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Use of the Thunkable Platform in Preparing a Digital Arabic-Indonesian Dictionary as a Learning Resource for Arabic Language Learners

Khabibul Khoiri[1], Lukman Habibul Umam[2], Yusuf Mustofa[3], Ema Puspitasari[4]
[1234]Institut Agama Islam Darul A'mal Lampung; Indonesia
Correspondence email; khabibul.khoiri123@gmail.com

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Abstract

This research aims to answer the anxiety that current Arabic language learners must immediately respond to the increasingly massive development of digital technology by presenting a thunkable platform in creating a digital Arabic-Indonesian dictionary application as an independent learning resource for Arabic language learners. With the millennial generation preferring digital over printed resources, this research explores using the Thunkable platform to create a digital Arabic-Indonesian dictionary as a self-learning tool. Using a waterfall and qualitative descriptive approach, the study outlines the creation and use of the app. The data in this research are data on developing a digital Arabic-Indonesian dictionary via a thunkable platform, application user data, data on using digital dictionary features, and evaluation data on Arabic language learning using a digital dictionary. The data collection technique this research uses involves qualitative methods, providing a comprehensive overview of how the Thunkable platform can develop digital dictionaries for Arabic language learning. Meanwhile, the data sources in this research were obtained from observations, interviews, questionnaires, learning tests, application log analysis, and documentation studies, which will produce in-depth data regarding the effectiveness and efficiency of the application as a learning resource for Arabic language learners. Then, the data obtained was analyzed in several stages: data collection, data reduction, data presentation, and drawing conclusions. Thanks to its translator feature and block-based programming, thunkable simplifies the process by eliminating the need for time-consuming vocabulary inventories and manual coding. The digital dictionary also works offline, offering flexible access for learners anytime, anywhere. This study demonstrates how technology can support independent learning and enhance Arabic language skills.

Keywords Arabic Language Learners; Digital Dictionary; Learning Resources; Thunkable.

INTRODUCTION

The Society 5.0 era is a massive phase of increasingly rapid digital technology development, where humans are currently very dependent on technology (Bimantoro et al., 2021). This concept emerged as an effort to develop Industrial Revolution 4.0, also known as the Fourth Industrial Revolution (Arifin & Mulyani, 2021). This allows for optimizing results achieved by artificial intelligence and Big Data, which can exceed a person's insight and knowledge; these results are fed back into the physical world (Setyowati & Nasir Ahmad, 2021). Society 5.0 is a high-level merger between the virtual and physical worlds, which can provide balance in the economic field and social problems (Hiasa et al., 2023). This concept aims to fulfill human needs from the most basic to the most principled. Society 5.0 encourages humans to adapt quickly to social life (Teknowijoyo & Marpelina, 2022).

The era of Society 5.0 has had a huge positive impact on the world of education (Fricticarani et al., 2023). Language learners today benefit from technological advances supporting their learning process. This phenomenon is very useful for finding effective learning resources and getting easy access according to needs. However, it is important to have basic knowledge so that language learners are wiser in choosing trusted learning sources (Azhar et al., 2023). In learning Arabic, language learners often experience difficulties in understanding the meaning of vocabulary in Arabic literature (Rachmawati et al., 2023). Therefore, a dictionary is necessary to help them understand the meaning correctly, both textually and contextually. The Arabic dictionary is one of the main references for language learners studying Arabic. Along with the development of digital technology, dictionaries in this era are available in printed and digital form, and they can be accessed via various devices such as Android, laptops, and so on (Yamin et al., 2023).

The development of Arabic dictionaries in Indonesia began with the morphological system, which is still used today. The advantage of this system is that it is considered more complete, fulfills the functions and benefits of a dictionary, and helps students understand the basics of Sharaf science (morphology) (Dewandono, 2020). Based on writing guidelines, bilingual dictionaries use two languages, namely the source language and the target language. The source language functions as an inventory object that becomes input to the dictionary, which explains its meaning in the target language.

Digital dictionaries are becoming increasingly popular compared to printed dictionaries due to their effectiveness and efficiency (Wahdah et al., 2023). This aligns with the needs of Arabic

language learners, mostly millennials skilled in digital technology (Badi, 2022). Electronic dictionaries are more accessible, offer greater variety and completeness, are more affordable, and can be updated and developed by anyone, whether individuals or companies. The systematics of compiling electronic dictionaries, particularly for Arabic, are also better (Mahmudah & Paramita, 2023). However, the text translation feature in electronic dictionaries has not yet fully captured translations that adhere to the grammatical rules of Arabic (Alhafidz, 2023). Therefore, educational or language institutions must develop high-quality and credible digital Arabic dictionaries to benefit language learners and the general public. This way, they can find highly recommended Arabic electronic dictionary applications (Ilham, 2023).

Digital dictionary terms are one of the options available to users to overcome the problem of not knowing new vocabulary. There are many options available regarding the type of digital dictionary, one of which is the Arabic-Indonesian digital dictionary, which can be found on the Play Store (Zahrah et al., 2021). It is recommended to use an Arabic-Indonesian dictionary because it can be a reference source when searching for vocabulary from Arabic to Indonesian or vice versa. The dictionary contains a lot of vocabulary and can be used even if you are not connected to the internet (Fadhilah, 2021).

In compiling digital Arabic dictionaries, various digital platforms are available in this digital era, one of which is called thunkable. Creating an Arabic dictionary application on Thunkable is easy: dragging and dropping the desired components, then integrating them with columns or coding in the form of available blocks (Gunadi, 2020). On Thunkable, a digital Arabic dictionary application can be created only once and works on two platforms, namely Android and iOS (Salma et al., 2024). In addition, users no longer need to build applications from scratch because Thunkable is building an open-source project application library, the world's largest. It aims to inspire users and save them time. Thunkable also has the most active and engaged community in the world. If users experience problems and cannot find them themselves, they can directly communicate with Thunkable via the helpdesk. Thunkable does not utilize traditional programming or coding languages; the platform is block-based and designed for future developers. Thunkable provides two popular platforms where millions of Thunkers worldwide create their own applications without needing to write code (Ashari, 2019). Thus, the Thunkable platform provides easy facilities for language learners to independently innovate in providing media or learning resources in the form of a digital Arabic dictionary through the platform. So that language learners can improve their mastery of Arabic

vocabulary through applications that are prepared independently.

Several previous studies relevant to this research include a study conducted by Defrian (2023), which found that educators and students can use the Android-based learning media developed through the Thunkable platform to learn about the growth and development process. This application underwent a series of tests based on the evaluation. The validity assessment involving four experts resulted in a score of 0.8, indicating valid criteria. Next, the practicality test, evaluated by an expert, obtained a score of 0.9, categorized as very high. Meanwhile, the effectiveness test involving fifteen students received a score of 0.8, indicating a high level of feasibility for implementation in learning (Defrian et al., 2023). A study by Uljannah (2021) found that Android-based learning media were considered very feasible after data analysis using Microsoft Excel, yielding a total score of 277, with an average rating of 4.85 and a percentage of 97%, categorized as "Very Feasible". The learning media, which is Android-based, was also found to be practical after processing the research data obtained from questionnaires and practical tests, resulting in a total score of 2204, with an average rating of 4.45 and a percentage of 89%, categorized as "Very Practical" (Nada uljannah, Stevani, 2021). A study by Hiasa (2023) found that the total score for the combined validation questionnaire was 129, with an average of 4.03. In other words, these results indicate the feasibility of using Android-based learning media for modern Indonesian literature, assisted by the Thunkable application, in teaching the History of Literature course (Hiasa et al., 2023).

A study by Raibowo (2023) revealed several important findings related to tennis learning. As a mandatory course, the research found that most students (92.85%) had not yet mastered playing tennis. However, the digital learning infrastructure was adequate, as evidenced by the availability of internet access throughout the campus and all students' ownership of digital devices (laptops and smartphones). Economically, more than half of the students (60%) came from middle-income backgrounds. Currently, the learning process still relies entirely on the lecturer as the sole source of learning. Based on analyzing these conditions, developing tennis learning media using the Thunkable platform was considered strategic to optimize learning outcomes (Raibowo et al., 2023). Another study by Hiasa (2023) aimed to examine the attractive design used in the BIS application as an educational media, to identify the educational materials used, and to evaluate the assessment by experts on the BIS application for Islamic Education learning in elementary schools (Hiasa et al., 2023).

Overall, the research gap in previous research results lies in the focus of content and learning objectives. These studies focus more on general learning (such as sports, growth and development, or literature) and do not highlight the use of Thunkable-based digital dictionaries for Arabic language learning. The novelty of this research is that it offers innovation by utilizing Thunkable in developing and preparing a digital Arabic-Indonesian dictionary application, which can be a learning resource for Arabic language learners, with a special focus on increasing vocabulary for language learners.

From the explanation above, the researcher attempts to reveal how to prepare a digital Arabic dictionary along with the stages using the thunkable platform, it is also discussed in depth regarding the use of digital Arabic applications prepared by language learners independently to be used as a learning resource, in improving mastery of Arabic vocabulary.

METHOD

The methodology used in this research, which focuses on compiling a digital Arabic dictionary, is a qualitative descriptive method; this method aims to describe and understand phenomena comprehensively, emphasizing the context and experiences of the subjects studied (Purnia et al., 2020). Specifically, this method is used to describe the stages in preparing a digital Arabic dictionary and explain the use of this application to improve mastery of Arabic vocabulary.

Researchers also use the waterfall method. The details of activities using this method are as follows (Purnia et al., 2019);

a. The needs review aims to identify user needs and research needs in the form of hardware and software.
b. Design the application design; this step focuses on two different aspects, namely software and users. The design process is an effort to transform user needs into software whose quality can be evaluated before the application is created.
c. Application development is a stage that focuses on developing a digital Arabic dictionary application using a digital platform called Thunkable.
d. Application feasibility test: This testing process is carried out to ensure that the application created meets the requirements and specifications of previously determined functional requirements, using the Black-Box testing method, which evaluates the function of the

application (Functional Testing) and ensures the application that is made can function well (Uminingsih et al., 2022).

FINDINGS AND DISCUSSION

Findings

Review of User Needs (Users)

Users' needs for digital Arabic dictionary applications can be classified into two categories, namely based on the function of use and the form of the device, both software and hardware. The function-based requirements for use can be explained in the table below;

Table 1. The Function-Based Requirements for Use

Number	Application Features	Feature Description	Relevance to the Research
1	Word or Sentence Input Field	The application provides an input field for words or sentences to be translated, either into Indonesian or Arabic, according to the user's needs.	Relevance: This feature allows users to input words or sentences in the desired language and receive an instant translation, supporting the application's goal as a resource for learning Arabic.
2	Language Selection Menu	The application offers two language options (Arabic and Indonesian), allowing users to select the language according to their translation needs (from Indonesian to Arabic or Arabic to Indonesian)	Relevance: This feature supports user interaction with the application in two languages and facilitates Arabic language learners who are also Indonesian speakers to learn effectively.
3	Translation Accuracy	The application produces translations with precise accuracy in terms of Arabic grammar (nahwu) and morphology (sharaf), ensuring correct grammar for every word or sentence translated.	Relevance: This feature is crucial to ensure the quality of learning is truly accurate, especially for vocabulary and grammatical structure learning in Arabic. The translation accuracy that considers nahwu and sharaf helps improve overall mastery of the Arabic language.

With these three features, the developed digital dictionary application makes it easier for users to translate words or sentences. It ensures the quality of translations that adhere to the correct Arabic language rules. This is highly relevant to the aim of this research, which is to create an effective application as a resource for learning Arabic.

The software required shows a light and easy impression because the application used can be run without being connected or connected to an internet network; in other words, it can be used offline (Sholihah et al., 2019); the appearance of the application used has a display with The shape of an Android smartphone makes it seem attractive, used with a minimal Jelly Bean Android system, and does not require a large capacity in terms of random access memory, processor or storage space. Meanwhile, for the hardware required to use the digital dictionary application, there are two components, namely, 1 laptop/PC unit and 1 smartphone unit (Irsan et al., 2024). Apart from that, the developer must prepare an active email from the developer as a condition for access to creating applications.

Application Design

At this stage, the focus is on identifying and analyzing the menus or options provided by the thunkable platform, so that it can provide a detailed and complete picture according to the needs for compiling a digital Arabic dictionary. The facilities provided on the thunkable platform are as explained in the following table;

Table 2. The Facilities Provided on The Thunkable Platform

Number	Application Features	Feature Description	Relevance to the Research
1	Developer Capacity Options	Thunkable provides various capacity options for users who wish to develop applications: developer, designer, teacher/parent, enthusiast, entrepreneur, professional, student, and someone else. Each capacity is designed to meet specific needs such as consumer app development, product design, learning media, exploration of new ideas, and company development.	Relevance: This feature allows users from different backgrounds (such as app developers, educators, or students) to utilize the platform according to their needs in developing an Arabic-Indonesian digital dictionary application. For example, educators can use this platform to create an application that facilitates the Arabic language learning process for students.
2	Project Name and Category Determination Form	The Thunkable platform provides a form to determine the name and category for an app project, with category options such as: books, business, developer tools, education, entertainment, finance, and others.	Relevance: This feature is highly relevant to your research, as the digital dictionary application can be categorized under 'education' to assist Arabic language learners. By selecting the appropriate category, the application can be more focused on educational

			functions and meet the needs of digital Arabic language learning.
3	Video Tutorial and Steps for Creating the Application	This platform provides video tutorials with a step-by-step menu for creating applications, as well as a demo app menu to demonstrate the applications that have been created.	Relevance: This feature supports users using Thunkable for the first time in developing applications, including creating a digital dictionary app. The tutorials and demos are very helpful in understanding how the platform works and accelerating the process of developing an Arabic dictionary application.
4	Design Menu and Blocks	The platform provides an application design menu in the form of screens equipped with components or tools and a block menu containing coding blocks. Additionally, a translator tool enables the translation process within the application, such as in the Arabic digital dictionary.	Relevance: This feature enables efficient app design and development. The design screen menu allows for a user-friendly interface (UI) of the digital dictionary app, while the blocks menu facilitates the development of the app's functionality. The translator tool is highly relevant for enabling the translation process, which is the core function of the Arabic-Indonesian dictionary application.

The Thunkable platform provides various features that are very relevant for the development of Arabic-Indonesian digital dictionaries, ranging from ease in choosing developer capacity to the ability to design user-friendly application designs (Kassim et al., 2022). With step-by-step tutorials, tools translator, and category features that support applications in the education category, Thunkable allows developers (educators and learners) to produce effective applications as Arabic learning aids.

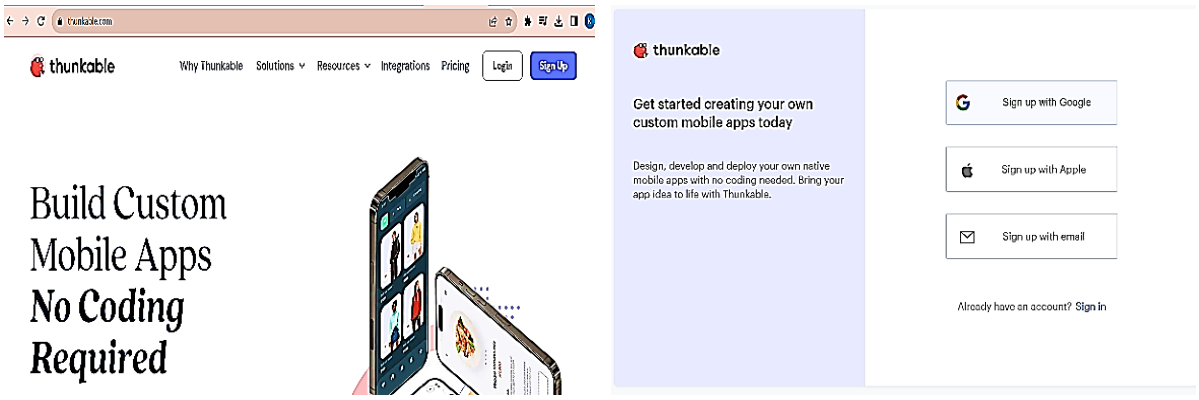
Development of a Digital Arabic-Indonesian Dictionary Application

Making a digital Arabic-Indonesian dictionary application has several stages, including determining the identity and category of the application, designing the application, giving commands to the application through blocks in the form of coding, and testing the application function. The following are the stages in creating a digital Arabic-Indonesian dictionary application;

1. Visit the website https://thunkable.com/

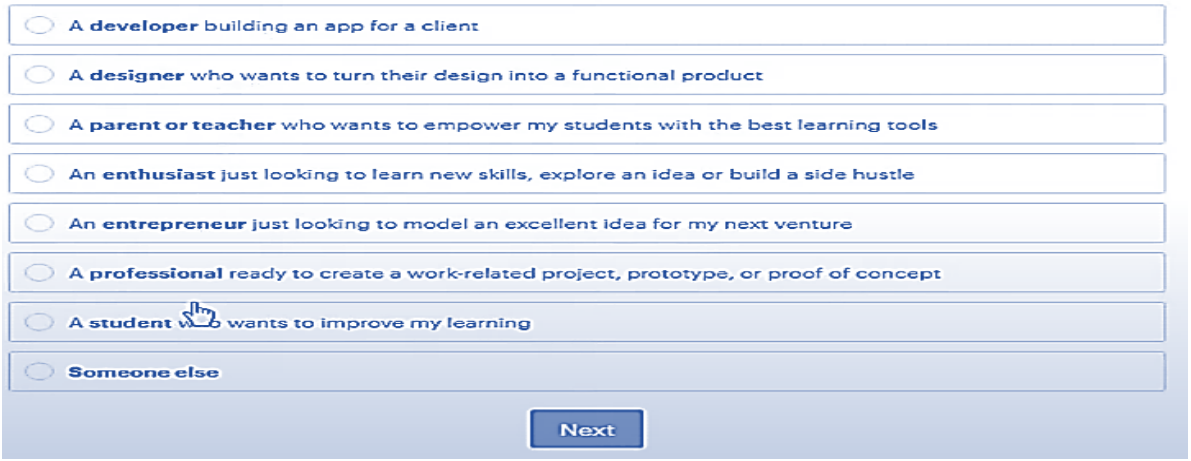
2. Create an account on the menu provided on the thunkable platform by using an active email from the user; the display form is as follows;

Picture 1. Account on the Menu Provided on the Thunkable Platform



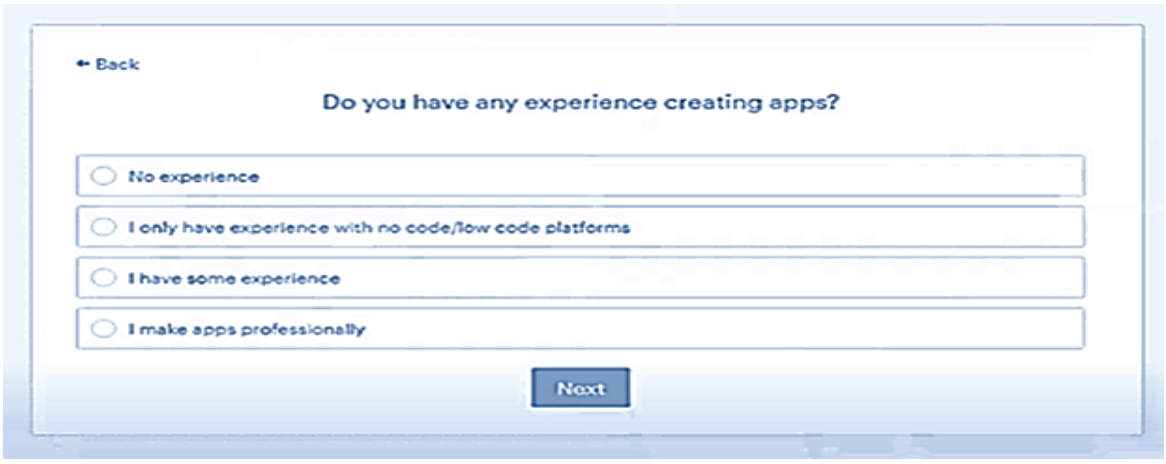
3. Determine the capacity of the application developer or user, as a language learner, you can choose your capacity as a student.

Picture 2. Capacity of the Application Developer



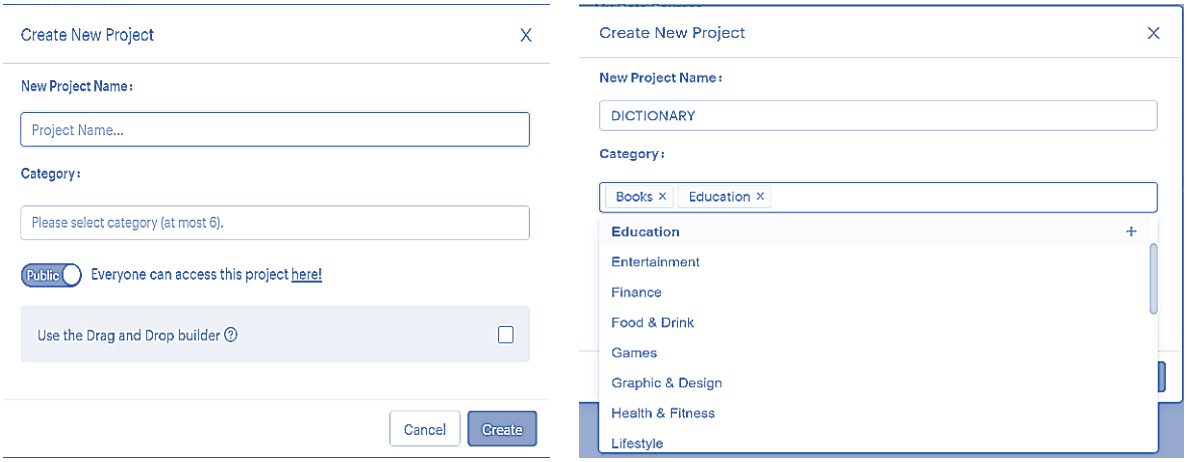
4. Confirm the language learner's experience by selecting 'no experience,' which indicates a beginner or first-time developer in creating an Arabic-Indonesian digital dictionary application.

Picture 3. Language Learner's Experience



5. Fill in the application name and determine the category options provided to ensure that the application created is a digital dictionary; the name of the application project is a dictionary after filling in the category appropriate to the application created by selecting two categories: books and education.

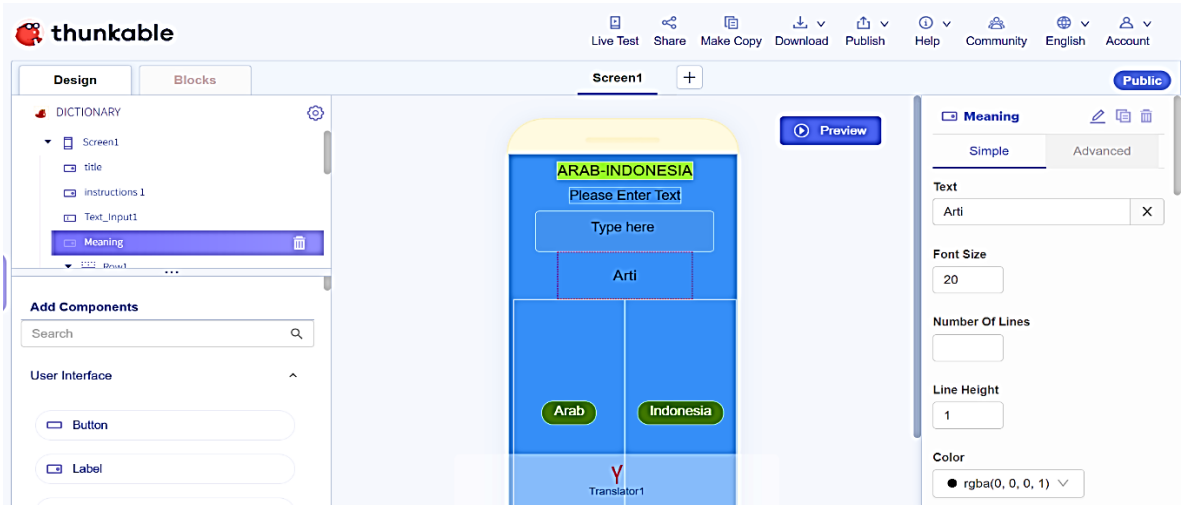
Picture 4. Category Column



6. Designing on a screen or worksheet equipped with menus or tools from Thunkable, at this stage, the digital dictionary developer or user can carry out the design by giving the name of the dictionary, namely "Arabic-Indonesian", making instructions and commands regarding the location for inputting words or sentences, namely with the words "Please Enter Text" then create a column to input the words of the sentence to be translated so that a column appears with the words "type here", followed by creating a column for the translation results with the words "Meaning", after that create the "Arabic" and "Indonesian" buttons. ” which works for bringing up translation results, as well as integrating the translator into the digital Arabic-Indonesian dictionary application project, as a core feature for getting translation

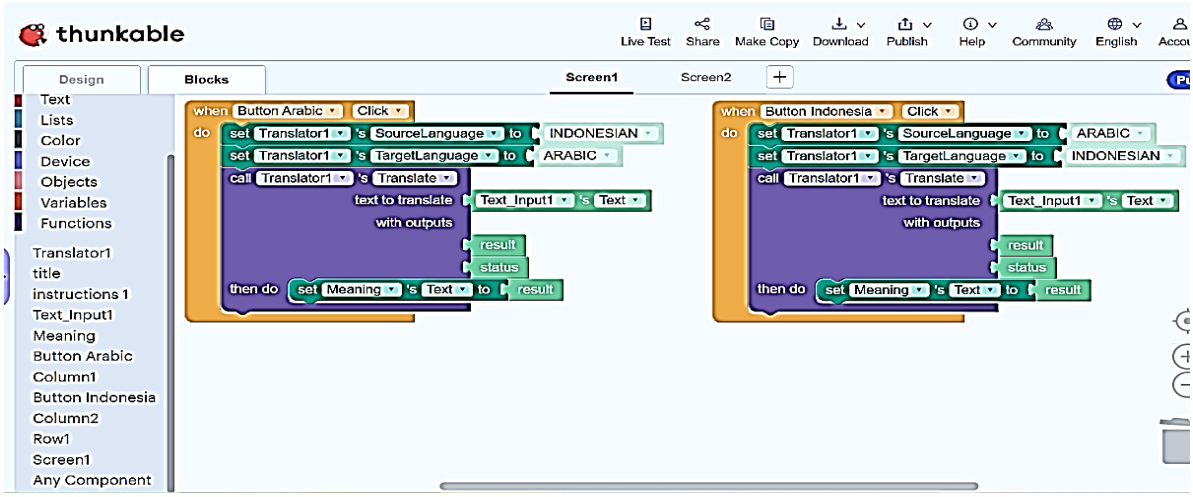
results according to needs, this feature is here to provide convenience for application makers without carrying out vocabulary inventory.

Picture 5. Thunkable Design



7. Providing a menu that has been designed through blocks available in the form of coding is done to activate the entire menu design in the digital Arabic-Indonesian dictionary; there are two blocks, namely Button Arabic, whose function or command is to translate Indonesian into Arabic, while the Indonesian Button gives commands to display the translation results of Arabic words or sentences into Indonesian.

Picture 6. Coding Menu's



8. Preview the Arabic-Indonesian dictionary application that has been created

Picture 7. Preview the Arabic-Indonesian Dictionary Application

Application Feasibility Test

The feasibility test on the Arabic-Indonesian dictionary application ensures that each component operates properly. The results of the feasibility test on the application are detailed in the table below:

Table 3. The Results of the Feasibility Test on the Application

Test Type	Test Results	Status
Word or sentence input column	You can input words or sentences	Succeed
"Arabic" button	You can click on the "Arabic" button	Succeed
"Indonesia" button	You can click on the "Indonesia" button	Succeed
Translation results column	Can display translation results according to the button clicked, both Arabic and Indonesian	Succeed

The test results on the digital Arabic-Indonesian dictionary application using the Thunkable platform show the success of four components, namely the word or sentence input column, the "Arabic" button, the "Indonesian" button, and the translation result column, which can function well so that it can be used directly to search for translation results according to what users want, both Arabic and Indonesian.

Advantages of Developing a Digital Arabic-Indonesian Dictionary Application Using the Thunkable Platform

Some of the advantages of a digital Arabic-Indonesian dictionary using the platform are as follows; 1) The Arabic-Indonesian dictionary application produced via Thunkable can be used offline, providing convenience for users or language learners in various places without being connected to an internet connection or network; 2) In making a dictionary application using Thunkable, there is no need to inventory a vocabulary, which will later be input into the dictionary

created, which seems to take a very long time. However, Thunkable provides a service that can be integrated with a translator program that contains all the vocabulary. Languages include Arabic and Indonesian to speed up the creation of digital Arabic-Indonesian dictionary applications without manually inventorying vocabulary; 3) The dictionary produced through Thunkable makes it easier for users or language learners because it has simple features without any additional features that can make it difficult for users to find the translation of a word or sentence they want; 4) The digital Arabic-Indonesian dictionary application can translate words and sentences into Arabic and Indonesian.

Discussion

This study shows that Thunkable is a highly useful platform for developing a digital Arabic-Indonesian dictionary application. Supported by features such as easy application design, translation integration, and ease of testing and development, this application can be effectively used as a learning tool for the Arabic language. The application also offers ease of use without requiring an internet connection. It eliminates the need for manual vocabulary inventory, making it a practical and efficient solution for Arabic language learners (Manoppo & Arif, 2023).

Use of the Thunkable platform in developing a digital Arabic-Indonesian dictionary as a learning resource for Arabic language learners. In developing this digital dictionary, several important aspects can be analyzed using lexicography or dictionary theories (Hayani, 2019). Lexicography is a branch of science that studies the preparation of dictionaries, which includes various aspects such as word selection, definitions, dictionary structure, and systematic presentation of lexical information (Hizbullah et al., 2022). The following is an analysis referring to lexicographic theories that are relevant to this research, including:

Descriptive Lexicography Theory

Descriptive Lexicography Theory focuses on recording and describing existing language lexicons without trying to change or suggest better forms of language. The dictionary prepared using this approach aims to describe the words used in a language based on empirical reality (Ryan Nurdiana, 2022). In the context of this research, the digital Arabic-Indonesian dictionary developed using the Thunkable platform can be analyzed from a descriptive lexicography perspective because its main goal is to provide a tool for Arabic language learners to search for translations of words and sentences in the context of daily use. Several things that are relevant to this theory are: 1) Word Selection: This dictionary focuses on relevant vocabulary used in daily conversation or Arabic

learning contexts. Each word in the dictionary application is based on words used in daily life or learning that Arabic language learners commonly encounter; 2) Description Definition and Accuracy: As in descriptive lexicography, this application provides word translations that describe the meaning of words in a broader context. The translation process is carried out by considering aspects of nahwu (grammar) and sharaf (morphology), reflecting an accurate grammatical depiction by correctly using Arabic.

The suitability of this research is that this digital dictionary aims to provide an accurate description of words in Arabic and give users a correct understanding of their meaning and use in Indonesian without imposing certain language norms.

Prescriptive Lexicography Theory

Prescriptive Lexicography Theory focuses on providing rules or guidelines that must be followed when using certain words or expressions in language. Dictionaries with this approach often suggest using words correctly or more by standard language rules (Almos et al., 2023).

In developing this digital Arabic-Indonesian dictionary, the use of prescriptive lexicography theory can be seen in the translation section, which prioritizes accuracy in sentence structure and grammar (Krissandi, 2023). The feature that considers the rules of nahwu and sharaf in translation is one of the elements that reflect the theory This, where the application not only provides direct translation, but also ensures that the translation complies with correct grammatical rules in Arabic (Raodhatul Jannah & Herdah, 2022); 1) Grammatical Prescription: This application not only provides literal translations of words but also ensures that sentence structures are maintained by Arabic rules, for example, by paying attention to word types, verb forms, and word gender (masculine/feminine); 2) Compiling a Digital Dictionary with Strict Language Rules: This dictionary application follows strict rules in compiling lexical data, such as separating verbs, nouns, adjectives, and other categories and suggesting how to use words according to their context in Arabic.

Conformity with this research is that this dictionary follows more prescriptive language rules, guiding Arabic language learners to use the language by the standard rules that apply in the rules of nahwu and sharaf.

Functional Lexicography Theory

Functional Lexicography Theory focuses on creating dictionaries designed to meet users' needs in certain contexts, taking into account the function of dictionaries in everyday life or professional contexts. Dictionaries created with this approach are more practical and functional,

prioritizing usability for users in real situations (Batubara & Mahakarya, 2021). In the digital Arabic-Indonesian dictionary developed using Thunkable, several aspects refer to functional lexicography theory: 1) Context of Use: This application is designed to meet the needs of Arabic language learners who seek translations of words or sentences in various situations, both for academic purposes and daily conversations; 2) Use of Dictionaries in Learning: As a learning resource, this dictionary application aims to make it easier for users to learn Arabic vocabulary by providing direct translations and accurate explanations regarding the use of words in Arabic and Indonesian; 3) Ease of Access: This dictionary can be used offline and has a simple interface, making it easy for students to access information anytime and anywhere and supporting functionality as a learning aid.

The suitability of this research is that this digital dictionary is designed to have practical and affordable functions for Arabic language learners. Its ease of use and features such as sentence translation and grammatical accuracy make it highly relevant to the theory of functional lexicography.

Computational Lexicography Theory

Computational Lexicography Theory focuses on developing computer-based dictionaries that leverage technology to create, manage, and disseminate lexical data more efficiently (F. R. Harahap & Sinar, n.d.). Computational dictionaries allow users to access data automatically and enable the development of fast and accurate translation algorithms (Simonsen & Simonsen, 2021).

This research is highly relevant to computational lexicography theory, given that the Thunkable platform used to develop this dictionary application provides functionality for integrating translation algorithms, enabling automatic translation processes (K. A. Harahap, 2014). Furthermore, this application uses a block-based system and coding, which illustrates using computational technology to create a digital dictionary; 1) Technology Integration: This dictionary application uses a translator tool that integrates translation algorithms to provide automatic translations; 2) Digital Accessibility: This dictionary can be accessed through mobile devices, allowing learners to use the dictionary conveniently and quickly.

The relevance of this study is that this digital dictionary employs a computational approach, utilizing digital platforms and automatic translation algorithms that make the dictionary creation and usage process more efficient. Based on an analysis using various lexicographic theories, this study successfully developed a digital Arabic-Indonesian dictionary that is functional, practical, and grammatically accurate. This dictionary meets the needs of Arabic learners by providing precise

translations, adhering to the rules of grammar and morphology (nahwu and sharaf), and offering easy access through a computationally-based digital platform. The application also prioritizes practical usability for learners with its simple interface, offline capability, and no need for manual vocabulary inventory. Therefore, this application is an exemplary case of applying lexicography theory in creating a technology-based digital dictionary.

CONCLUSION

This research contributes knowledge to language learners in creating digital Arabic-Indonesian dictionaries using a thunkable platform that can be used as an effective and efficient learning resource. The Thunkable platform provides easy facilities for language learners to compile dictionaries independently without carrying out a manual inventory of vocabulary, which takes a long time because Thunkable has services that can be integrated directly with translator programs. Apart from that, the digital Arabic-Indonesian dictionary produced through the Thunkble platform can be used without an internet connection so that it can be accessed in various places; the features available are relatively simple and can be translated into sentence form, but also in word form. Thus, the presence of results or findings from this research can be used as a form of response from language learners to be able to collaborate with the development of digital technology with science, especially Arabic language science, and specifically provide facilities for language learners to be able to easily and quickly obtain information in the form of translation. Arabic and Indonesian are translated through a digital Arabic-Indonesian dictionary created so that language learners can quickly improve their knowledge of Arabic vocabulary.

REFERENCES

Alhafidz, A. Z. (2023). The Existence of Arabic Print Dictionaries in the Digital Age/ Eksistensi Kamus Cetak Bahasa Arab Di Era Digital. *Ijaz Arabi Journal of Arabic Learning*, *6*(1), 271–280. https://doi.org/10.18860/ijazarabi.v6i1.19044

Almos, R., Pramono, P., Seswita, S., Asma, R. A., & Putri, N. O. (2023). Linguistik Korpus: Sarana dan Media Pembelajaran pada Mata Kuliah Leksikologi dan Leksikografi di Perguruan Tinggi. *Lectura : Jurnal Pendidikan*, *14*(1), 45–59. https://doi.org/10.31849/lectura.v14i1.11705

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

Ashari. (2019). Aplikasi panduan budidaya okra sistem penjadwalan alarm otomatis berbasis android dengan thunkable. *Information Technology Journal*, *1*(2), 6–10.

Azhar, M., Wahyudi, H., Promadi, & Masrun. (2023). Penggunaan Teknologi dalam Pembelajaran

Bahasa Arab di Indonesia. *Jurnal Review Pendidikan Dan Pengajaran*, *6*(4), 3160–3164. https://journal.universitaspahlawan.ac.id/index.php/jrpp/article/view/20984/15794

Batubara, M. H., & Mahakarya, A. (2021). Leksikografi Bergambar Indonesia-Gayo-Inggris-Arab: Konsep Dasar, Fungsi, Jenis, Dan Isi Kamus. *Mahakarya: Jurnal Mahasiswa Ilmu Budaya*, *2*(2), 53–62. https://doi.org/10.22515/mjmib.v2i2.4959

Bimantoro, A., Pramesti, W. A., Bakti, S. W., Samudra, M. A., & Amrozi, Y. (2021). Paradoks Etika Pemanfaatan Teknologi Informasi di Era 5.0. *Jurnal Teknologi Informasi*, *7*(1), 58–68. https://doi.org/10.52643/jti.v7i1.1425

Defrian, F. R., Okra, R., Derta, S., Musril, H. A., & Yuspita, Y. E. (2023). Perancangan Media Pembelajaran Informatika Menggunakan Thunkable. *Indonesian Journal of Innovation Learning and Technology*, *2*(2), 33–44.

Dewandono, W. A. (2020). Leksikologi Dan Leksikografi Dalam Pembuatan Dan Pemaknaan Kamus. *Paramasastra*, *7*(1), 16. https://doi.org/10.26740/paramasastra.v7n1.p16

Fadhilah, M. A. (2021). Analisis Karakteristik Aplikasi Kamus Arab-Indonesia Karya Tim Ristek Muslim. *Alsina : Journal of Arabic Studies*, *3*(2), 201–218. https://doi.org/10.21580/alsina.3.2.5938

Fricticarani, A., Hayati, A., R, R., Hoirunisa, I., & Rosdalina, G. M. (2023). Strategi Pendidikan Untuk Sukses Di Era Teknologi 5.0. *Jurnal Inovasi Pendidikan Dan Teknologi Informasi (JIPTI)*, *4*(1), 56–68. https://doi.org/10.52060/pti.v4i1.1173

Gunadi, G. (2020). Rancang Bangun Aplikasi Media Pembelajaran Mengenal Nama Hewan Dalam Dua Bahasa Berbasis Android Menggunakan Thunkable. *Infotech: Journal of Technology Information*, *6*(1), 35–42. https://doi.org/10.37365/jti.v6i1.77

Harahap, F. R., & Sinar, T. S. (n.d.). *Analisis Verba ' Ajar ' dalam Korpus Bahasa Indonesia : Studi Linguistik Korpus*.

Harahap, K. A. (2014). Analisis Kesalahan Linguistik Hasil Terjemahan Mesin Terjemah Google Translate dari Teks Bahasa Arab ke dalam Bahasa Indonesia. *Jurnal Penelitian Agama*, *15*(1), 26–43. https://doi.org/10.24090/jpa.v15i1.2014.pp26-43

Hayani, F. (2019). Leksikografi Arab (Sebuah Kajian Linguistik Terapan). *Shaut Al Arabiyyah*, *7*(1), 1. https://doi.org/10.24252/saa.v1i1.7786

Hiasa, F., Supadi, S., Agustina, E., Afrodita, M., Lazfihma, L., & Yanti, N. (2023). Development of android-based learning media assisted by Thunkable Applications in literary history courses. *Bahastra*, *43*(2), 221–233. https://doi.org/10.26555/bs.v43i2.514

Hizbullah, N., Mardiah, Z., & ... (2022). Sinonimi dalam Al-Quran: Tinjauan Leksikografi Historis-Komparatif. *… , Social, and Arts …*, *5*(2). https://doi.org/10.32734/lwsa.v5i1.1338

Ilham, R. N. (2023). Pemanfaatan Kamus Digital Bahasa Arab-Indonesia Sebagai Sumber Belajar di SMP IT Ibnu Khaldun. *Journal of Educational Research*, *4*(4), 1932–1942. https://jer.or.id/index.php/jer/article/view/632

Irsan, M., Derta, S., Okra, R., & Darmawati, G. (2024). Perancangan Aplikasi Herregistrasi Siswa Baru Berbasis Android Menggunakan Thunkable Di Sman 1 Lubuk Sikaping. *JATI (Jurnal Mahasiswa Teknik Informatika)*, *7*(5), 3384–3391. https://doi.org/10.36040/jati.v7i5.7572

Kassim, N., Iman, N., Afandi, M., Kamsan, S. Z., Isham, M., & Ishak, F. (2022). The Development of Basic Wudhu Mobile Application for Johor Islamic School in Year 3 Pupils. *Multidisciplinary Applied Research and Innovation*, *3*(1), 93–105. https://doi.org/10.30880/mari.2022.03.01.013

Krissandi, A. D. S. (2023). Survei Pemahaman Leksikon Ekologis Bahasa Jawa Pada Mahasiswa PGSD Universitas Sanata Dharma (Tinjauan Ekologi Linguistik). *Sabdasastra : Jurnal Pendidikan Bahasa Jawa*, *7*(1), 1. https://doi.org/10.20961/sabpbj.v7i1.40793

Mahmudah, & Paramita, N. P. (2023). Transformasi Pembelajaran Bahasa Arab di Era Digital:

Tantangan dan Peluang dalam Pendidikan. *Prosiding Pertemuan Ilmiah Internasional Bahasa Arab*, *14*(1), 841–858. https://www.prosiding.imla.or.id/index.php/pinba/article/view/396/396%0Ahttps://www.prosiding.imla.or.id/index.php/pinba/article/view/396

Manoppo, N., & Arif, M. (2023). Assuthur: Jurnal Pendidikan Bahasa Arab. *Jurnal Pendidikan Bahasa Arab*, *2*(1), 41.

Nada uljannah, Stevani, R. V. (2021). Jurnal horizon pendidikan. *Jurnal Horizon Pendidikan*, *1*(4), 601–613.

Purnia, D. S., Adiwisastra, M. F., Muhajir, H., & Supriadi, D. (2020). Pengukuran Kesenjangan Digital Menggunakan Metode Deskriptif Berbasis Website. *EVOLUSI : Jurnal Sains Dan Manajemen*, *8*(2). https://doi.org/10.31294/evolusi.v8i2.8942

Purnia, D. S., Rifai, A., & Rahmatullah, S. (2019). Penerapan Metode Waterfall dalam Perancangan Sistem Informasi Aplikasi Bantuan Sosial Berbasis Android. *Seminar Nasional Sains Dan Teknologi 2019*, 1–7.

Rachmawati, S. A., Elmubarok, Z., & Nawawi, M. (2023). Analisis Kesulitan Penguasaan Kosakata Bahasa Arab Pada Siswa. *Lisanul Arab: Journal of Arabic Learning and Teaching*, *12*(1), 46–50. https://doi.org/10.15294/la.v12i1.67552

Raibowo, S., Sugihartono, T., Permadi, A., Aldino, A., & Rahmi, M. F. (2023). Need Assesment Pengembangan Media Pembelajaran Tenis Lapangan Berbasis Aplikasi Thunkable. *Jurnal Muara Pendidikan*, *8*(2), 274–278. https://doi.org/10.52060/mp.v8i2.1498

Raodhatul Jannah, & Herdah. (2022). Kata Serapan Bahasa Arab Dalam Bahasa Indonesia: Pendekatan Leksikografi. *Al-Ishlah: Jurnal Pendidikan Islam*, *20*(1), 123–132. https://doi.org/10.35905/alishlah.v20i1.2820

Ryan Nurdiana. (2022). Komponen Mu'jam Al Lughah Al Arabiyyah Al Mu'ashiroh (Studi Analisis Ditinjau dari Ilmu Leksikografi). *Tarling : Journal of Language Education*, *7*(1), 97–112. https://doi.org/10.24090/tarling.v7i1.8184

Salma, Kholisin, & Nurhidayanti. (2024). Needs Analysis of Development Ilmu Ashwat to Improve Speaking Skills Using Thunkable Applications. *Journal Arabic Learning*, *7*(1), 345–357.

Setyowati, L., & Nasir Ahmad, D. (2021). Pemanfaatan Big Data Dalam Era Teknologi 5.0. *ABDINE: Jurnal Pengabdian Masyarakat*, *1*(2), 117–122. https://doi.org/10.52072/abdine.v1i2.205

Sholihah, E., Supardi, A., & Hilmi, I. (2019). Teknologi Media Pembelajaran Bahasa Arab. *Jurnal Keislaman Dan Pendidikan*, *1*(2), 12–15.

Simonsen, H. K., & Simonsen, H. K. (2021). *LexicoNordica Strategiske overvejelser for nordisk leksikografi*.

Teknowijoyo, F., & Marpelina, L. (2022). Relevansi Industri 4.0 dan Society 5.0 Terhadap Pendidikan Di Indonesia. *Educatio*, *16*(2), 173–184. https://doi.org/10.29408/edc.v16i2.4492

Uminingsih, Nur Ichsanudin, M., Yusuf, M., & Suraya, S. (2022). Pengujian Fungsional Perangkat Lunak Sistem Informasi Perpustakaan Dengan Metode Black Box Testing Bagi Pemula. *STORAGE: Jurnal Ilmiah Teknik Dan Ilmu Komputer*, *1*(2), 1–8. https://doi.org/10.55123/storage.v1i2.270

Wahdah, Y. A., Muhajir, M., & Abdullah, A. W. (2023). Kamus Online Sebagai Media Penerjemahan Teks Bagi Calon Guru Bahasa Arab. *Edukasiana: Jurnal Inovasi Pendidikan*, *2*(3), 138–150. https://doi.org/10.56916/ejip.v2i3.368

Yamin, M., Putri, A. M., Rohimah, R., Chairunnisa, S., & Chaidar, M. R. (2023). Kamus Digital Sebagai Sarana Hifdzul Mufrodah di Kelas VII-1 Madrasah Tsanawiyah Negeri Samarinda. *Jurnal Tarbiyah Dan Ilmu Keguruan Borneo*, *3*(3), 195–203. https://doi.org/10.21093/jtikborneo.v3i3.6388

Zahrah, H., Wargadinata, W., & Barry, N. A. (2021). Analisis E-Dictionarry "Arab-Indonesia" yang

Tersedia di Playstore dengan Pendekatan Leksikologi. *Shaut Al Arabiyyah*, *9*(1), 1. https://doi.org/10.24252/saa.v9i1.21494