia can support the learning process¹⁶. Some key principles of this theory can be applied to improve the quality of Arabic language learning. First, the Cognitive Principle emphasizes the importance of matching cognitive load with students' memory working capacity¹⁷. Learning media should be designed with simple design, using relevant text and images, and well-structured information to reduce unnecessary cognitive load. Second, the Visual and Verbal Learning Principle suggests that a good combination of visual and verbal elements can strengthen students' understanding. Effective learning media should integrate images or videos with appropriate text or narration. Third, the Contiguity Principle emphasizes the importance of presenting related information simultaneously, such as narration or text accompanying the image being explained, so that students can easily understand

¹⁴ Miftahul Huda, "Difficulties in Learning Arabic Vocabulary (Mufradat) Students of MTs NU Al Falah Jekulo Kudus Kesulitan Belajar Kosakata Bahasa Arab (Mufradat) Siswa MTs NU Al Falah Jekulo Kudus" 3, no. 2 (2022): 291–304.

¹⁵ Muhammad dkk Dzulkifli, *Teori Dan Prinsip Pengembangan Media Cetak*, 2024.

¹⁶ Boumedyen Shannaq, "Franklin Open Enhancing Arabic Text Classification through Mobile Virtual Keypad-Based Encoding Algorithm," *Franklin Open* 12, no. March (2025): 100373, <https://doi.org/10.1016/j.fraope.2025.100373>.

¹⁷ Rana Alshaikh, Norah Al-malki, and Maida Almasre, "Heliyon The Implementation of the Cognitive Theory of Multimedia Learning in the Design and Evaluation of an AI Educational Video Assistant Utilizing Large Language Models," *Heliyon* 10, no. 3 (2024): e25361, <https://doi.org/10.1016/j.heliyon.2024.e25361>.

the relationship between information¹⁸.

Fourth, the Modality Principle underscores the importance of using multiple sensory channels in conveying information, such as a combination of visual, audio and text, to enhance student understanding. For example, subject matter can be delivered through animated videos with supporting narration and text¹⁹. Finally, the Principle of Cohesion emphasizes the importance of an organized and logical presentation of information to help students understand the relationships between concepts²⁰. Techniques such as concept maps or hierarchical organization can be used to create a clear learning framework. By applying the principles in Multimedia Learning Theory, the development of learning media can be directed to create learning experiences that are more interesting, interactive, and facilitate understanding and retention of information²¹. This can be a solution to overcome the problems faced by seventh grade students of Tsurayya Islamic Boarding School in learning Arabic.

One of the media that can be used to implement this theory is Learning Apps. Learning Apps is a web based learning media that allows educators to create a wide variety of online learning activities, such as matching, fill in the blanks, word searches, crosswords, maps, voting and more²². The platform offers a variety of creative templates with gamification elements that make it ideal for different types of

¹⁸ Meidias Abror Wicaksono, Ab Halim Ahmad, and Wa Muna, “تطوير مواد تعليم مهارة الكلام،“ ضوء المعايير الوطنية للكفاءة المهنية” ٧ للسياحة في no. 1 (2023): 62–78.

¹⁹ Megawati Megawati et al., “Hubungan Antara Kebiasaan Menonton Film Berbahasa Inggris Menggunakan English Subtitle Dan Kemampuan Berbicara Bahasa Inggris,” *Research and Development Journal of Education* 7, no. 2 (2021): 363, <https://doi.org/10.30998/rdje.v7i2.8594>.

²⁰ Dzulkifli, *Teori Dan Prinsip Pengembangan Media Cetak*.

²¹ Kurniawan Hamidi et al., “Pengembangan Media Pembelajaran Bahasa Arab Berbasis Video Animasi Interaktif Untuk Siswa Madrasah Aliyah,” *Journal on Education* 5, no. 2 (2023): 5289–96, <https://doi.org/10.31004/joe.v5i2.1098>.

²² N Sunarko and A Aulia Rahman, “Penggunaan Media Film Animasi Untuk Meningkatkan Penggunaan Kosakata Bahasa Arab,” *Jurnal Al-Qalam* 23, no. 1 (2022): 8–14.

learners and can be accessed for free using a laptop, notebook or smartphone. In addition, Learning Apps is very easy to use to create various learning activities for grammar, vocabulary, as well as reading, writing, listening and speaking skills. With its flexibility, Learning Apps can be customized to suit the needs of the material, making it an effective tool to improve the quality of Arabic language learning²³.

Some research is relevant to this study. The first research by Annisa Hafitria and Imam Asyrofi aims to develop Arabic learning media, especially mufrodat, using Augmented Reality (AR) technology. This research shows that the use of AR technology can make learning more fun and interesting, so that it can improve students' understanding of Arabic vocabulary ²⁴. The second study, by Fina Nur Fadhilah focuses on the use of Educandy, a game-based learning platform, in increasing students' motivation in learning Arabic, especially during the pandemic. The results of this study indicate that Educandy is effectively used for evaluation and improving students' mastery of Arabic vocabulary ²⁵. The third study, by Atika Rahmawati and Khizanatul Hikmah developed Arabic vocabulary learning media using the Plotagon Story animation application. This research aims to provide innovation in Arabic language learning through animated media. The results of this study showed a positive response from students to the use of this media ²⁶. The fourth study, by Nurkholis,

²³ Muchsinul Khuluq, Mamluatul Hasanah, and Nurul Imamah, "Al- Ta ' Rib Mobile-Assisted Language Learning Apps : The Analysis of Duolingo 's Content Using ACTFL Standarization" 12, no. 2 (2024): 229–46.

²⁴ Imam Hafitria, A., Asyrofi, "PENGEMBANGAN MEDIA AUGMENTED REALITY DALAM PEMBELAJARAN MUFRADAT," *Tsaqofiya : Jurnal Pendidikan Bahasa Dan Sastra Arab* 6 no 1 (2024), <https://doi.org/DOI: 10.21154/tsaqofiya.v6i1.253>.

²⁵ Fina Nur Fadhilah, "Pengembangan Media Bahasa Arab Menggunakan Web Educandy," *Al-Ittijah : Jurnal Keilmuan Dan Kependidikan Bahasa Arab* 14, no. 1 (2023): 51–62, <https://doi.org/10.32678/al-ittijah.v14i1.5609>.

²⁶ Atika Rahmawati and Khizanatul Hikmah, "Pengembangan Media Pembelajaran Kosakata Bahasa Arab Berbasis Plotagon Story Di SMP Muhammadiyah 8 Tanggulangin Sidoarjo," *Lisanan Arabiya: Jurnal Pendidikan Bahasa Arab* 6, no. 2 (2022): 225–41, <https://doi.org/10.32699/liar.v6i2.3489>.

Hendri Raharj, and Toto Santi Aji discussed the use of Learning Apps as an interactive learning media at the elementary school level. This media creates an interesting and interactive learning atmosphere, which can be applied in various subjects, including Arabic, to increase student motivation and creativity²⁷.

These four studies make an important contribution in developing learning media that are innovative, technology based, and in accordance with the needs of students in learning Arabic. Our research entitled Development of Vocabulary Learning Media through Learning Apps for Tsurayya Junior High School Students has differentiation and novelty compared to previous studies. While previous studies focus more on the use of technology such as Augmented Reality to teach vocabulary or animation-based media for vocabulary learning, our research integrates web-based applications, namely Learning Apps, as an interactive learning media that allows students to actively participate in the learning process. In addition, this research focuses more on the application of learning media that is easy to access and use in an online learning context that is relevant to the current conditions at Tsurayya Junior High School. By using Learning Apps, which offers various educational and interactive game features, this research seeks to increase students' engagement and motivation to learn, which is different from the use of more sophisticated but less practical technologies.

The novelty of this research lies in the approach that utilizes web based interactive media that is more accessible and has the advantage of creating a more enjoyable and effective learning experience in mastering skills in Arabic and mastering elements in Arabic that can be created through this application, one of which is

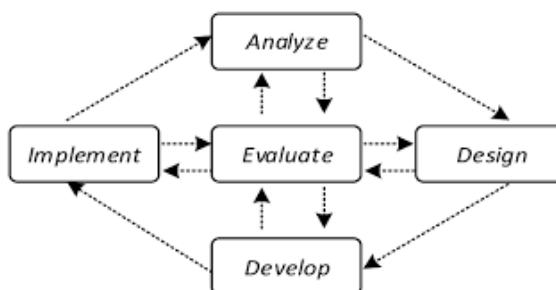
²⁷ dkk Nurkholis, "PENGGUNAAN LEARNING APPS SEBAGAI PEMBELAJARAN INTERAKTIF DI SEKOLAH DASAR," *Jurnal Cakrawala Pendas* 8 no 4 (2022), <https://doi.org/DOI: http://dx.doi.org/10.31949/jcp.v8i2.3108>.

mastery of vocabulary. The purpose of this study is to support the mastery of Arabic vocabulary by developing interactive Learning Apps based learning media for seventh grade students of Tsurayya Junior High School.

Method

The type of research used in this study is development research or R&D (Research and Development), with the aim of developing Arabic vocabulary learning media based on Learning Apps applications. The research model used is a procedural model that refers to the R&D cycle of ADDIE. This research involves several stages, starting with needs analysis, design, development, implementation, and product evaluation²⁸. The first stage is analysis, where researchers conduct theoretical studies and field observations to find out the needs of appropriate learning media. The second stage is design, where researchers design learning materials and Learning Apps application designs. In the third stage, development, researchers develop learning media in the form of interactive applications which are then tested by material experts and media experts. The fourth stage is implementation, which includes product trials in small groups and field tests with a larger number of participants to measure product validity, reliability and effectiveness. The last stage is evaluation, where feedback from users is used to improve and refine the product. By following this model, it is expected that Learning Apps-based learning media can effectively improve the mastery of Arabic vocabulary of seventh grade students of Tsurayya Junior High School.

²⁸ Sugiyono, *Metode Penelitian Pendidikan (Pendekatan Kuantitatif, Kualitatif, R&D)* (Bandung: ALFABETA, 2021).

Fig 1: ADDIE Model

The data collection instruments in this study consisted of three types, namely structured interviews, observations, and questionnaires. Interviews were conducted with seventh grade students Arabic subjects, to obtain information about the problems faced in learning Arabic. Observation was used to assess how the Learning Apps-based Arabic vocabulary learning media was implemented at Tsurayya Junior High School, while the questionnaire was used to measure students' responses to the use of the media after the trial was conducted.

After the data was collected, researchers used quantitative and qualitative data analysis techniques. Quantitative data was obtained through the results of student responses to a questionnaire using a Likert Scale to measure the effectiveness of the learning media developed. From this data, which is used as a percentage to determine the level of product feasibility. The following is the analysis formula using the Likert scale.

$$P = \frac{\sum x_i}{\sum x} \times 100\%$$

Notes:

P = Percentage value

$\sum x$ = Total score obtained from the validator (actual score)

$\sum x_i$ = Maximum expected score

100 = Constant value

Table 1: Media Feasibility Category

| Percentage Range | Feasibility Category |
|------------------|----------------------|
| 76% - 100% | Highly Feasible |
| 51% - 75% | Feasible |
| 26% - 50 % | Moderately Feasible |
| 1% - 25 % | Not Feasible |

Source: (Sugiyono, 2017)

Qualitative data was obtained through interviews with school officials and analyzed descriptively to provide deeper insight into suggestions and criticisms that can be used for product improvement. The product test targets were 12 Tsurayya Junior High School seventh grade students who were selected based on the results of initial observations regarding the relevance of this learning media product.

Result and Discussion

The results of the research on the development of Arabic vocabulary learning media conducted by researchers at Tsurayya Dau Junior High School, Malang are producing vocabulary learning media through Learning Apps media that have been validated by expert validators, educational practitioners and have been tested on students. The development of this vocabulary learning material is carried out using the ADDIE development model which consists of five stages, namely the Analysis, Design, Development, Implementation, and Evaluation stages. In this development transferring Arabic language media from the book *Arabiyah Linnasyi'in*. The researcher did not develop the Arabic material but the researcher made Arabic learning vocabulary media by the online application using the learning apps application. For more details, the following describes the process of developing this online Arabic teaching material application

according to the ADDIE model. The vocabulary learning media developed through the Learning Apps application has gone through the following stages.

Analysis Stage

At this stage the researchers identifies the learning problems that exist in the research site and the learning objectives to be achieved²⁹. Based on the results of observations and interviews with Arabic language teacher at Tsurayya Junior High School in Dau, Malang, researchers found several problems from the school, especially in seventh grade students regarding the media used, it was found that the Arabic vocabulary learning carried out had not achieved the learning objectives, namely not using technological media assistance in the learning process. Teacher only use textbooks, lecture methods, and discussions, so that the media used is considered ineffective in learning Arabic vocabulary.

The difference in students ability levels in Arabic is also a challenge for teachers in choosing learning media that suits the needs of all students. The problem shows the importance of innovation in the use of learning media that is more varied, interactive, and in accordance with the needs of students to improve the quality of Arabic language learning in seventh grade students of Tsurayya Junior High School.

Implicitly say that learning media include tools that are physically used to convey the content of learning materials, which consist of books, tape recorders, cassettes, video cameras, video

²⁹ Sahya Husein, Muhamad Abdul Hamid, and M. Sayid Umar, "Pengembangan Bahan Ajar Bahasa Arab On-Line Berbasis Website Wakelet Pada Program Intensif Pusat Pengembangan Bahasa UIN Maulana Malik Ibrahim Malang," *Lisanan Arabia: Jurnal Pendidikan Bahasa Arab* 4, no. 2 (2020): 175–209, <https://doi.org/10.32699/liar.v4i2.1592>.

recorders, films, slides, photos, graphic images, radio, television, computers and others³⁰. In other words, media is a learning resource component that contains instructional material and can stimulate students to learn³¹. In fact, media assistance is very helpful for students in understanding vocabulary learning. Learners will more easily understand and be able to master many vocabulary by using media that are certainly interesting and innovative. There are many vocabulary that must be mastered in learning Arabic because this material is key in language, so it requires media in the learning process³².

Media analysis is used to determine the material to be used in research. This media analysis, which relates to facts, concepts, principles, and procedures, is a form of identifying relevant material for the development of teaching media in the learning process. The material used is taken from the *Arabiyah Linnasyi'in* grade 7th textbook in the vocabulary learning section³³. However, these grade seventh students are not yet very proficient in vocabulary. Therefore, the learning objectives in the development of this media are to support and facilitate vocabulary mastery in students, make learning less monotonous and more enjoyable, and enable students to learn together through discussion and collaboration using Learning Apps learning media.

³⁰ Andi Bangsawan and Mohammad Yusuf, "Strategi Pemanfaatan Media Dalam Pembelajaran Bahasa Arab Di" 1, no. 1 (2023): 36–45.

³¹ Umi Hanifah, *Media Pembelajaran Bahasa Arab* (Surabya: CV. Putra Media Nusantara, 2011).

³² Siti Mahmudah, "Media Pembelajaran Bahasa Arab," *An Nabighoh Jurnal Pendidikan Dan Pembelajaran Bahasa Arab* 20, no. 01 (2018): 129, <https://doi.org/10.32332/an-nabighoh.v20i01.1131>.

³³ Rahmat Arofah Hari Cahyadi, "Pengembangan Bahan Ajar Berbasis Addie Model," *Halaqa: Islamic Education Journal* 3, no. 1 (2019): 35–42, <https://doi.org/10.21070/halaqa.v3i1.2124>.

Design Stage

After the analysis stage, proceed to the next stage, which is the design stage, namely designing vocabulary learning media through the Learning Apps application. The media content to be developed is material taken from the book used in schools, namely the *Arabiyah Linnasyi'in* book. In this design stage, vocabulary material based on the themes in the learning book is prepared, along with images that correspond to the vocabulary. The purpose of this design is to provide an overview or concept prior to the development of the learning media³⁴.

The results of this learning media design are used as illustrations for the development of the learning media as a whole, taking into account the systematic sequence of its preparation. The initial design of the learning media begins with setting learning objectives, designing learning activities, designing learning tools using the Learning Application, designing learning materials, namely determining the vocabulary themes to be developed, collecting vocabulary according to the themes in the book, and preparing images that correspond to the vocabulary³⁵. This design forms the basis for the process of developing vocabulary learning materials through the Learning Application.

The selection of Learning Apps as the platform for developing learning media is based on its characteristics as a web based, interactive, and flexible tool that can be accessed without installing additional applications³⁶. Learning Apps provides a variety of learning activity

³⁴ Mukhtar Miolo, “Inovasi Pembelajaran Bahasa Arab Bagi Mahasiswa Pemula: Pengembangan Bahan Ajar Berbasis ADDIE,” 2024, 36–53, <https://doi.org/http://dx.doi.org/10.31314/ajamiy.13.2.636-656.2024>.

³⁵ AK Bhakti, F Solihin, and F Damayanti, “Pengembangan M-Learning Bahasa Arab Berbasis LTSA Dengan Pendekatan Addie,” *Infestasi.Trunojoyo.Ac.Id* 6, no. 2 (2017): 73–84.

³⁶ Abdul Gafur Marzuki and Abdul Gafur Marzuki, “Revolutionizing English Vocabulary Learning through Augmented Reality : Innovative Strategies for Indonesian Classrooms Revolutionizing English Vocabulary Learning through Augmented Reality : Innovative Strategies for Indonesian Classrooms,” 2025, 0–10, <https://doi.org/10.20944/preprints202508.1027.v1>.

templates, such as matching pairs, fill in the blank exercises, grouping activities, and word games, which are highly suitable for foreign language vocabulary learning. The platform allows the integration of text, images, and gamification elements that can enhance students' active participation in the learning process³⁷. Furthermore, Learning Apps supports both independent and collaborative learning, making it consistent with the principles of 21st century learning. The use of Learning Apps in vocabulary learning has a positive impact on students' vocabulary mastery, learning motivation, and engagement³⁸. Research findings suggest that Learning Apps based learning media significantly improve students' vocabulary acquisition compared to conventional teaching methods. Therefore, at the design stage, Learning Apps is considered a relevant and potential platform to support the development of innovative and effective Arabic vocabulary learning media.

Development Stage

After the design stage, the development stage continues, namely all components that have been previously designed will be developed in accordance with the concept or description that has been prepared previously. This development stage will explain how the process and results of the development of vocabulary learning media through the Learning Apps application³⁹. The following is the process of making and developing vocabulary learning media.

³⁷ Mahjabin Chowdhury et al., "Digital Game-Based Language Learning for Vocabulary Development," *Computers and Education Open* 6, no. January (2024): 100160, <https://doi.org/10.1016/j.caeo.2024.100160>.

³⁸ Umi Hijriyah and Muhammad Aridan, "Arabic Learning Media Based on Smart Apps Creator for Students of Islamic Junior High School Arabiyât" 9, no. 2 (2022): 217–30.

³⁹ Bhakti, Solihin, and Damayanti, "Pengembangan M-Learning Bahasa Arab Berbasis LTSA Dengan Pendekatan Addie."

Fig 2 : Learning Apps Main Page Display

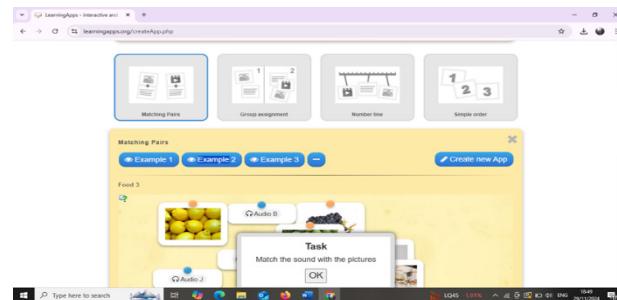
On the appearance of this main page is obtained through the application link, namely <https://learningapps.org/> so that the main page appears or the outer page of the application, before entering or logging in the application is required to create an account first. After creating an account, log in using the email and password on the learning apps account. Then enter the Learning Apps account and to make it easier to read the instructions, first set the language, for example using English which is located in the upper left corner or on the flag image.

Fig 3: Learning Apps Menu Page Display

This page appears after entering the learning apps application, then clicking the Create App menu, this page will appear, which will display various menu options such as Matching Pairs, Group

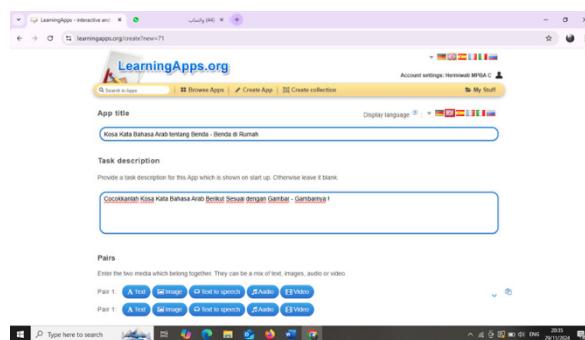
Assignment, Number line, Simple order, Crossword and many others. In making this learning application, researchers chose one of the menus, namely Matching Pairs, in which there are already 3 examples of display models that can be used for learning media according to your wishes and needs.

Fig 4 : Learning Apps Media Menu



In this Matching Pairs menu, researchers chose the second example display model (Example 2), which can fill in material in the form of Arabic vocabulary and images that match the vocabulary.

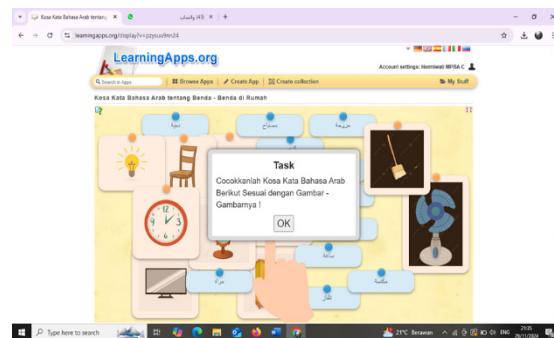
Fig 5 : Vocabulary Material Development Page



After selecting the Matching Pairs display menu, then click start making learning media, which starts by filling in the title of the learning media, filling in the description or instructions before entering the learning media, then entering Arabic vocabulary and pictures that match the vocabulary that will be matched by the use

of this learning media as much as we want. At this stage of entering vocabulary and images, the researchers only enter 10 Arabic vocabulary about objects at home and their corresponding images.

Fig 6 : Media Development Results Page



On this page after finishing entering the material, click finish and save. Then the results will appear like a wall magazine display, namely Arabic vocabulary and embedded images that will be matched or paired by the user. After everything is done, a link <https://learningapps.org/watch?v=pzysuu9nn24> or barcode will appear that can be shared with users or students.

After completing the media development process, in this development stage there is a feasibility test by the validator. Researchers conducted media content and media display. The purpose of the feasibility test was to find out the shortcomings of the development results from criticism, suggestions and input from the validators. Validation by experts is carried out with the aim of knowing the quality of the product and knowing the feasibility of media for use in schools⁴⁰. The validation process of Learning Apps media was carried out by 2 validators. The first validator is a media display expert who

⁴⁰ Ahmad Iqbal Hs and Wuni Mei Suriningsih, "Pengembangan Media Pembelajaran Berbasis Permainan Roda Putar Pada Pembelajaran Kosakata Bahasa Arab Di Taman Kanak - Kanak," *Al-Athfaal: Jurnal Ilmiah Pendidikan Anak Usia Dini* 4, no. 2 (2021): 291–303, <https://doi.org/10.24042/ajipaud.v4i2.11381>.

conducts assessment of media aspects such as display quality and media programs and the second validator is a media content expert who assesses the material aspects in the media.

Media display expert validation was carried out by an expert. The feasibility test or assessment by this media display expert validator is to find out the shortcomings of media development. Learning Apps media assessment is carried out using a validation questionnaire that uses a Likert scale. The answer categories of the scale are Very Worthy, Worthy, Quite Worthy, and Not Worthy. There are 27 indicators in the validation questionnaire. The acquisition of the media validation value is a percentage of 76, 8% with very feasible criteria.

Media content expert validation was carried out by an expert. The feasibility test or assessment by the content expert validator is to find out the shortcomings of the development of vocabulary material. The assessment of vocabulary material is carried out using a validation questionnaire that uses a Likert scale. The answer categories of the scale are Very Worthy, Worthy, Quite Worthy, and Not Worthy. And there are 10 indicators in the validation questionnaire. The acquisition of the media validation value is a percentage of 87.5% with very feasible criteria. The following are the results of Learning Apps media validation and mufrodat learning materials, presented in the table below.

Table 2: Feasibility Level Validation Results

| Validator | Average Score (%) | Feasibility Level |
|----------------------------------|-------------------|------------------------|
| Media Display Validator | 76,8% | Highly Feasible |
| Media Content Validator | 87,5% | Highly Feasible |
| Overall Average Score (%) | 82,1% | Highly Feasible |

Table 2 presents the results of the feasibility validation of the Learning Apps based Arabic vocabulary learning media conducted by expert validators. The validation results indicate that the media display aspect achieved an average score of 76.8%, which falls into the “Highly Feasible” category. This suggests that the visual design, layout, and overall appearance of the media are considered appropriate and supportive of the learning process.

Meanwhile, the media content aspect obtained a higher average score of 87.5%, also categorized as “Highly Feasible.” This result reflects that the vocabulary materials, accuracy of content, and alignment with learning objectives are of high quality and suitable for instructional use. Overall, the combined average feasibility score reached 82.1%, which confirms that the developed Learning Apps based learning media is highly feasible for implementation in Arabic vocabulary learning. These findings indicate that the media meets both technical and pedagogical standards and is appropriate to be applied in classroom learning to support students’ mastery of Arabic vocabulary.

Implementation Stage

After the development stage and having obtained validation results from media and content experts, along with revisions based on their suggestions and critiques, the next stage was the implementation of the developed Arabic vocabulary learning media using the Learning Apps application. This stage involved introducing the interactive vocabulary learning media to 12 seventh grade students at Tsurayya Junior High School. The implementation stage functioned as an initial application phase to observe how the media operated in real classroom conditions and how students interacted with the Learning Apps based learning environment.

The implementation was carried out collaboratively by the researchers and the Arabic language teacher at Tsurayya Junior High School. During this stage, the teacher acted as the main facilitator of the learning process, while the researchers provided technical assistance and guidance. Prior to the learning activities, students were given clear instructions regarding how to access and use the Learning Apps platform, including navigating the interface, completing vocabulary exercises, and responding to interactive tasks. The learning media could be accessed through the Learning Apps link provided at, allowing students to engage directly with the vocabulary materials in a digital and interactive format <https://learningapps.org/watch?v=pzysuu9nn24>.

Evaluation Stage

After the implementation stage is carried out, the last stage carried out in this research is the evaluation stage. The evaluation stage is a stage carried out to evaluate product development in accordance with the learning model used. In formative evaluation development research, it is carried out to improve the products produced through student responses to interactive learning media questionnaires and suggestions given by media experts and interactive learning material experts ⁴¹. At this stage, researchers gave a questionnaire to Tsurayya Junior High School students in seventh grade students to see their responses after doing Learning Apps media based learning. The following table shows the results of student responses through questionnaires that have been summed up and obtained the average response in the table below.

⁴¹ Alvi Aliyanti Dwi Anggraini, Iskandar Wiryokusumo, and Ibut Priono Leksono, “Pengembangan Multimedia Pembelajaran Interaktif Mengenal Huruf Dan Angka Dengan Model ADDIE,” *Education and Development* 9, no. 4 (2021): 426–32.

Table 3: Student Responses to Learning Media

| Statement | Very Good (%) | Good (%) | Fair (%) | Poor (%) |
|---|---------------|------------|------------|-----------|
| Interactive learning media | 60% | 30% | 10% | 0% |
| Learning media increase learning motivation | 25% | 60% | 15% | 0% |
| Learning media support independent learning | 30% | 45% | 25% | 0% |
| Learning media are easy to access | 70% | 30% | 0% | 0% |
| Learning materials are easy to understand | 25% | 65% | 10% | 0% |
| Program reliability (error rate) | 30% | 60% | 0% | 10% |
| Learning media are easy to operate | 25% | 65% | 10% | 0% |
| Learning media can be operated on various devices | 60% | 30% | 10% | 0% |
| Media display is attractive | 25% | 65% | 10% | 0% |
| Colour composition is appropriate | 25% | 65% | 10% | 0% |
| Display size is clear | 40% | 60% | 0% | 0% |
| User guidelines are easy to understand | 60% | 30% | 10% | 0% |
| Learning media are simple to use | 35% | 65% | 0% | 0% |
| Learning media help in learning Arabic | 50% | 20% | 25% | 5% |
| Language used is easy to understand | 15% | 75% | 10% | 0% |
| Overall average (%) | 38% | 51% | 10% | 1% |

The data presented in Table 3 indicate that students responded very positively to the use of Learning Apps based interactive learning media in Arabic vocabulary instruction. Overall, 89% of student responses fell within the “Very Good” and “Good” categories, demonstrating a high level of acceptance and perceived usefulness of the developed media.

In terms of usability and accessibility, the media received particularly strong evaluations. A total of 70% of students rated the media as very easy to access, and 60% stated that it could be operated on various devices, indicating that the web-based nature of Learning Apps effectively supports flexible learning environments. Additionally, 65% of students reported that the media were easy to operate, and 60% found the user guidelines easy to understand, suggesting that the interface and navigation were user friendly and appropriate for seventh grade learners.

Regarding learning effectiveness, the results show that the media contributed positively to students' motivation and comprehension. 85% of students agreed that the media increased their learning motivation, while 90% indicated that the learning materials were easy to understand. Furthermore, 70% of students stated that the media supported independent learning, highlighting the potential of Learning Apps to encourage self-directed learning outside the classroom.

From an aesthetic and technical perspective, the media design was also well received. Most students rated the visual appearance, colour composition, and display clarity as good or very good, confirming that the visual elements contributed positively to learning engagement. Although a small proportion of students (10%) reported issues related to program reliability, the majority still evaluated the system as stable and functional. Overall, these findings suggest that the developed Learning Apps based learning media are effective, user friendly, and motivating, and they successfully support Arabic vocabulary mastery among seventh grade students. The positive student responses strengthen the feasibility of implementing this media in Arabic language learning and indicate its potential for broader application in similar educational contexts.

Conclusion

This study concludes that the development of Learning Apps based Arabic vocabulary learning media makes a meaningful contribution to addressing the limited availability of interactive instructional media in Arabic language learning at the junior high school level. The findings indicate that the developed media is feasible and appropriate for classroom implementation, as reflected by an average expert validation score of 82.1%, which falls into the Very Feasible category. This result confirms that the media meets the required standards in terms of content accuracy, visual presentation, and instructional design. Student responses further demonstrate that the Learning Apps based media is positively received, with 89% of learners rating it as Good and Very Good. These findings suggest that the media effectively supports Arabic vocabulary mastery by providing engaging, accessible, and learner activities. The interactive features and visual support help reduce learning monotony and encourage more independent learning practices among students.

This research establishes that Learning Apps based vocabulary learning media represents an effective and relevant instructional innovation in Arabic language education at the junior high school level. The study contributes to existing scholarship by demonstrating how web based interactive media can enhance the quality of vocabulary learning in a practical and accessible manner, particularly within digital era learning environments. For future research, it is recommended that subsequent studies involve larger sample sizes and more diverse educational settings to examine the generalizability of the findings. Further research may also explore the integration of Learning Apps in developing other Arabic language skills, such as reading, writing, listening, and speaking, as well as its combination with other instructional models to enrich learning outcomes.

References

Alshaikh, Rana, Norah Al-malki, and Maida Almasre. "Heliyon The Implementation of the Cognitive Theory of Multimedia Learning in the Design and Evaluation of an AI Educational Video Assistant Utilizing Large Language Models." *Heliyon* 10, no. 3 (2024): e25361. <https://doi.org/10.1016/j.heliyon.2024.e25361>.

Anggraini, Alvi Aliyanti Dwi, Iskandar Wiryokusumo, and Ibut Priono Leksono. "Pengembangan Multimedia Pembelajaran Interaktif Mengenal Huruf Dan Angka Dengan Model ADDIE." *Education and Development* 9, no. 4 (2021): 426–32.

Arian, Dwi, and Putra Mandaka. "Problems of Learning Arabic for Non-Islamic School Graduate Students at the Arabic Language Education Program at Sultan Thaha Saifuddin State Islamic University Jambi" 7, no. 2 (2023): 148–58.

Asep, Muhammad. "Asep Muhammad Saepul Islam, "Faktor Demotivasi Pembelajaran Bahasa Arab Dalam Perspektif Siswa Madrasah." *ARABIYAT: Jurnal Pendidikan Bahasa Arab Dan Kebahasaaraban* 2 no 1 (2015). <https://doi.org/https://doi.org/10.15408/a.v2i1.1511>.

Bangsawan, Andi, and Mohammad Yusuf. "Strategi Pemanfaatan Media Dalam Pembelajaran Bahasa Arab Di" 1, no. 1 (2023): 36–45.

Bhakti, AK, F Solihin, and F Damayanti. "Pengembangan M-Learning Bahasa Arab Berbasis LTSA Dengan Pendekatan Addie." *Infestasi.Trunojoyo.Ac.Id* 6, no. 2 (2017): 73–84.

Cahyadi, Rahmat Arofah Hari. "Pengembangan Bahan Ajar Berbasis Addie Model." *Halaqa: Islamic Education Journal*

3, no. 1 (2019): 35–42. <https://doi.org/10.21070/halaqa.v3i1.2124>.

Chowdhury, Mahjabin, L Quentin Dixon, Li-Jen Kuo, Jonan Phillip Donaldson, Zohreh Eslami, Radhika Viruru, and Wen Luo. “Digital Game-Based Language Learning for Vocabulary Development.” *Computers and Education Open* 6, no. January (2024): 100160. <https://doi.org/10.1016/j.caeo.2024.100160>.

Deliana, Anju. “Efektivitas Pemanfaatan Canva Sebagai Media Pembelajaran Luring.” *Multiverse: Open Multidisciplinary Journal* 2 no 2 (2023): 298–303. <https://doi.org/https://doi.org/10.57251/multiverse.v2i2.1258>.

Dzulkifli, Muhammad dkk. *Teori Dan Prinsip Pengembangan Media Cetak*, 2024.

Fadhilah, Fina Nur. “Pengembangan Media Bahasa Arab Menggunakan Web Educandy.” *Al-Ittijah : Jurnal Keilmuan Dan Kependidikan Bahasa Arab* 14, no. 1 (2023): 51–62. <https://doi.org/10.32678/al-ittijah.v14i1.5609>.

Faryadi, Qais, and Candidate Date. “Performance Evaluation of the Arabic Language Multimedia Instruction : Malaysian Perspective Performance Evaluation of the Arabic Language Multimedia Instruction : Malaysian Perspective Introduction Criteria for a Feasible Multimedia Instructional Design ” 40 (2008): 1–27.

Fithriyah, Aidah, Amrina Rosyada, Muhammad Fadhil, Khusnul Mubarok, Danial Hilmi, and Walid Rasuliy. “قِبَرْ عَلَا ظَغْلَ لَا زَكْرَمْ يَفْ قِبَرْ عَلَا ظَغْلَامْ يَلْعَتْ جَمَانِرْبْ ذِيْفَنْتْ قَرَادِيْ اَرُوْدَامْ مَلَسَلَارَادْ كَاجْنُوْ فَبْ” 11, no. 2 (2024): 53–78.

Hafitria, A., Asyrofi, Imam. “Pengembangan Media Augmented Reality Dalam Pembelajaran Mufradat.” *Tsaqofiya : Jurnal Pendidikan Bahasa Dan Sastra Arab* 6 no 1 (2024). <https://>

doi.org/DOI: 10.21154/tsaqofiya.v6i1.253.

Hamidi, Kurniawan, Wan Jamaluddin, Koderi Koderi, and Erlina Erlina. "Pengembangan Media Pembelajaran Bahasa Arab Berbasis Video Animasi Interaktif Untuk Siswa Madrasah Aliyah." *Journal on Education* 5, no. 2 (2023): 5289–96. <https://doi.org/10.31004/joe.v5i2.1098>.

Hanifah, Umi. *Media Pembelajaran Bahasa Arab*. Surabya: CV. Putra Media Nusantara, 2011.

Hijriyah, Umi, and Muhammad Aridan. "Arabic Learning Media Based on Smart Apps Creator for Students of Islamic Junior High School Arabiyât" 9, no. 2 (2022): 217–30.

Hs, Ahmad Iqbal, and Wuni Mei Suriningsih. "Pengembangan Media Pembelajaran Berbasis Permainan Roda Putar Pada Pembelajaran Kosakata Bahasa Arab Di Taman Kanak - Kanak." *Al-Athfaal: Jurnal Ilmiah Pendidikan Anak Usia Dini* 4, no. 2 (2021): 291–303. <https://doi.org/10.24042/ajipaud.v4i2.11381>.

Huda, Miftahul. "Difficulties in Learning Arabic Vocabulary (Mufradat) Students of MTs NU Al Falah Jekulo Kudus Kesulitan Belajar Kosakata Bahasa Arab (Mufradat) Siswa MTs NU Al Falah Jekulo Kudus" 3, no. 2 (2022): 291–304.

Husein, Sahya, Muhamad Abdul Hamid, and M. Sayid Umar. "Pengembangan Bahan Ajar Bahasa Arab On-Line Berbasis Website Wakelet Pada Program Intensif Pusat Pengembangan Bahasa UIN Maulana Malik Ibrahim Malang." *Lisanan Arabiya: Jurnal Pendidikan Bahasa Arab* 4, no. 2 (2020): 175–209. <https://doi.org/10.32699/liar.v4i2.1592>.

Husnul Khatimah, Dkk. "Meningkatkan Attensi Belajar Siswa Kelas Awal Melalui Media Visual." *Jurnal Pendidikan Anak* 8 no 1 (2019): 17–28. <https://doi.org/https://doi.org/10.21831/>

jpa.v8i1.22657.

Khalilullah, Muhammad. "Permainan Teka-Teki Silang Sebagai Media Dalam Pembelajaran Bahasa Arab (Mufradat)." *Jurnal Pemikiran Islam* 37 no 1 (2012): 15–26.

Khuluq, Muchsinul, Mamluatul Hasanah, and Nurul Imamah. "Al- Ta ' Rib Mobile-Assisted Language Learning Apps : The Analysis of Duolingo ' s Content Using ACTFL Standarization" 12, no. 2 (2024): 229–46.

Mahmudah, Siti. "Media Pembelajaran Bahasa Arab." *An Nabighoh Jurnal Pendidikan Dan Pembelajaran Bahasa Arab* 20, no. 01 (2018): 129. <https://doi.org/10.32332/an-nabighoh.v20i01.1131>.

Marzuki, Abdul Gafur, and Abdul Gafur Marzuki. "Revolutionizing English Vocabulary Learning through Augmented Reality : Innovative Strategies for Indonesian Classrooms Revolutionizing English Vocabulary Learning through Augmented Reality : Innovative Strategies for Indonesian Classrooms," 2025, 0–10. <https://doi.org/10.20944/preprints202508.1027.v1>.

Megawati, Megawati, Eka Rista Harimurti, Neng Nurwiatin, and Nurhasanah Nurhasanah. "Hubungan Antara Kebiasaan Menonton Film Berbahasa Inggris Menggunakan English Subtitle Dan Kemampuan Berbicara Bahasa Inggris." *Research and Development Journal of Education* 7, no. 2 (2021): 363. <https://doi.org/10.30998/rdje.v7i2.8594>.

Miftah, Muhammad. "Fungsi, Dan Peran Media Pembelajaran Sebagai Upaya Peningkatan Kemampuan Belajar Siswa." *Jurnal Kwangsan* 1 no 2 (2013): 95. <https://doi.org/https://doi.org/10.31800/jtpk.v1n2.p95--105>.

Miolo, Mukhtar. "Inovasi Pembelajaran Bahasa Arab Bagi

Mahasiswa Pemula: Pengembangan Bahan Ajar Berbasis ADDIE,” 2024, 36–53. <https://doi.org/http://dx.doi.org/10.31314/ajamiy.13.2.636-656.2024>.

Nurkholis, dkk. “Penggunaan Learning Apps Sebagai Pembelajaran Interaktif Di Sekolah Dasar.” *Jurnal Cakrawala Pendas* 8 no 4 (2022). <https://doi.org/DOI: http://dx.doi.org/10.31949/jcp.v8i2.3108>.

Nurul Halimah, dkk. “Analisis Pembelajaran Berdiferensiasi Sebagai Bentuk Implementasi Kebijakan Kurikulum Merdeka.” *Pendas: Jurnal Pendidikan Dasar* 8 no 1, no. 1–15 (2023).

Rahmawati, Atika, and Khizanatul Hikmah. “Pengembangan Media Pembelajaran Kosakata Bahasa Arab Berbasis Plotagon Story Di SMP Muhammadiyah 8 Tanggulangin Sidoarjo.” *Lisanan Arabiya: Jurnal Pendidikan Bahasa Arab* 6, no. 2 (2022): 225–41. <https://doi.org/10.32699/liar.v6i2.3489>.

Rembulan, Intan & Fauziah, Syifa. “Pemanfaatan Feeds Dan Fitur Instagram Stories Dalam Pembelajaran Bahasa, Sastra, Dan Budaya Arab.” *Semnasbama* 4 no 0 (2020).

Shannaq, Boumedyen. “Franklin Open Enhancing Arabic Text Classification through Mobile Virtual Keypad-Based Encoding Algorithm.” *Franklin Open* 12, no. March (2025): 100373. <https://doi.org/10.1016/j.fraope.2025.100373>.

Sri Anitah dkk. “Penggunaan Media Audio-Visual Pada Mata Pelajaran Ilmu Pengetahuan Alam Di Sekolah Menengah Pertama Negeri 1 Pacitan.” *Jurnal Teknologi Pendidikan Dan Pembelajaran* 2 no 2 (2014).

Sugiyono. *Metode Penelitian Pendidikan (Pendekatan Kuantitatif, Kualitatif, R&D)*. Bandung: ALFABETA, 2021.

Sumantri, Afrilys, Tamyis, and Endang Ekowati. “Penerapan Metode Pembelajaran Berbasis Teknologi Terhadap Peningkatan Pemahaman Materi Pendidikan Agama Islam.” *Unisan Jurnal* 3, no. 1 (2024): 299–311.

Sunarko, N, and A Aulia Rahman. “Penggunaan Media Film Animasi Untuk Meningkatkan Penguasaan Kosakata Bahasa Arab.” *Jurnal Al-Qalam* 23, no. 1 (2022): 8–14.

Wahyudi. “Hubungan Penggunaan Multimedia Dalam Pembelajaran Terhadap Peningkatan Hasil Belajar Peserta Didik.” *Journal on Education* 6 no 1 (2023): 25–34. <https://doi.org/https://doi.org/10.31004/joe.v6i1.2910>.

Wicaksono, Meidias Abror, Ab Halim Ahmad, and Wa Muna. تطوير مواد تعليم مهارة الكلام للسياحة في ضوء المعايير الوطنية، ٧، no. ٦٢: ٢٣٠٢٠ (٢٠٢٣): ٦٢-٧٨.