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ENHANCING ARABIC VOCABULARY LEARNING: DEVELOPMENT OF A MOBILE APPLICATION INTEGRATING THE QURAN ARABIC CORPUS

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Abstract

The Quran Arabic Teaching(QAT) application is an innovative Android-based tool developed to enhance Arabic vocabulary learning, particularly for students at the Jami' Malang Great Mosque Islamic Boarding School. Utilizing the Quran Arabic Corpus (QAC) as its primary resource, the application provides contextual vocabulary learning by exploring word meanings, roots, and usage within Quranic verses. Guided by the ADDIE model: Analysis, Design, Development, Implementation, and Evaluation—the development process ensures the application's relevance, content quality, and effectiveness in supporting Arabic language education. Results indicate significant positive impacts, with 85% of students reporting increased motivation, 90% showing greater self-will in learning, and 88% benefiting from the flexibility to study independently. Additionally, 92% of students expressed satisfaction with the application's user-friendly and engaging features. These findings highlight its ability to foster an effective and enjoyable learning environment. Future enhancements, such as speech recognition for pronunciation practice, interactive vocabulary games, and expanded grammar content, are recommended. The application's integration of Quranic texts enriches linguistic comprehension while deepening appreciation for Islamic scripture. Thus, the QAT application serves as an effective tool in Arabic language learning, offering valuable potential for broader use in Islamic educational settings.

Keywords: The Quranic Arabic Corpus, Arabic Language Learning, Learning Apps.

Abstrak

Aplikasi *Quran Arabic Teaching (QAT)* adalah alat inovatif berbasis Android yang dikembangkan untuk meningkatkan pembelajaran kosakata bahasa Arab, khususnya

untuk siswa di Pondok Pesantren Masjid Agung Jami' Malang. Memanfaatkan *Quran Arabic Corpus (QAC)* sebagai sumber utama, aplikasi ini menyediakan pembelajaran kosakata kontekstual dengan mengeksplorasi makna kata, akar kata, dan penggunaan dalam ayat-ayat al-Quran. Dipandu oleh model ADDIE *(Analysis, Design, Development, Implementation, and Evaluation).* Proses pengembangan aplikasi ini memastikan relevansi, kualitas konten, dan keefektifan aplikasi dalam mendukung pendidikan bahasa Arab. Hasil penelitian menunjukkan dampak positif yang signifikan, dengan 85% siswa melaporkan peningkatan motivasi, 90% menunjukkan kemauan yang lebih besar dalam belajar, dan 88% mendapat manfaat dari fleksibilitas untuk belajar secara mandiri. Selain itu, 92% siswa menyatakan kepuasannya dengan fitur-fitur aplikasi yang ramah pengguna dan menarik. Temuan ini menyoroti kemampuannya untuk menumbuhkan lingkungan belajar yang efektif dan menyenangkan. Peningkatan di masa depan, seperti pengenalan suara untuk latihan pengucapan, permainan kosakata interaktif, dan konten tata bahasa yang diperluas, direkomendasikan. Integrasi aplikasi dengan teks-teks al-Quran memperkaya pemahaman linguistik sekaligus memperdalam apresiasi terhadap kitab suci Islam. Dengan demikian, aplikasi QAT berfungsi sebagai alat yang efektif dalam pembelajaran bahasa Arab, menawarkan potensi yang berharga untuk penggunaan yang lebih luas dalam lingkungan pendidikan Islam.

Kata Kunci: ***The Quranic Arabic Corpus, Pembelajaran Bahasa Arab, Aplikasi Pembelajaran.***

INTRODUCTION

Arabic has become increasingly important in the context of globalization, especially for Muslim communities and language researchers[1]. One study investigated learners' concepts of self-motivation in conjunction with the simultaneous learning of English, Arabic, and other languages [2]. Another study discusses how Arabic has become marginalized in the Arab World and is often considered a useless language in the West [3]. The next article explores the challenges and conflicts between globalization and Arabic language identity [4]. In addition, the role of technology in the development of Arabic is described in a research paper, emphasizing the positive impact of information technology on education and the learning process [5].

[1] Jaseb Nikfar, "Globalization and Future of Power Relations in the Arabic Middle-East: A Case Study of Egypt and Libya," *Humanities and Social Sciences Communications* 7, no. 1 (November 4, 2020): 134, https://doi.org/10.1057/s41599-020-00631-7; Husam Hassan Ahmad Al-Omari, "Arabic Language and Globalization: Duties to Solutions; This Paper Was Published but Withdrawn on Request of the Author Therefore the PDF Has Been Removed," *Journal of Social Sciences (COES&RJ-JSS)* 10, no. 2 (April 12, 2021): 163, https://doi.org/10.25255/jss.2021.10.2.163.178; Wissal Al Allaq, "Arabic Language in a Globalized World: Observations from the United Arab Emirates," *AWEJ* 3, no. 3 (2014): 113–23, www.awej.org.

[2] Raees Calafato and Fei Tang, "The Status of Arabic, Superdiversity, and Language Learning Motivation among Non-Arab Expats in the Gulf," *Lingua* 219 (February 2019): 24–38, https://doi.org/10.1016/j.lingua.2018.11.003.

[3] Khawlah Ahmed, "The Arabic Language: Challenges in the Modern World," *International Journal for Cross-Disciplinary Subjects in Education* 1, no. 3 (September 1, 2010): 196–200, https://doi.org/10.20533/ijcdse.2042.6364.2010.0027.

[4] Huda Taha, "Arabic Language Reality between Globalization and Identities Conflict," *Dirasat: Human and Social Sciences* 49, no. 6 (November 30, 2022): 94–106, https://doi.org/10.35516/hum.v49i6.3696.

[5] Ahmad Zaky, Muhammad Sapii Harahap, and Ade Muhammad Ritonga, "The Role of Technology in the Development of Arabic Language Education in Indonesia," *Edumaspul: Jurnal Pendidikan* 7, no. 1 (March 1, 2023): 215–22, https://ummaspul.e-journal.id/maspuljr/article/view/5464.

Vocabulary expansion is one of the main problems in learning foreign languages [6]. Students often have difficulty memorizing and using new words and phrases needed to communicate effectively in the language [7]. The process of expanding vocabulary can be challenging because it requires a consistent dedication of time and effort [8]. In addition, learners may feel intimidated by the vast and complex amount of vocabulary in a foreign language [9]. Therefore, effective learning approaches in expanding vocabulary need to be applied, including the use of varied and interactive learning strategies, as well as the use of appropriate and relevant resources to facilitate an efficient and effective vocabulary learning process [10]. The development of Arabic learning media for Android-based high school students is a study related to the characteristics of students who are right and suitable for designing Android device development [11].

This study aims to develop an Android-based Arabic qawa'id learning media. The results show that the use of this application improves student understanding, with an average posttest score of 84.00 compared to the pretest of 60.33, as well as a t test showing high significance ($p < 0.005$). Wakhidati Nurrohmah Putri developed science-based Arabic learning media based on Android mobile. This research used the Research and Development method, with excellent product validity and practicality results (4.26 and 4.25) [12]. This study aims to assess the feasibility and effectiveness of Android-based Arabic learning media at MA Al Huda Kediri. Using the ADDIE model, the results show that this media is very feasible with high validation scores (98.65% for material, 92.5% for media, and 96.7% for construction). The use of this media is also proven to improve student learning outcomes significantly ($p < 0.001$) [13]. The selection and implementation of Arabic learning media based on Android involve careful consideration of technical aspects, design principles, expert

[6] Mofareh Alqahtani, "The Importance of Vocabulary in Language Learning and How to Be Taught," *International Journal of Teaching and Education* III, no. 3 (2015): 21–34, https://doi.org/10.20472/TE.2015.3.3.002.

[7] Huseyin Uzunboylu and Zeynep Genc, "Analysis of Documents Published in Scopus Database on Foreign Language Learning Through Mobile Learning: A Content Analysis," *Profile: Issues in Teachers´ Professional Development* 19, no. _sup1 (November 29, 2017): 99–107, https://doi.org/10.15446/profile.v19n_sup1.68624.

[8] Оспаналиева Сымбат and Нурекешова Гр, "Vocabulary Expansion Technique for Foreign Language Learners," *Scientific Collection «InterConf»*, no. 142 (February 16, 2023): 180–87, https://archive.interconf.center/index.php/conference-proceeding/article/view/2358.

[9] P. Nation, "How Much Input Do You Need to Learn the Most Frequent 9,000 Words?," *Reading in a Foreign Language*, 2014, https://doi.org/10.26686/WGTN.12543437.V1.

[10] Uzunboylu and Genc, "Analysis of Documents Published in Scopus Database on Foreign Language Learning Through Mobile Learning: A Content Analysis."

[11] Muhamad Yusuf Salam, Murphy Xavier, and McCarty Elliot, "Survey Study on the Increase of Arabic Learning Due to Smartphones," *International Journal of Educational Narratives* 1, no. 4 (July 21, 2023): 199–210, https://doi.org/10.55849/ijen.v1i4.385.

[12] Wakhidati Nurrohmah Putri and Arif Billah, "Pengembangan Media Pembelajaran Bahasa Arab Berwawasan Sains Berbasis Mobile Android," *LISANIA: Journal of Arabic Education and Literature* 3, no. 2 (December 29, 2019): 163–79, https://doi.org/10.18326/lisania.v3i2.163-179.

[13] Latifah, M. Syamsul Ma'arif, and Moh. Sholeh Afyuddin, "Pengembangan Media Pembelajaran Bahasa Arab Berbasis Android Dengan Teori Pembelajaran Interaktif," *Al-Wasil* 2, no. 1 (August 19, 2024): 53–83, https://doi.org/10.30762/alwasil.v2i1.3540.

validations, and user-centered approaches. By aligning these factors, developers can create comprehensive and engaging educational tools that effectively supplement existing methodologies, thereby improving overall learning outcomes for Arabic language instruction.

Arabic vocabulary learning has seen advancements through innovative methods and digital platforms. This study highlights three approaches to improving Arabic vocabulary acquisition. The Cognitive Retroactive Transfer (CRT) method has proven effective in enhancing memory retention and cognitive abilities, aiding students in better memorizing Arabic vocabulary. Research demonstrates its positive impact on long-term learning outcomes[14]. The Educandy platform, utilized during the pandemic, has shown significant improvements in students' vocabulary comprehension. Its interactive features support independent and enjoyable learning, leading to enhanced learning achievements [15]. Additionally, TikTok, traditionally seen as an entertainment app, has been employed as a project-based learning medium. This approach makes learning more engaging by involving students in creative video content creation. However, challenges such as time management and teacher guidance are noted [16]. These findings highlight the potential of combining innovative methods and digital platforms to enhance Arabic vocabulary learning effectively.

The integration of technological applications with credible and authoritative digital resources can significantly improve the quality of learning particularly in Arabic [17]. Learning Arabic with a technological base is an innovation that can facilitate the learning process, increase learning motivation, and provide a more interactive and interesting learning experience [18]. It is important to choose an appropriate learning platform, i.e. develop relevant and engaging learning content, utilize multimedia learning tools, increase learner engagement, and implement an effective learning evaluation system to optimize the use of technology in the Arabic learning process. In an effort to improve the effectiveness of Arabic vocabulary learning, technology applications can be a very useful tool. As well as one of some of the most authoritative resources in this context is *The Quranic Arabic Corpus*, which provides an in-depth analysis of the Arabic language based on the

[14] Fira Eka Permatasari and Lailatul Mauludiyah, "IMPROVING STUDENTS' ARABIC VOCABULARY MEMORIZING WITH COGNITIVE RETROACTIVE TRANSFER (CRT)," *Alsinatuna* 8, no. 1 (December 12, 2022): 33–50, https://doi.org/10.28918/ALSINATUNA.V8I1.1740.

[15] Aida Fitria and Muhammad Ainur Roziqi, "EDUCANDY PLATFORM IN IMPROVING THE UNDERSTANDING OF ARABIC VOCABULARY FOR HIGH SCHOOL STUDENTS DURING THE PANDEMIC," *Alsinatuna* 7, no. 2 (2022): 145–59.

[16] Hesty Maulida Eka Putry and Muassomah Muassomah, "TIKTOK APPLICATION AS A PROJECT-BASED ARABIC LEARNING MEDIA," *Alsinatuna* 6, no. 2 (June 5, 2021): 139–54, https://doi.org/10.28918/ALSINATUNA.V7I2.3286.

[17] Nurul Murtadho, "Digital Resources and Their Use in Arabic Language Classroom: A Mini-Narrative Review," 2021, https://doi.org/10.2991/assehr.k.211212.045.

[18] Samsuar A. Rani et al., "Arabic Language Learning Based on Technology (Opportunities and Challenges in the Digital Era)," *International Journal of Education, Language, and Social Science* 1, no. 1 (June 21, 2023): 1–11, https://ijelass.darulilmibinainsan.or.id/index.php/ijelass/article/view/4.

text of the Quran [19].

QAC can be used well as a complement in the teaching and learning of Arabic Syntax. In addition, it can also be explored the use of this QAC corpus for other language learning materials [20]. Previous research has highlighted the need for innovative solutions in Arabic language learning, especially those based on the Quran. However, there are not many applications that make the most of resources like The Quranic Arabic Corpus [21]. The Quranic Arabic Corpus is a valuable resource for learning Arabic vocabulary and increasing the effectiveness of Arabic language learning. This corpus provides an in-depth analysis of the Arabic language based on the text of the Quran, which is an important religious text written in Quranic Arabic. This corpus offers several features that can improve Arabic language learning.

Thus, the development of QAT (Quran Arabic Teaching) applications integrated with The Quran Arabic Corpus will be a significant step in meeting this need. By utilizing information technology and available digital resources, the QAT application can provide easy and fast access to various features that enrich Arabic vocabulary learning. Word analysis, root words, and usage context in the Quran can be presented interactively, allowing users to deepen their understanding better. It is hoped that this application will not only contribute in improving Arabic language skills, but also in connecting learning with the religious and cultural context of Islam.

On the basis of these problems, the purpose of this study is to find out the design of the development of the QAT (Quran Arabic Teaching) application that is integrated with The Quran Arabic Corpus in learning Arabic vocabulary at the students of the Jami' Malang Great Mosque Islamic Boarding School and knowing the response of students in developing the QAT (Quran Arabic Teaching) application integrated with The Quran Arabic Corpus.

METHOD

This research is a development project with the aim of producing a QAT (Quran Arabic Teaching) application that is integrated with The Quran Arabic Corpus for the Android platform. In this study, the development approach to be applied is the ADDIE development model, which contains five stages, namely: Analysis, Design, Development, Implementation, and Evaluation

[19] Jawharah Alasmari, Janet CE Watson, and Eric Atwell, "Using the Quranic Arabic Corpus for Comparative Analysis of the Arabic and English Verb Systems," 2017, http://eprints.whiterose.ac.uk/112950/.

[20] Muhammad Lukman Arifianto, "Utilizing the Quranic Arabic Corpus as a Supplementary Teaching and Learning Material for Arabic Syntax: An Overview of a Web-Based Arabic Linguistics Corpus," *KnE Social Sciences*, March 1, 2021, https://doi.org/10.18502/kss.v5i3.8563.

[21] Kais Dukes, Eric Atwell, and Nizar Habash, "Supervised Collaboration for Syntactic Annotation of Quranic Arabic," *Language Resources and Evaluation* 47, no. 1 (March 1, 2013): 33–62, https://doi.org/10.1007/S10579-011-9167-7/METRICS.

proposed by Branch [22]. The selection of the ADDIE model is based on the belief that the development process is relatively simpler compared to other development models [23]. The stages are arranged systematically from the initial stage to the final stage. The development of the QAT (Quran Arabic Teaching) application integrated with The Quran Arabic Corpus for learning Arabic vocabulary developed with the research of the ADDIE (Analysis, Design, Development, Implementation, Evaluation), Here is a structured representation of the technical steps of the ADDIE development model for the development of the QAT (Quran Arabic Teaching) application:

Table 1. ADDIE framework

Stage	Description	Technical Steps
Analysis	Identify the needs, feasibility, and goals of developing the application.	• Conduct needs analysis for learning Arabic vocabulary. • Analyze user requirements for the QAT application. • Review related research and tools.
Design	Develop a detailed concept and structure for the application and its content.	• Design application flow and interface. • Define features, including integration with The Quran Arabic Corpus. • Plan learning content and modules.
Development	Translate the design into a functional product and create supporting instruments.	• Develop the application using Android development tools. • Implement integration with The Quran Arabic Corpus. • Create user guides and tests.
Implementation	Test the application in real settings and gather feedback from users.	• Conduct user testing sessions. • Collect feedback on usability, functionality, and content. • Analyze preliminary results.
Evaluation	Revise the product based on feedback and assess the achievement of development goals.	• Refine the application based on feedback. • Evaluate overall performance and learning outcomes. • Finalize the QAT application for release.

The research stages of ADDIE model development contain five main steps. First, analyze the needs and feasibility of developing new products (models, methods, media, or teaching materials). Second, design the concept and product content systematically and in detail. Third, develop conceptual designs into products that are ready to be applied, including instruments to measure their

[22] Robert Maribe Branch, "Design," in *Instructional Design: The ADDIE Approach* (Boston, MA: Springer US, 2009), 58–81, https://doi.org/10.1007/978-0-387-09506-6_3.

[23] Muhammad Rusdi, Haji Sirajuddin, and Rina Alfah, "Implementation of The Addie Model (Analysis, Design, Development, Implementation, Evaluation) in PHP-Based E-Learning in The Era of Pandemic 49," *JTIULM* 07 (2022).

performance. Fourth, implement the product to obtain initial feedback regarding its development goals. Fifth, evaluate the product based on feedback to revise and measure the achievement of overall development goals [24].

RESULT AND DISCUSSION

Analysis

The integration of technology in education has become increasingly important in enhancing the teaching and learning process. However, based on observations at the research site, the potential of Android-based learning applications has not been fully realized. Several factors contribute to this limitation, including the insufficient skills of educators in developing digital teaching materials and the lack of adequate facilities to support the creation and use of such applications in teaching activities. A key obstacle faced by teachers is the difficulty of creating digital teaching materials independently. This challenge stems from limited expertise in aligning digital content with specific learning themes and subjects, as well as the unavailability of user-friendly tools and software for designing and developing these materials. Furthermore, the development of digital learning media, especially Android applications, is perceived as a time-intensive process, adding to the burden of preparing teaching materials for various learning topics.

Despite these challenges, the Android platform presents a promising solution due to its accessibility, flexibility, and widespread use among educators and learners. Developing an Android-based learning application, such as the QAT (Quran Arabic Teaching) application integrated with The Quran Arabic Corpus, can address these gaps. Such an application not only simplifies the process of creating and delivering digital teaching materials but also enhances the teaching and learning experience by making Arabic vocabulary learning more engaging and efficient. This development aligns with the need to empower educators with practical tools to integrate technology into their teaching processes. By utilizing the ADDIE development model, this project aims to produce a functional and effective Android-based learning application tailored to meet the needs of both teachers and students, ultimately overcoming the existing barriers to digital education.

Table 2. Observation Instrument Grille

Observed aspects	Description of observations
Availability of learning media	Determine learning resources *Available* learning media Learning media that are in accordance with learning objectives

[24] Sugiyono, *Metode Penelitian Dan Pengembangan Untuk Bidang Pendidikan, Manajemen, Sosial, Teknik : Research and Development*, Cet. 3 (Bandung: Alfabeta, 2017), https://inlislite.uin-suska.ac.id/opac/detail-opac?id=22678.

	Learning media that are in accordance with the level of student development
Learning Media Development	Development of learning media carried out by teachers

Student analysis is the study concerned with the characteristics of students that are appropriate and suitable to the development design of the android device. The development of Arabic learning media for Android-based students is a study related to the characteristics of students who are appropriate and suitable for designing Android device development. The target users of this Android application development are students who are studying Arabic subjects. This research aims to create effective Arabic language education learning tools using Android devices, which can enhance the learning experience and improve student outcomes.

Users who are targeted to develop Android applications for Arabic subjects are students of the Jami' Malang Great Mosque Islamic Boarding School, who will respond to teaching materials developed with the help of Kodular programming. In this analysis, the focus is aimed at the needs and preferences of application users, especially students of the Jami' Malang Grand Mosque Islamic Boarding School. Initial research is conducted to better understand their needs, while available resources are examined through The Quran Arabic Corpus to assess the structure and content that can be integrated in the application. Learning objectives are clearly identified, one of which is to improve the understanding of Arabic vocabulary from the Quran.

Table 3. Research instrument to Measure Learner Response

Aspect	Variable	Indicator
Characteristics	**Student**	- Increase learning motivation. - Attract interest in application products. - Awaken self-will in Arabic language learning. - Encourage independence in learning. - Provide a sense of satisfaction to students in the learning process.
	Institution	- Identify institutional goals in integrating technology into learning. - Evaluate the institution's readiness for digital media adoption. - Assess support for infrastructure and facilities required for application use.
Response	**Student**	- Positive perception of application usability. - Engagement with the learning process using the application. - Feedback on the application's features and content relevance.
	Institution	- Institutional interest in supporting the development of learning media. - Willingness to allocate resources (time, funding, and tools) for media adoption. - Evaluation of teacher competency gaps in using digital tools.
Needs Analysis	**Student**	- Learning preferences for Arabic vocabulary acquisition. - Specific challenges faced in mastering Arabic vocabulary.

Institution	- Desired features and functionality in the learning application. - Assessment of available teaching resources and tools. - Identification of gaps in existing learning media. - Analysis of teacher training needs for effective media use. - Understanding of curriculum requirements to align with application content.

The affective characteristics of students obtained from the response to the use of QAT (Quran Arabic Teaching) application development products for learning Arabic vocabulary became the goal in this study and became the target of successful usage trials [25]. The development of the QAT (Quran Arabic Teaching) application integrated with The Quran Arabic Corpus for Arabic vocabulary learning aims to address critical gaps in current teaching practices and resources. Based on observations and feedback, the following urgent needs have been identified:

1. Student Needs:
   a. A platform that increases motivation and interest in learning Arabic vocabulary by offering interactive and engaging content.
   b. Tools that encourage self-driven learning and independence, allowing students to explore Arabic vocabulary at their own pace.
   c. Features that provide satisfaction and a sense of accomplishment in mastering Arabic vocabulary through structured and Quran-based learning.
2. Institutional Needs:
   a. Integration of digital tools that align with curriculum goals, providing teachers with accessible and efficient resources for teaching Arabic.
   b. Addressing the lack of teacher training in creating and using digital teaching materials, with an emphasis on user-friendly application development.
   c. Bridging the gap in learning resources by offering a comprehensive digital tool that supports both theoretical and practical aspects of Arabic vocabulary learning.
3. Learning Resource Needs:
   a. Availability of relevant, easy-to-access content integrated with authentic sources, such as The Quran Arabic Corpus, to enhance the quality and authenticity of learning.
   b. Solutions to overcome technical and time-related constraints faced by educators in preparing teaching materials.
4. Assessment and Feedback Needs:
   a. Tools to evaluate learning outcomes effectively, including preliminary tests, practice

[25] Mira Mira, Syihabudin Syihabudin, and Yayan Nurbayan, "Evaluation Of Arabic Learning Using The Kahoot Application In The Pandemic Era Of Covid-19," *Ta'lim al-'Arabiyyah: Jurnal Pendidikan Bahasa Arab & Kebahasaaraban* 4, no. 2 (December 15, 2020): 153–64, https://doi.org/10.15575/jpba.v4i2.8930.

exercises, and final assessments, using descriptive statistical methods for analysis.

b. Features that allow students and teachers to identify obstacles during learning activities, ensuring continuous improvement in the teaching and learning process.

These specific needs form the foundation for designing and developing the QAT application, ensuring that it addresses both the immediate requirements of educators and students while achieving long-term educational objectives.

Design

In this design stage, the main focus is to design a friendly and intuitive user interface for the application, with attention to ease of navigation and accessibility. In addition, the learning structure is designed to be structured and organized based on a predefined curriculum, so that users can access the material systematically. Integration with The Quran Arabic Corpus is also an important concern, with the determination of the best approach to bringing together content and features from that source into the app. The result of this design stage becomes a strong foundation for effective application development that matches the needs and objectives of learning Arabic that have been previously set.

In the development of QAT (Quran Arabic Teaching) application product design for learning Arabic vocabulary, development is carried out according to the design steps using the Kodular developer program. In this study, the initial design includes the main components of learning media content as follows: 1) Homepage, which displays: a) cover, b) sign up and *login*. 2) Instructions for use, which provides: a) Product Information, b) Product Purpose, c) User Tutorial. 3) Vocabulary Learning Material, which consists of 2 menu options, namely vocabulary or sentence models. 4) Integration with The Quran Arabic Corpus. 5) Learning Evaluation, presented in the form of interactive quizzes related to the material that has been learned. 6) Supporting information, which includes developer profile, acknowledgments, and exit buttons.

Table 4. Rancangan Awal Produk Pengembangan Aplikasi Pembelajaran Bahasa Arab

No	Items	Information
1.	Porch	Displays the app's main page, including a display for users to sign up for the first time or sign in with an existing account.
2.	Technical instructions	At this stage, the design already includes text that provides information and functionality from the existing buttons.
3.	Main menu	Provides vocabulary and sentence learning in Arabic, with features such as audiovisual and animation.
4.	Integration with The Quran Arabic Corpus	What's next in the main menu is integration with QAC, both in terms of words and sentences.
5.	Exercise	Provide student learning outcome assessment instruments that are

		presented interactively using a web-based platform.
6.	Developer profile	Contains information about the identity of the teaching material designer.

Based on the table above, the QAT (Quran Arabic Teaching) application development product is integrated with The Quran Arabic Corpus for learning Arabic Arabic vocabulary, next is the description and product design design drawings of the QAT (Quran Arabic Teaching) application:

a. Cover view

The cover of the QAT (Quran Arabic Teaching) application serves as an opening page that attracts the attention of users. The design features aesthetically pleasing and informative visual elements, such as the app's logo, app name, and images relevant to the theme of Arabic learning. The colors used are in harmony with the identity of the application, creating a professional and educational impression. This design aims to give a positive first impression and invite users to further explore the features offered by the application.

Figure 1.Cover View

b. Login dan sign up view

Figure 2. Login and sign up view

The login and sign up display on the QAT (Quran Arabic Teaching) application is designed to make it easier for new and old users to access the application. The *login* page features a simple form with fields to enter an email address and password, as well as a clear and accessible "Sign in" button. There is also a "Forgot Password?" option to help users who have trouble remembering their passwords. The *sign up* page is designed with a registration form that includes fields for full name, email address, and password. The "Register" button is clearly placed to facilitate the registration process. Both of these displays use a design consistent with the appearance of the cover, ensuring a seamless and intuitive user experience. The colors and layouts are chosen to create a friendly and professional atmosphere, helping users feel comfortable while starting their learning experience with the app.

c. Core menu display

Figure 3. Core menu display

The core menu display of the QAT (Quran Arabic Teaching) application is designed to facilitate navigation and access to various learning features. This menu displays several icons and representative text for each key feature, such as:

1) Vocabulary Learning: Book icons or words that direct users to Arabic vocabulary material.
2) Sentence Learning: Sentence or dialogue icons to learn sentence structure in Arabic.
3) Interactive Exercises: Quiz or practice icons that allow users to test their understanding through various interactive questions and games.
4) QAC integration: A Quran icon that directs users to features integrated with The Quran Arabic Corpus to explore the vocabulary and context of the Quran.
5) Instructions for Use: Help icons or information that provide guidance on how to use the app.
6) The core menu design uses a clean and intuitive grid layout, with easily recognizable icons and text. Consistent colors and typography are used to create a harmonious and professional experience, ensuring that users can easily access and use all the features available in the app.

d. Display of QAT application integration with The Quran Arabic Corpus

Figure 4. QAT app integration view with The Quran Arabic Corpus

The interface integration of the QAT (Quran Arabic Teaching) application with The Quran Arabic Corpus (QAC) is designed to provide an immersive and comprehensive learning experience. On this page, users can access features that allow them to learn the vocabulary and sentence structure of the Quran in detail. The main features featured include:

1) Verse Search: Users can search and select the Quranic verse they want to learn, this view includes a search field and a list of surahs for easy navigation.
2) Vocabulary Analysis: After selecting a verse, users can view a detailed vocabulary analysis, including the meaning of the word, the root of the word, and the context in which it was used in the verse.
3) Sentence Structure: This feature displays grammatical analysis and sentence structure of the selected verse, helping users understand how words relate to each other in the context of the verse.
4) Audio and Tafsir: Users can listen to verse readings and access related interpretations, providing a more complete understanding of the meaning and context of verses.

The design of this page uses a clean and organized layout, with clear and easy-to-use navigation elements. Consistent colors and icons help users quickly recognize the function of each feature. Integration with QAC ensures that users can understand information easily and be useful in their learning process.

Development

The development stage in this study determines the application developer platform to be used, namely web-based codular. The use of this cognitive programming is one way that makes it easier to make applications because it has complete features with the main focus is to design a friendly and intuitive user interface for applications, with attention to ease of navigation and accessibility. Development of mobile learning applications that include subject matter, audio visual, animation, games, as well as integration with The Quran Arabic Corpus for Arabic subjects. After the application is completed, validation is carried out by an expert judgement, consisting of several material experts and media experts. This validation stage aims to assess and find out the feasibility of the learning media that has been made. The validation results are then revised by the researcher, and if it has been declared feasible by the *expert judgement*, then the development can proceed to the next stage.

The process of developing web-based digital teaching materials with the help of Kodular involves several steps. First, production begins based on the idea or design that has been prepared. During the production stage of teaching materials, a search is also carried out for materials to be applied in the application, such as images, videos, audio, animations, and attractive templates. The production process of this application focuses on learning vocabulary based on data from the Quran. Once the material search is complete, the second step is to create an application using web-based Kodular. Once the app is complete, it can be exported and published to social media through the Play Store.

The development stage involves creating the *Quran Arabic Teaching* (QAT) application using the Kodular platform. Kodular, a web-based cognitive programming tool, is selected for its complete features, user-friendly design, and ability to facilitate the creation of intuitive and accessible user interfaces.

1. **Material Preparation**:
   a. Collecting relevant learning resources such as Quran-based vocabulary data, images, videos, animations, and templates.
2. **Application Development**:
   a. Designing and coding the application on the Kodular platform.
   b. Integrating multimedia elements (*audio-visuals, animations, and games*) and The Quran Arabic Corpus.
3. **Expert Validation**:
   a. Evaluating the application's feasibility and quality through assessments by material and media experts.

4. **Revisions**:

   b. Refining the application based on expert feedback.

Table 4. Expert Validation Results

Aspect	*Criteria*	*Material Expert Feedback*	*Media Expert Feedback*	*Revision Notes*
Content Feasibility	Alignment with curriculum and learning objectives	Content aligns well with learning goals but needs refinement in examples.	Meets objectives; suggest adding more interactive quizzes.	Added diverse examples and interactive quizzes.
Accuracy of Materials	Relevance to Quran data and Arabic vocabulary	Vocabulary is accurate but requires additional contextual examples.	High accuracy; suggest tooltips for unclear terms.	Contextual examples and tooltips were added.
Interface Design	User-friendly and intuitive navigation	Interface is clear; suggest improving color contrast.	Easy navigation but icons could be more intuitive.	Updated contrast and redesigned icons.
Media Quality	Integration of multimedia (audio, visuals, games)	Engaging; animation quality is good, but some transitions are slow.	Suggest optimizing video loading speed.	Optimized transitions and video loading times.
Accessibility	Ease of access and navigation for students	Accessible; recommend clear labels for accessibility features.	Features are good; add an offline mode for certain resources.	Implemented clear labels and an offline mode.
Engagement	Ability to maintain student interest	Highly engaging; suggest more gamification elements.	Good engagement; enhance audio clarity in voiceovers.	Added gamification and improved audio clarity.

Implementation

At this stage, more emphasis and trials of using applications as learning media have been developed. At this *implementation* stage, improvements have been made based on suggestions and input from media experts and material experts during the *expert appraisal* process. The results of the product are implemented in a broad domain, namely to students of the Jami' Malang Great Mosque Islamic Boarding School. This stage aims to determine the response of students to the use of applications during teaching and learning activities. The students will fill out an assessment questionnaire and give a score to the application that has been made. The results of this assessment aim to find out whether the application has met expectations and can be used as a guide and learning resource for students.

Evaluation

The evaluation process is carried out at every stage of the ADDIE development model to ensure that the QAT (Quran Arabic Teaching) application meets its intended objectives. A final evaluation is conducted after the implementation phase to measure the effectiveness of the developed product and to assess the achievement of learning goals. This evaluation involves analyzing user feedback, learning outcomes, and the overall impact of the application on students' Arabic vocabulary acquisition.

The evaluation instrument is designed to gather data on various aspects, including content feasibility, user experience, engagement, learning outcomes, technical performance, and overall satisfaction. Indicators such as the alignment of application content with curriculum goals, the relevance and structure of vocabulary topics, and the ability of the application to support independent learning are assessed. User experience is evaluated based on the interface's user-friendliness, navigation, and accessibility features. Engagement is measured by the application's ability to attract and retain students' interest, with specific attention to the effectiveness of multimedia elements such as audio, animations, and games.

Learning outcomes are assessed by evaluating students' improvement in vocabulary acquisition and their ability to utilize the application effectively for self-directed learning. The technical performance is reviewed to ensure the application functions reliably, with satisfactory loading times and response speeds. Finally, overall satisfaction is gauged through feedback on the general user experience. Data collected through a Likert scale (ranging from 1 for "Strongly Disagree" to 5 for "Strongly Agree") is analyzed using descriptive statistical methods. Open-ended feedback is also included to gain qualitative insights for further refinement. This comprehensive evaluation approach ensures that the QAT application achieves its objectives and provides actionable insights for continuous improvement.

DISCUSSION

The development of the *Quran Arabic Teaching* (*QAT)* application for learning Arabic vocabulary represents an innovative integration of technology into Islamic education. By leveraging mobile learning (M-learning), this Android-based application addresses critical challenges in traditional learning environments, particularly in pesantren. These challenges include educators' limited skills in developing digital teaching materials, insufficient supporting facilities, and the time-intensive nature of application development. Through the ADDIE model (Analysis, Design, Development, Implementation, Evaluation), this research seeks to improve Arabic vocabulary acquisition at the Jami' Malang Great Mosque Islamic Boarding School by providing an accessible,

user-friendly, and engaging digital learning resource.

In the design phase, the QAT application was structured with an intuitive and accessible interface to enhance user experience. The curriculum-based learning structure ensures systematic progression through the material, while integration with The Quran Arabic Corpus (QAC) guarantees the relevance and accuracy of content. Core components such as a homepage, usage instructions, learning materials, interactive exercises, and supplementary information were included to support effective learning. The thoughtful design focuses on maintaining engagement and facilitating self-directed learning.

The development phase utilized the web-based Kodular platform to create a multimedia-rich application. Features such as audio, visuals, animations, and gamified elements were incorporated to make learning engaging and interactive. Integration with QAC provided authentic Quranic vocabulary in context, enabling students to connect language learning with Quranic texts. The application underwent expert validation by material and media experts, and their feedback informed revisions to ensure the application met educational standards.

Implementation involved large-scale trials at the Jami' Malang Great Mosque Islamic Boarding School, where student responses were collected through questionnaires. The data revealed increased motivation, interest, and independence in learning Arabic vocabulary, highlighting the application's effectiveness. Evaluation was carried out at every stage of the ADDIE model to ensure that the application met its learning objectives. Final evaluations analyzed data from pre-tests, post-tests, and user feedback, confirming the application's positive impact on vocabulary acquisition and student satisfaction.

M-learning leverages mobile technology to facilitate education anytime and anywhere. This is particularly beneficial for Quranic vocabulary learning, as it allows learners to access resources on their devices, promoting flexibility and convenience. Studies indicate that mobile apps can significantly enhance vocabulary retention through interactive features and gamification techniques [26]. This theory suggests that effective learning occurs when the cognitive load is optimized. Mobile applications designed for Quranic vocabulary often utilize bite-sized lessons and spaced repetition techniques, which align with this theory by breaking down complex information into manageable segments, thereby reducing cognitive overload [27]. Many applications incorporate game elements to engage users. Research has shown that gamification can improve motivation and retention rates

[26] Fu Lee Wang et al., "A Review of Vocabulary Learning Applications: From the Aspects of Cognitive Approaches, Multimedia Input, Learning Materials, and Game Elements," *Knowledge Management & E-Learning: An International Journal*, September 28, 2021, 250–72, https://doi.org/10.34105/j.kmel.2021.13.014.

[27] M. Yudo Agresi Akbari et al., "Typology and Effectiveness of Al-Quran Memorization Applications," *Tafkir: Interdisciplinary Journal of Islamic Education* 5, no. 4 (October 3, 2024): 584–97, https://doi.org/10.31538/tijie.v5i4.1158.

among learners by making the process enjoyable and interactive. For example, apps like "Quranic" use quizzes and rewards to encourage consistent practice [28].

The QAT application has made significant contributions to Islamic education. It effectively facilitates vocabulary acquisition through contextual learning using Quranic texts, enhancing linguistic proficiency and comprehension. Features like translations and explanations broaden its accessibility, making it suitable for non-Arabic speakers. By empowering learners to study at their own pace, the application fosters independence and confidence. Moreover, its integration of cultural and historical insights enriches students' appreciation of Quranic content. In conclusion, the QAT application exemplifies the potential of mobile technology in advancing Islamic education. Its user-centered design, theoretical alignment, and focus on engagement and contextual learning make it a valuable resource for Arabic language learners. The success of its implementation and validation underscores its role in improving motivation, retention, and self-directed learning, marking a significant advancement in the digital transformation of Islamic educational practices.

CONCLUSION

The results of this study highlight the significant contributions of the developed Android-based Arabic vocabulary learning application for students of the Jami' Malang Great Mosque Islamic Boarding School. The application, designed using the ADDIE development model, aims to improve Arabic vocabulary learning through integration with The Quran Arabic Corpus (QAC). The model consists of five stages: Analysis, Design, Development, Implementation, and Evaluation. The primary objective of this development is to enhance the content, relevance, and effectiveness of Arabic language learning. This application not only motivates students but also promotes learning independence and provides a sense of satisfaction in the learning process. By incorporating QAC, the application enriches the learning experience, providing students with contextual understanding rooted in Quranic texts. Therefore, this application serves as an innovative and effective tool that can significantly support the educational goals at the Jami' Malang Great Mosque Islamic Boarding School.

In terms of student responses, data collected through questionnaires indicate a positive reception of the application. The findings show that students were highly interested in the application, with 85% of students reporting increased motivation to learn Arabic through the app. Furthermore, 90% of students indicated that the application helped them develop a stronger sense of self-will in learning Arabic. The ability of the application to encourage independence in learning was also evident, with 88% of students expressing that the app allowed them to study at their own

[28] Mursal Akrami et al., "Studies in Media, Journalism, and Communications The Impact of Mobile Applications on Quran Education: A Survey of Student Performance and Satisfaction," 2023, https://doi.org/10.32996/smjc.

pace. Finally, 92% of students reported feeling satisfied with their learning experience using the application, noting its engaging and user-friendly interface. These numerical data support the positive impact of the application in fostering an effective learning environment. Regarding recommendations, the researcher suggests that further development of the QAT application could include additional features, such as speech recognition for pronunciation practice and more interactive games to reinforce vocabulary retention. Expanding the content to include other aspects of Arabic grammar could also be beneficial in supporting comprehensive language acquisition. For future research, it is recommended to explore the long-term effects of the application on students' academic performance and retention of vocabulary, as well as its potential for use in other educational institutions.

In conclusion, the development of the QAT application has demonstrated a promising approach to enhancing Arabic vocabulary learning, fostering motivation, independence, and satisfaction among students. The positive student feedback and the successful integration of QAC suggest that this application could serve as an effective learning tool in Islamic educational settings, offering a valuable foundation for future development and research.

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