



ENHANCING SHARAF MASTERY THROUGH RISTEK MUSLIM DIGITAL DICTIONARY AND GOOGLE CLASSROOM AMONG ARABIC LANGUAGE STUDENTS

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ABSTRACT

This study contributes significantly to the development of *Sharaf* learning by introducing an innovative approach using the Ristek Muslim digital dictionary. The guidelines developed in this research provide Arabic language students with an accessible and effective tool to improve their understanding of *Sharaf*, a crucial component of Arabic grammar. This study enhances student engagement and learning outcomes by integrating digital resources into *Sharaf's* instruction. The positive feedback from students, material experts, and media experts highlights the value of these guidelines in improving both the content and delivery of *Sharaf* lessons. Furthermore, the T-test results demonstrate the effectiveness of the digital dictionary guidelines in fostering a more profound comprehension of *Sharaf* concepts. This contribution supports the modernization of Arabic language teaching, offering a more interactive and efficient way for students to master the intricacies of *Sharaf*. The findings suggest that integrating digital tools in Arabic language learning, particularly in the study of *Sharaf*, can contribute to better learning outcomes. Additionally, based on the Borg and Gall model, the development process successfully addressed potential challenges and refined the product through multiple stages of testing and validation. Overall, this study demonstrates that the Ristek Muslim digital dictionary guidelines are a valuable resource for improving *Sharaf* learning and can be a model for integrating digital technology into Arabic language education.



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INTRODUCTION

Digital literacy has emerged as a key component in modern education, driven by the transition from traditional methods to an era where digital technology plays a central role in all aspects of life (Chaldun, 2022). This shift has made it essential for individuals to develop strong digital literacy skills, particularly in the educational sector (Bridge et al., 2023). Digital literacy positively impacts teachers and students and poses challenges for those who *fā'il* to utilize these skills effectively. The ability to engage with digital tools is crucial in today's educational environment, as it enables access to vast resources and enhances learning experiences. In the millennial era, integrating technology in education is no longer optional but necessary to ensure better learning outcomes and prepare students for future challenges (Ajeng Rahmawati, 2023).

Many factors, including learning media, can affect student success in the learning process. In his article, Jauhar Ali mentioned that various other aspects must be considered in choosing media, including learning objectives, types of tasks and responses that students are expected to master after learning occurs, and the context of learning, including student characteristics (Ali, 2018). However, one of the main functions of learning media is as a teaching aid that also affects the climate, conditions, and learning environment that teachers arrange and create (Mutholib et al., 2023). Of course, for students who focus on language, dictionaries are an essential medium to understand the meaning of language vocabulary.

In Arabic language education, digital literacy is vital in enhancing learning experiences. Digital tools such as Arabic dictionaries and other online learning media have transformed how Arabic is taught and learned. These tools, including computer-based learning media and the internet, enable students to access content more efficiently, helping them achieve learning goals and increasing motivation (Luo et al., 2024). In particular, the study of *sharaf*, a key component of Arabic grammar, benefits significantly from digital literacy. *Like other areas of Arabic grammar, Sharaf* is complex and requires digital technology in teaching methods, strategies, and media (Nasution et al., 2024). One of the competencies in digital literacy is the ability to effectively use technology, which is crucial for both students and teachers in enhancing the quality of instruction and improving students' understanding of complex subjects like Sharaf (Mustaifiy, 2023).

Many dictionaries, such as manual dictionaries, can be used to discover the meaning of Arabic vocabulary (Luo et al., 2024). However, these dictionaries that only display the essence of the meaning of the word are not accompanied by an explanation of the rules of *nahwu* and *sharaf*, even though *nahwu* and *sharaf* are essential keys to understanding the meaning of Arabic vocabulary in a complex way (Nurhayati, 2020). This certainly causes beginner learners to find it challenging to comprehend Arabic vocabulary (Yunisa, 2023). Some digital dictionaries provide a unique lexicography different from manual Arabic dictionaries (Alhafidz, 2023). One of the uniqueness of digital dictionaries is the innovation in providing information about the semantics or *sharaf* of a verb in Arabic (Fadhilah, 2021). This is not found in the manual dictionary, so it supports improving *Sharaf's* learning for students, including in learning paraphrases (Chi et al., 2023). Using digital dictionaries at STAIN Mandailing Natal is essential when there is no technological innovation to support *sharaf's* understanding, and using digital dictionaries as a learning support has not been optimal. This is due to the lack of facilities and infrastructure (Sanchez Diaz et al., 2024).

Although several studies have explored the role of digital dictionaries in language learning, particularly in translation, there remains a gap in research regarding their specific impact on *Sharaf* learning. Previous studies have highlighted the effectiveness of digital dictionaries in various educational contexts. For instance, Nur Azmi et al. (2023) examined the impact of digital dictionaries on Indonesian elementary school students' learning outcomes, while Ahmad Arifin and Slamet Mulyani (2021) explored student perceptions of Arabic digital dictionaries in the era of society 5.0. Other studies, such as those by Ramadhan Nur Ilham (2023) and Maulida Almas (2021), also addressed using digital dictionaries in Arabic language learning, particularly for translation and vocabulary acquisition.

The similarity of this research with previous studies is in digital dictionaries. In theory, several research results show that the use of digital dictionaries as a medium to assist students in learning, especially in translation. The difference with previous research on the focus of the study is *Sharaf's* understanding of using a digital dictionary, as the paradigm explored by Jiaming Luo about machine and human translation (Luo et al., 2024). This study aims to design a guideline for using digital dictionaries in *Sharaf* learning and evaluate their effectiveness in improving student's understanding of this aspect of Arabic grammar. The primary focus is creating a digital dictionary guideline that provides the meanings of Arabic verbs and links them to *Sharaf* principles. This innovation will allow students to visualize how *Sharaf* rules apply to vocabulary and provide practical examples through sentences that demonstrate the digital dictionary of *Sharaf* (Rahimadinullah et al., 2023). By incorporating digital dictionaries into *Sharaf* learning, the study improves the quality of Arabic language education, especially for beginner learners. The research is expected to enhance students' ability to comprehend *Sharaf* concepts more efficiently and effectively, ultimately supporting the modernization of Arabic language teaching. The study's findings will offer valuable insights into how digital tools can bridge learning gaps and improve engagement and understanding of Arabic grammar.

METHOD

This study employs a mixed-methods approach, combining qualitative and quantitative research methods within a research and development (R&D) framework (Rahman, 2023). The research utilizes the Borg and Gall model, widely regarded for its comprehensive, step-by-step process of developing educational products (Bahy et al., 2024). This model is particularly suitable for this study because it allows for the systematic development, testing, and refinement of digital tools, specifically digital dictionaries, for enhancing *Sharaf* learning in Arabic language education. The Borg and Gall model ensures a well-structured approach, from identifying potential problems to evaluating and revising the developed product. The data for this study were sourced from questionnaires and trials involving Arabic language students from STAIN Mandailing Natal, material experts, media experts, and Arabic language teachers. These participants provided valuable insights and evaluations that were essential for assessing the effectiveness of the digital dictionary guidelines in improving *Sharaf's* understanding. The evaluators' feedback was critical in ensuring that the product met the academic needs and expectations of students and educators alike (Guerreiro et al., 2023; Costa et al., 2024).

Data collection in this study involved both observation and the distribution of questionnaires. Observations allowed the researchers to assess students' engagement and use

of the digital dictionary in real-time, while the questionnaires provided structured responses from students and experts. The questionnaires were designed to gather both qualitative and quantitative data. The qualitative data were collected through open-ended questions, capturing suggestions and critiques from the material experts, media experts, and teachers. These insights helped refine the product. The quantitative data gathered from closed-ended questions were used to assess the effectiveness of the digital dictionary guidelines, particularly regarding their impact on students' *Sharaf* learning. Data analysis involved both qualitative and quantitative methods. The qualitative data, derived from the suggestions and criticisms of the evaluators, were analyzed thematically to identify key areas for improvement. These insights were used to refine the digital dictionary guidelines to meet students' needs better. The Likert scale was used for the quantitative data to measure participants' responses. The analysis formula applied was: $P = \left(\frac{f}{n}\right) \times 100\%$. With explanation, p: percentage of questionnaire results, f: questionnaire answers, and n: collection of results of all questionnaire samples. Furthermore, the T-test (SPSS Statistics) is used by researchers to measure and determine the effectiveness of the products that have been developed.

The procedure for this research followed the ten steps outlined by Sugiyono (2019) in conducting research and development with proposed ten steps in conducting research and development, namely potentials and problems, data collection, product design, product validation, design revision, product trial, product revision, use trial; product revision; and mass production. Specifically, the steps of "design revision," "product revision," and "mass production" were omitted. The rationale for these exclusions is that this study focused on the digital dictionary guidelines' design, validation, and testing phases rather than final production. Given the research context, the aim was to evaluate the effectiveness of the prototype in improving *Sharaf's* understanding among students rather than mass-producing the final product.

RESULT AND DISCUSSION

Identification of Potential and Problem

Based on the results of observation, the researcher sees the potential and problems in the Arabic language education study program of STAIN Mandailing Natal are located in the background of Arabic students who have not been maximized in understanding *sharaf*, while the teaching materials used in lectures are teaching materials that are sometimes in Arabic as a whole (Zakiah, 2021). The researcher distributed the following questionnaire questions to corroborate the observation results: 1. I have used a digital dictionary, 2. I have used a digital Arabic dictionary for learning, 3. *Sharaf* is learning using supporting books; 4. I looked up Arabic vocabulary in the dictionary, 5. I always bring a dictionary with me when learning, 6. Teachers use Arabic teaching materials, 7. Teachers use supporting materials in learning Arabic.

Potential and Problem Analysis Data

Based on a questionnaire distributed to 20 Arabic students at STAIN Mandailing Natal, here's a summary of the findings and their implications for *Sharaf* learning: 1) 62.4% of Students Have Never Used a Digital Dictionary. Most students are not using digital tools, which could hinder their ability to learn new vocabulary and understand word forms. This is

essential for mastering *Sharaf*, which focuses on word structure and morphological changes. 2) 90% of Students Have Never Used a Digital Arabic Dictionary for Learning. The lack of exposure to digital Arabic dictionaries limits students' ability to track and comprehend morphological changes in words, which is crucial for *Sharaf*. 3) 48% of Students Use Supporting Books for Learning *Sharaf*. While books provide theoretical knowledge, they may lack interactive features, making it harder for students to practice *Sharaf* concepts actively. 4) 70.3% of Students Use Manual Dictionaries. Relying on traditional dictionaries is time-consuming and may slow down progress in learning *Sharaf*, which requires frequent reference to word forms and patterns. 5) 80.5% of Students Don't Always Bring a Dictionary to Class. Not bringing a dictionary to class limits students' ability to clarify word meanings and understand *Sharaf* concepts in real-time during lessons. 6) 69.7% of Teachers Use Arabic Teaching Materials. Most teachers use teaching materials but may rely on traditional resources, which may not fully integrate modern, digital tools that could enhance *Sharaf*'s learning. 7) 40.2% of Teachers Use Supplementary Materials: Few teachers incorporate supplementary materials, limiting students' access to interactive and personalized learning essential for mastering *Sharaf*. From this problem, the researcher concludes that Arabic students need a guide to use a supporting application to help understand *Sharaf*, namely a guide to using a digital dictionary that will make it easier for them to understand teaching materials and tasks related to *Sharaf*.

Product design

In this stage, the researcher plans to design a guide for using digital dictionaries using the Microsoft Word application. Then, the guidelines that have been created are distributed in Google Classroom (Putri Andhini et al., 2022). Meanwhile, the content of the guide to using the digital dictionary contains content from *Sharaf* learning, namely looking for *tashrif istilabi* from an Arabic vocabulary/*mufradat*. The following is the display of the Arabic digital dictionary of Muslim research and technology:

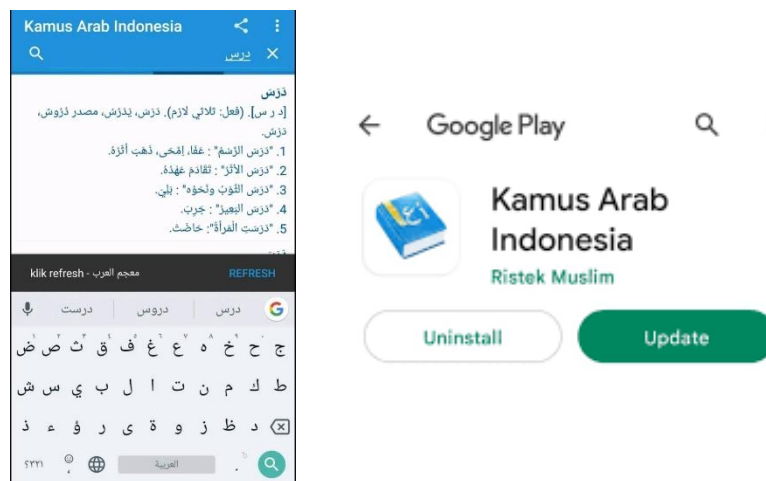


Figure 1: Contents and display of the digital dictionary on Android

The Indonesian Arabic Dictionary of Muslim Research and Technology has features symbolized by several Arabic letters and pictures. The symbols of Arabic letters and images

are explanations from the combined dictionaries in the Muslim Research and Technology Dictionary (Susilana et al., 2022). The symbols are the Letter ع stating that the Indonesian Arabic dictionary. The letter م means dictionary al-Munawwir. The letter غ means mu'jam al-Ghani. The letter ن means *mu'jam al-Muashirah*. The letter ج means *Ma'ajim al-Arab*. The letter ل means oral al Arabic / almufid dictionary. The symbol of the book implies a dictionary of the Quran. From the information above, it can be seen that this Muslim research and technology dictionary combines large Arabic dictionaries from both bilingual and multilingual dictionaries.

The product design of the guide to using digital dictionaries contains instructions on finding the tashrīf istilāhī using a digital dictionary of Arabic and Muslim research. This guide consists of several steps that must be followed to make it easier to use the dictionary. The following is the design of a guide to using a digital dictionary to find *tashrif istilāhī* from the vocabulary "*kataba*" or "كتب" using Microsoft Word.

The explanation of the initial step contains commands to open the Muslim Research and Technology digital dictionary application. On the first display of the menu, please change it to menu من because, in the ع menu, not all letters are given *barakat*. In the menu من, when the word we want to be *tashrif* is, for example, the word "*kataba*". The word "*kataba*" is a form of *fi'il madhi*. Then, on display, it appears on the first line, namely the form of *fi'il mudhari* from the word "*kataba*", namely "*yaktubu*". Those who have memorized the form of *wazan fi'il tsulatsi mujarrad* will not have difficulty because just looking من menu will show the form of *tashrif istilāhī*. But what about those who do not understand *tashrif*?

The explanation in the second step is a continuation of the initial step. In *tashrif istilāhī*, the first arrangement is *fi'il madhi*, for example, the word "*kataba*", followed by *fi'il mudhari*, which is "*yaktubu*". After *fi'il mudhari* is *mashdar*, we must look for the *mashdar* form of the word "*kataba*". Then, to find *mashdar*, move to the غ menu and look for the word "*kataba*". Next in the column, look for the *mashdar* inscription. Then there will be a *mashdar* information. The word *mashdar* here has three forms. The first, "*kitabaturun*", the second, "*katibun*", the third, "*kitabun*". It is permissible to use all three, but the one often used is "*kitabun*". Here, the *mashdar* wishes on this menu end in *dhammah*. Furthermore, for the next *tashrif istilāhī*, the word *mashdar* obtained from the dictionary must be changed to *fathah*. So, for the word "*kitabun*," change the last *barakat* to *kitabun* (with the addition of alif after كتابا). After getting the *mashdar* from the word "*kataba*", the next step is to find the *isim al-fā'il* form of "*kataba*". Those who have memorized the *wazan* will not have a problem. You can see the "nun" menu on the dictionary application for those who have not memorized.

The third step consists of a follow-up guide from the previous step. On the first line of the nun menu, it can be seen that not all letters are given *barakat*. To get the *isim fā'il*, look at the description on the first line there and look at the word after فهو Then there is the *isim al-fā'il* form of the word "*kataba*". It should be noted that all forms of *isim al-fā'il* follow the *wazan فاعل*, so the *isim al-fā'il* of "*kataba*" is "*katibun*." Then, after the *isim al-fā'il*, there is an *isim maf'ul* in the description. The form of the *wazan* is مفعول. Next, find the form of *fi'il*

amar from the word "*kataba*". Then go back to the غ menu. From the description on the menu, find which form of *fi'il amar* is "*kataba*". The characteristics of *fi'il amar* are as follows: the last letter ends with the letter /*barakat* breadfruit. So, you will see the word "*uktub*". To find *fi'il naby*, it is enough to look at the *fi'il mudhari* that has been searched for before, namely on the من menu. In the menu من, the word "*kataba*" has the form of *mudhari*, namely "*yaktubu*". How to make *fi'il naby* is the word before *yaktubu* is given the letter لا. The letter 'ya' in "*yaktubu*" is changed to the letter ta,' and the last line of letters is changed to breadfruit. Then it will be found that the *fi'il naby* of "*kataba*" is لا تكتب. Finally, overall, the *tashrif istilahi* from the word "*kataba*" obtained in the use of the Muslim research and technology digital dictionary is كتب - يكتب - كتابا - كاتب - مكتوب - اكتب - لا تكتب

Product Validation

Validation aims to determine the product quality developed to get criticism, suggestions, and input for product improvement at the next stage. Validation was carried out by two peer reviewers by filling out a suggestion sheet and criticism of the design aspect, product content aspect, and material aspect of the product developed (Costa et al., 2024). Based on the feedback provided by the peer reviewers, several revisions were made to enhance the product. The suggestions from the design, content, and material aspects have been integrated as follows: the design was praised for being good, simple, and attractive, with a minimalist approach that makes the digital dictionary user guide visually appealing. It kept the overall design minimalist, but improvements have been made to streamline the user interface for better accessibility further. Font sizes and color contrasts enhance readability, ensuring the guide is visually pleasing and user-friendly.

In the Content Aspect, the product's guide was straightforward, with just the right amount of information, ensuring students could easily use the guide. However, the content was noted to be somewhat basic and could benefit from additional details. Based on the feedback, we expanded the content slightly by adding practical examples and step-by-step instructions on using the digital dictionary effectively. While maintaining simplicity, these additions aim to provide more clarity without overwhelming the users, ensuring that the guide remains easy to follow. In the Material Aspect, the vocabulary material presented was appreciated for being practical and consisting of everyday words, which makes it suitable for introducing *tashrif istilahi* (morphological changes) to beginners. They incorporated a wider variety of vocabulary relevant to beginner-level learners of Arabic, including more contextual examples for each word to show how *tashrif istilahi* works. Additionally, we added short exercises and practice sessions to allow users to apply what they've learned in real scenarios, reinforcing their understanding of the material. (Fitria, 2019).

Product trials

The product trial is a small-scale trial conducted on 20 PBA students by providing directions through Classroom media (Hapsari & Pamungkas, 2019) to download the Arabic Indonesian Ristek Muslim dictionary application. Then, the researcher explained the dictionary and how to use it. Furthermore, students are asked to look for Arabic vocabulary,

such as "*Kataba*." The product trial aims to provide an initial overview of students' responses to the developed user guide product. The trial was carried out 2 times on different days. Some dictionaries in their use require *sharaf* science, which is the science that studies word changes (Fuad, 2019). However, some dictionaries are compiled practically, so they do not require understanding *Sharaf* first. Before opening the dictionary, you should follow the practical tips for using the dictionary, namely:

First, look for a dictionary following the discipline being read. This can increase and expand knowledge about the word you seek according to the terms commonly used in the dictionary. Second, read carefully the front of the dictionary first to make it easier to use and find the word you are looking for. Third, pay attention to the form of the word you are looking for carefully (Yamin et al., 2022). By paying attention: For dictionaries that require the knowledge of *sharaf*, the dictionary searches for the first word using *fi'il madhi*. If the form of the word is past (*madhi*), the search can be carried out directly. However, if the form is not *madhi*, for example, "*maktuubun*", then the *fi'il madhi* is sought, which is "*kataba*". Look at the first letter, "*kaf*," then trace to the following letter until the word "*kataba*" is formed.

For dictionaries that do not require *sharaf*, to use this dictionary, it is not necessary to know the root word of the sentence. Just look for the Arabic word. For example, "*Maktuubun*," then immediately look for the first letter, namely "*Mim*," and the next word "*ma-k-tuu-bun*." With this dictionary, there is no need to learn the science of *sharaf* first because you can directly look for the meaning of the Arabic language that will be sought.

In some Arabic dictionaries, some abbreviations must be understood (Nasarudin, 2020); for example, If the acronym is the letter "*Jim*," it means plural, a word that shows a large number. If the abbreviation is "*mim*," it means *muannats*; if it is abbreviated "*dal kha*," it means that the word is foreign. When choosing a definition, do not be too quick to compare it with the existing meaning and match the form read. Because dictionaries usually have many meanings. Pay attention to example sentences because example sentences will be able to clarify the meaning sought. The words and meanings found are recorded to become treasures and will increase linguistic knowledge to understand various language disciplines (Fauzan, 2020).

Product use test

The trial of use uses digital dictionary guidelines in the Muslim research and technology digital dictionaries on 20 PBA STAIN Mandailing Natal students. The trial was implemented by providing guidelines for using Muslim research and technology digital dictionaries, and then students followed the steps in the guidelines. After completion, students are given a questionnaire in the form of assessment items against the guidelines for using the dictionary. The aspects assessed by the students include content, presentation, and language (Sholihatin, 2020).

The results from the questionnaire distributed to 20 Arabic students at STAIN Mandailing Natal strongly indicate the effectiveness and user-friendliness of the digital dictionary usage guidelines. Here's a deeper analysis of the data and its implications for *Sharaf* learning: 1) 95.4% of Respondents Found the Guidelines Feasible to Use. A high percentage of students found the guidelines practical, suggesting that the design and structure of the guide are accessible and usable. This is important for *Sharaf* learning, where understanding how to use a digital dictionary effectively can aid in identifying word forms, roots, and

patterns, which is essential for mastering *Sharaf*. 2) 90% of Respondents Found the Guidelines Very Helpful. Most students deemed the guidelines helpful, indicating that the instructions provided clear and valuable information. For *Sharaf*, where morphological analysis and word form recognition are key, a helpful guide can assist students in navigating complex dictionary tools, ultimately improving their ability to study and apply *Sharaf* concepts. 3) 92% of Respondents Found the Instructions Clear.

Clarity in the instructions is crucial. Since *Sharaf* involves intricate rules of word formation and morphology, clear guidance ensures that students can accurately apply these concepts using the digital dictionary. Clear instructions minimize confusion, making it easier for students to grasp and practice *Sharaf* effectively. 4) 95.3% of Respondents Were Able to Follow the Instructions. Many students could follow the instructions, suggesting the guide is straightforward and intuitive. This is particularly relevant for *Sharaf* learners, who often need to reference and cross-check word forms. A guide that students can easily follow enhances their ability to practice *Sharaf*, independently strengthening the learning experience. 5) 95.5% of Students Understood the Language Used in the Guidelines. The language of the guidelines was highly accessible to students. Since *Sharaf* requires an understanding of language structure and technical terms, using language that students can easily comprehend is crucial for facilitating their understanding of complex concepts. This indicates that the digital dictionary guide is well-suited for students, enabling them to learn *Sharaf* concepts without language barriers.

Effectiveness test

Table 1: Group Statistics

Class	N	Mean	Std. Deviation	Std.	Error
				Mean	
Results of Using Digital Dictionary Guidelines	20	66.4000	3.34664	.74833	
Pretest	20	75.9000	5.80290	1.29757	
Posttest					

Source: SPSS

This table provides descriptive statistics for two groups: one for the pretest and one for the posttest. It shows the means, standard deviations, and standard errors of the mean for both the pretest and posttest. Pretest: N = 20 (the number of participants). Mean = 66.40: The average score of participants on the pretest (before using the digital dictionary guidelines). Standard Deviation = 3.35. This data shows the spread of scores around the mean. A more minor standard deviation means the scores are closer to the mean. Standard Error of Mean = 0.75. This reflects the precision of the mean estimate. A smaller value indicates a more accurate estimate of the population mean. Posttest: N = 20 (again, 20 participants). Mean = 75.90. The average score on the posttest (after using the digital dictionary guidelines). Standard Deviation = 5.80. The scores are more spread out than the pretest, indicating more variability. Standard Error of Mean = 1.30: The posttest standard error is larger than the pretest, indicating that the mean estimate is less precise for the posttest group.

Table 2: Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	t	df	Significance One-Sided P	Significance Two-Sided p	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
										Lower	Upper
Results of Using Digital Dictionary Guidelines	Equal variances assumed	5.913	.020	-6.342	38	<,001	<,001	-9.50009	1.49789	-12.53233	-6.46767
	Equal variances are not assumed.			-6.342	30.380	<,001	<,001	-9.50009	1.49789	-12.55750	-6.44250

Source: SPSS

The t-test results compare the means of the pretest and post-test groups to determine if there is a statistically significant difference between them. Levene's Test for Equality of Variances, $F = 5.913$, $\text{Sig.} = 0.020$ indicates that the variances of the two groups are significantly different ($p < 0.05$), so we use the "Equal variances not assumed" row for the t-test. T-test for Equality of Means, $t = -6.342$, $df = 38$, p (two-tailed) < 0.001 : This result shows a statistically significant difference between the pretest and posttest means, with a p-value less than 0.001 (less than 0.1% chance the result is due to random variation). Mean Difference = -9.50: The posttest group scored 9.5 points higher than the pretest group, with a standard error of 1.498, 95% Confidence Interval of the Difference: The confidence interval for the mean difference ranges from -12.53 to -6.47, confirming the statistical significance as it does not include zero. Two-tailed $p = <0.001$: This proves the difference between the groups is highly significant. This p-value confirms that the difference between the pretest and posttest groups is statistically significant. We can conclude that the digital dictionary guidelines significantly affected the participants, leading to higher post-test scores.

Table 3: Independent Samples Effect Sizes

		Standardizer ^a	Point Estimate	95% Confidence Interval	
				Lower	Upper
Results of Using Digital Dictionary Guidelines	Cohen's d	4.73675	-2.006	-2.762	-1.231
	Hedges' correction	4.83288	-1.966	-2.707	-1.207
	Glass's delta	5.80290	-1.637	-2.431	-.817

Source: SPSS

The very small p-value (<0.001) from the t-test indicates that the difference between the pretest and post-test is doubtful due to chance. This means that the digital dictionary guidelines significantly affected participants' scores. Effect Size: the effect sizes (Cohen's $d = 4.74$, Hedges' $g = 4.83$, and Glass's $\delta = 5.80$) all show that the difference between the pretest and post-test is statistically significant and practically meaningful. The values suggest a tremendous impact, meaning the digital dictionary guidelines strongly affected participants' performance.

We can conclude that the digital dictionary guidelines improved participants' test scores based on the statistical significance (p-value <0.001) and the significant effect sizes. The magnitude of the effect is substantial, making the guidelines a highly impactful tool for enhancing learning or performance. The combination of a highly significant p-value and substantial effect sizes strongly supports the conclusion that the digital dictionary guidelines improved participants' performance between the pretest and posttest.

Discussion

The significant results from the t-test, with a very small p-value (<0.001) and large effect sizes (Cohen's $d = 4.74$, Hedges' $g = 4.83$, Glass's $\delta = 5.80$), clearly indicate that the digital dictionary guidelines had a substantial and meaningful impact on participants' performance. These findings suggest that the digital dictionary intervention was highly effective in improving participants' scores, supporting the notion that digital tools can have a powerful influence on educational outcomes. This conclusion aligns well with the broader context of digital literacy's role in modern education.

Digital literacy has become a crucial aspect of modern education, as highlighted by who notes the shift from traditional methods to an era where digital technology is central to all areas of life (Chi et al., 2023). In today's educational landscape, the ability to engage with digital tools is not optional but necessary for both students and educators. This study's findings, showing substantial improvements in participants' test scores, underline the importance of integrating digital literacy into educational practices to enhance learning outcomes. The digital dictionary guidelines in this study acted as an essential tool to support and improve the participants' understanding, illustrating the practical application of digital literacy in fostering academic success (Huda & Ulfah, 2019).

Furthermore, in the context of Arabic language education, the role of digital literacy is particularly significant. Tools such as Arabic digital dictionaries and online learning platforms have revolutionized how Arabic is taught and learned (Siregar et al., 2023). The current study highlights how digital tools, like digital dictionaries, can be crucial in enhancing language learning, including complex areas like *Sharaf*, which require a precise understanding of Arabic grammar. Previous research has demonstrated the positive impact of digital dictionaries on language learning outcomes, including vocabulary acquisition and translation (Mahesta & Arianto, 2012). This study further supports the notion that digital literacy, particularly using digital dictionaries, can significantly affect learning in fields like *Sharaf*, as it helps students access information more efficiently and understand complex concepts.

The study also aligns with the growing body of research that emphasizes the role of technology in improving learning outcomes (Foster et al., 2024), which discusses how digital media can enhance student motivation and content access. The enormous effect sizes in this

study further reinforce the idea that technology, especially digital dictionaries, is a potent tool for improving comprehension and academic performance. This study's combination of statistically significant results and large effect sizes strongly supports the conclusion that digital dictionary guidelines improve. This supports the broader idea that digital literacy is an essential skill in modern education, particularly in language learning, and provides further evidence for the transformative potential of digital tools in the educational sector.

CONCLUSION

The findings of this study demonstrate that digital dictionary guidelines are an effective tool in improving students' understanding of *Sharaf*—the product trial using the Arabic-Indonesian Ristek Muslim dictionary app with guidance provided through Classroom media. The students were instructed to search for Arabic vocabulary, precisely the word "kataba," and the trial aimed to assess students' initial responses to the user guide. The guide emphasized two key approaches: For dictionaries requiring *Sharaf* knowledge, Students search for the past tense form of the verb, such as "kataba" for the word "maktūbun." For dictionaries not requiring *Sharaf*, Students can search directly by the word's first letter, such as "maktūbun," without knowing the root form. The guide also advised paying attention to abbreviations in the dictionary and example sentences to understand multiple meanings. This approach helps students expand their vocabulary and improve their language comprehension. The study's statistical results, with significant improvements in student performance, strongly support this conclusion. Moving forward, research should focus on developing more interactive and integrated digital dictionary features that specifically address the needs of *Sharaf* learners, ensuring that this tool continues to play a central role in improving Arabic language education.

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AUTHOR CONTRIBUTIONS STATEMENT

AR is the primary researcher who conducts experiments and product development based on the R&D, MA, AWR, MBAB, SN, and MIAK methods are all teams in this research who are in charge and share a role in data collection and completion of this research.

REFERENCES

- Ajeng Rahmawati, R. (2023). Implementasi Literasi Digital Pada Pembelajaran Maharah Qira'ah Al-Mutawassithah. *An Naba*, 6(1), 78–92. <https://doi.org/10.51614/annaba.v6i1.215>
- Alhafidz, A. Z. (2023). 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>
- Ali, J. (2018). Outbound As The Alternative Method To Have Fun Arabic Learning. *Alsinatuna*, 3(2), 5–24. <https://doi.org/10.28918/alsinatuna.v3i2.1276>
- Bahy, M. B. A., Ainin, M., Rosyidi, A. W., Rahman, A., Syaifullah, M., & NaFan, A. W. (2024). Digitalization of Arabic Language Textbook Based on Communicative Learning to Improve the Linguistic Competence of Madrasah Tsanawiyah Students. *An Nabighoh*, 26(1), 67–78. <https://doi.org/10.32332/annabighoh.v26i1.67-78>
- Bridge, C., Horey, D., Loch, B., Julien, B., & Thompson, B. (2023). The Impact of an Innovators Group on the Development of a Culture of Innovation in the Use of Educational Technologies. *Australasian Journal of Educational Technology*, 39(6), 17–32. <https://doi.org/10.14742/ajet.8575>
- Chaldun, W. (2022). Literasi Digital: Plus dan Minus dalam Pembelajaran Bahasa Arab di Era Milenial. *TALENTA Conference Series: Local Wisdom, Social, and Arts*, 5(2), 205–208. <https://doi.org/10.32734/lwsa.v5i2.1377>
- Chi, A., Chen, L.-K., Chang, Y.-C., Lee, S.-H., & Chang, J. S. (2023). Learning to Paraphrase Sentences to Different Complexity Levels. *Transactions of the Association for Computational Linguistics*, 11, 1332–1354. https://doi.org/10.1162/tacl_a_00606
- Costa, A., Rodrigues, F., Pitarma, R., & Ferreira, M. E. (2024). Design and validation of an instrument to evaluate the workgroup methodology in university students. *International Journal of Educational Research Open*, 7, 100351. <https://doi.org/10.1016/j.ijedro.2024.100351>
- 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>
- Fauzan, M. (2020). Pemanfaatan Media Digital Untuk Pengenalan Angka Arab. *Prosiding Konferensi Nasional Bahasa Arab*, 352–364. Retrieved from <http://prosiding.arabum.com/index.php/konasbara/article/view/722>
- Fitria, A. (2014). Penggunaan Media Audio Visual Dalam Peroses Pembelajaran. *Cakrawala Dini*, 5(2), 57-62. <https://doi.org/10.17509/cd.v5i2.10498>
- Foster, J. K., Korban, M., Youngs, P., Watson, G. S., & Acton, S. T. (2024). Automatic Classification of Activities in Classroom Videos. *Computers and Education: Artificial Intelligence*, 6, 100207. <https://doi.org/10.1016/j.caeai.2024.100207>
- Fuad, F. (2019). Analisis Kesulitan Belajar Bahasa Arab. *AL-Lisan: Jurnal Bahasa (e-Journal)*, 4(2), 161–169. Retrieved from <https://www.journal.iaingorontalo.ac.id/index.php/al/article/view/760>
- Hapsari, S. A., & Pamungkas, H. (2019). Pemanfaatan Google Classroom Sebagai Media Pembelajaran Online di Universitas Dian Nuswantoro. *WACANA: Jurnal Ilmiah Ilmu Komunikasi*, 18(2), 225–233. <https://doi.org/10.32509/wacana.v18i2.924>
- Huda, N., & Ulfah, N. (2019). Pengembangan Kamus Arab-Indonesia Sebagai Penunjang Penggunaan Buku Ajar Madrasah Tsanawiyah di Kelas VIII. *Alfazuna: Jurnal*

- Pembelajaran Bahasa Arab Dan Kebahasaaraban*, 3(2), 211–230.
<https://doi.org/10.15642/alfazuna.v3i2.533>
- Luo, J., Cherry, C., & Foster, G. (2024). To Diverge or Not to Diverge: A Morphosyntactic Perspective on Machine Translation vs Human Translation. *Transactions of the Association for Computational Linguistics*, 12, 355–371. https://doi.org/10.1162/tacl_a_00645
- Mahesta, L. K., & Arianto, F. (2012). Pengembangan Media Kamus Digital Sistem Isyarat Bahasa Indonesia Berbasis Android di SMP-LB Karya Mulia Surabaya. *Jurnal Mahasiswa Teknologi Pendidikan*, 1(1), 1–7. Retrieved from <https://ejournal.unesa.ac.id/index.php/jmtp/article/view/22557>.
- Mustaifiy, A. S. H. (2023). Peluang Dan Tantangan Pengembangan Literasi Digital Dalam Pembelajaran Bahasa Arab Pada Jenjang Pendidikan Dasar. *Fashluna*, 4(1), 9–15. <https://doi.org/10.47625/fashluna.v4i1.492>
- Mutholib, A., Munjiah, M., & Agny, A. S. (2023). The use of gamification in teaching writing skills to junior high students. *Ta'lim Al-'Arabiyyah: Jurnal Pendidikan Bahasa Arab Dan Kebahasaaraban*, 7(1), 73–87. <https://doi.org/10.15575/jpba.v7i1.23894>
- Nasarudin, N. (2020). Penggunaan Kamus Dwi Bahasa Sebagai Sumber Belajar Dalam Penguasaan Kosakata Arab Mahasiswa Fakultas Hukum Universitas Muhammadiyah Mataram. *Prosiding Seminar Nasional Penelitian Dan Pengabdian Kepada Masyarakat*, 1(1), 229–240. <https://doi.org/10.24967/psn.v1i1.828>
- Nasution, S., Asari, H., Al-Rasyid, H., Dalimunthe, R. A., & Rahman, A. (2024). Learning Arabic Language Sciences Based on Technology in Traditional Islamic Boarding Schools in Indonesia. *Nazhruna: Jurnal Pendidikan Islam*, 7(1), 77–102. <https://doi.org/10.31538/nzh.v7i1.4222>
- Nurhayati, F. (2020). Pembelajaran Ilmu Nahwu Dengan Metode Qurani. *Al-Urvatul Wutsqo : Jurnal Ilmu Keislaman Dan Pendidikan*, 1(1), 1–4. <https://doi.org/10.62285/alurwatulwutsqo.v1i1.4>
- Putri Andhini, Maya Dewi Kurnia, Jaja, J., & Cahyo Hasanudin. (2022). Penggunaan Aplikasi Google Classroom sebagai Media Pembelajaran di Era Digital. *Jurnal Pendidikan Dan Sastra Inggris*, 2(3), 01–08. <https://doi.org/10.55606/jupensi.v2i3.644>
- Rahimadinullah, M. Z. 'Afafarrasyihab, Mohammad Ahsanuddin, Irhamni, & Morhi, R. (2023). Development of Word Root-Based Digital Dictionary for Shorof Mastery. *Izdihar: Journal of Arabic Language Teaching, Linguistics, and Literature*, 5(3), 265–284. <https://doi.org/10.22219/jiz.v5i3.23024>
- Rahman, A. (2023). Penerapan Metode Penelitian di Sekolah Tinggi Agama Islam. *Tadris : Jurnal Penelitian Dan Pemikiran Pendidikan Islam*, 17(2), 66–76. <https://doi.org/10.51675/jt.v17i2.665>
- Sanchez Diaz, M. de las N., Morgado, B., & Seale, J. (2024). Access and Participation: the Use of Technologies as Tools for Inclusion by Spanish University Lecturers. *Australasian Journal of Educational Technology*, 40(1), 94–109. <https://doi.org/10.14742/ajet.8178>
- Sholihatini, L. (2020). Pengembangan Media Pembelajaran Bahasa Arab Berbasis Aplikasi Plotagon Pada Siswa MA NU Petung Panceng Gresik. *Prosiding Konferensi Nasional Bahasa Arab*, 320–326. Retrieved from <https://prosiding.arab-um.com/index.php/konasbara/article/view/718>

- Siregar, Z. U., Fauzia, E. L., & Fathurrahman, Y. (2023). Development of Arabic Language Skills for Students at Syamsul Ulum Muhammadiyah Bandung Islamic Boarding School | Pengembangan Keterampilan Berbahasa Arab Santri Pondok Pesantren Syamsul Ulum Muhammadiyah Bandung. *Ta'lim Al-'Arabiyyah: Jurnal Pendidikan Bahasa Arab & Kebahasaaraban*, 7(1), 156–174. <https://doi.org/10.15575/jpba.v7i1.24453>
- Susilana, R., Rullyana, G., Ardiansah, & Wulandari, Y. (2022). Pedagogia Dictionary: Web Application Development. *International Journal of Instruction*, 15(1), 197–218. Retrieved from <https://e-iji.net/ats/index.php/pub/article/view/442>
- Yamin, M., Putri, A. M., Rohimah, Chairunnisa, S., & Chaidar, M. R. (2022). Kamus Digital Sebagai Sarana Hifdzul Mufrodah di Kelas VII-1 Madrasah Tsanawiyah Negeri Samarinda. *Jurnal Tarbiyah & Ilmu Keguruan (JTIK) Borneo*, 3(3), 37–45. <https://doi.org/10.21093/jtikborneo.v3i3.6388>
- Yunisa, M. (2023). Problematika Pembelajaran Bahasa Arab dalam Aspek Ilmu Nahwu dan Sharaf pada Siswa Kelas X Madrasah Aliyah Laboratorium Jambi. *Ad-Dhuha: Jurnal Pendidikan Bahasa Arab Dan Budaya Islam*, 3(1), 63–79. Retrieved from <https://online-journal.unja.ac.id/Ad-Dhuha/article/view/19985>
- Zakiah, N. (2021). Problematika Pembelajaran Bahasa Arab Siswa Madrasah Tsanawiyah Al Islamiyah Kotabumi Lampung Utara. *Indonesian Journal of Instructional Technology*, 2(1), 52–66. Retrieved from <https://journal.kurasinstitute.com/index.php/ijit/article/view/105>