



PILOT STUDY AL-MAAHIRAH APP IN ENHANCING ARABIC LEARNING: A CASE STUDY AT AL-KHAIRIYAH HIGH SCHOOL, INDONESIA

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Abstract

The Arabic language proficiency of students at Al-Khairiyah Senior High School Kelapian Banten appears to be hindered by several factors, including a lack of interactive learning tools such as Android-based applications, gaps in instructional content, low student engagement, limited teacher training, and the absence of supplementary educational resources like LKPD. Even though Azzahra stated, that Android-based Arabic language worksheets are quite effective in improving students' Arabic learning outcomes. A study was conducted to evaluate the impact of the "Al-Maahirah" application on the Arabic learning performance of tenth-grade students at the school. The research utilized a quantitative experimental approach, specifically a pre-experimental design with a one-group pretest-posttest method. The sample consisted of 13 students, with data collected through assessments and analyzed using the Wilcoxon test and the N-Gain test. The results indicated that the Asymp. Sig. (2-tailed) value was 0.001, which is below 0.05, suggesting a significant difference between pretest and posttest scores. Moreover, the results of the N-Gain test showed a score of 0.715 or in percentage form 71.5%, which interprets a high score, and an effective score of 0.89824, which is included in the large category. Based on these findings, it was determined that the "Al-Maahirah" application contributed significantly to improving students' Arabic language learning outcomes during the 2024-2025 academic year.

Keywords: Arabic Language Education, Educational Technology, Mobile Learning

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INTRODUCTION | مقدمة

Innovation Knowledge and technology that continue to develop and increase automation and digitalization trigger transformation in various aspects of human life, including education and learning. (Rahayu et al., 2024) To adapt to these changes, educators are encouraged to integrate digital practices into their teaching methods, fostering interactive, personalized, collaborative, creative, and innovative learning environments that enable students to remain engaged regardless of location. (Puspa et al., 2023) This aims to facilitate students to have competence in thinking skills in the 21st century, namely critical thinking, communication, collaboration, and creativity, or skills known as "The 4C Skills. (Mardhiyah et al., 2021)

In this case, Indonesia presents an independent curriculum that is designed to adapt to developments in the 21st century by integrating technology through the use of digital devices and online learning platforms. (Indarta et al., 2022) One of the integrations of technology in learning is by utilizing mobile devices such as smartphones and tablets or what is called mobile learning. (Dias & Victor, 2022) Among the benefits are making lessons more interesting and relevant, facilitating students' needs for flexible and easily accessible education, assessing

students in real-time, and reducing teacher workload.(Parveen & Ramzan, 2024)

Mobile learning has very diverse types that can be used in learning, including learning Arabic.(Goundar & Kumar, 2022) One of them is by integrating LKPD (student worksheet) based on the Android application. Some of the advantages offered by mobile app-based Arabic language learning are increasing interest in learning, stimulating student motivation, providing direct experience to students, making it easier for students to understand Arabic, increasing vocabulary mastery, and learning becoming more active and interactive. (Nurul Fadila et al., 2025) This was confirmed by Azzahra, that Android-based Arabic language worksheets are quite effective in improving students' Arabic learning outcomes.(Azzahra, 2024)

Given an initial investigation into the learning of the Arabic language among 10th-grade students at Al-Khairiyah Senior High School Kelapian Banten, it was discovered that the academic performance of these students in Arabic is still subpar, remaining below the KKM score set by the school, with only 61.53% achieving passing marks. This issue arises from a learning environment that is often repetitive and dominated by the teacher, as the Arabic instructors have yet to incorporate interactive educational media or Android applications into their lessons. Additionally, some material has not been taught well, students are not involved enough, there is a lack of training provided by teachers, and there is no availability of supporting teaching materials such as student worksheets which are used to make it easier for students to access Arabic language materials and exercises so that they have a strong understanding.

In light of the issues outlined, the researcher aims to explore the implementation of an Android-based learning application in the Arabic language curriculum for 10th graders at Al-Khairiyah Senior High School, Kelapian Banten, by looking at students' current learning interest in the latest technology-based learning.(Rahmawati et al., 2021) The application is the "Al-Maahirah" application, an Android application for interactive Arabic language learning, especially for learning listening skills and reading skills. This aligns with the foreign language learning theory of the Input Hypothesis, as proposed by Stephen D. Krashen, which suggests that understanding through listening and reading skill must precede the development of speaking and writing skills. According to this theory, language is acquired naturally, rather than through memorizing rules or grammatical drilling.(Luo, 2024) This application was created for the first semester of class 10 SMA or equivalent which includes three themes, namely greetings and introductions, family and home, as well as school and the surrounding environment. In each theme, there are learning objectives, vocabulary, Arabic audio from native speakers for listening material, Arabic text for reading material, material explanations, and exercises that include HOTS questions, so that students can learn independently according to their needs, and practice their understanding. This application can send students' answers directly to the teacher so that teachers can find out students' understanding of the material. The "Al-Maahirah" application can be accessed at the following link: https://drive.google.com/drive/folders/1r9bdFYDjUJYh4L7oqhzTgLOwuX6ryO_s

Building on this information, the researcher has chosen to further investigate the topic titled "Effectiveness of the "Al-Maahirah" Application on Arabic Language Learning Outcomes for 10th Grade Students at Al-Khairiyah Senior High School Kelapian Banten." It is hoped that implementing the "Al-Maahirah" application in Arabic language instruction will enhance the academic performance of 10th-grade students at Al-Khairiyah Senior High School Kelapian Banten and contribute valuable feedback for future enhancements or developments in the Arabic language learning process.

METHOD

منهج

Research Design

The research adopts a quantitative research method, concentrating on the examination of numerical data, which are then analyzed through appropriate statistical methods to assess hypotheses. (Hardani. dkk, 2020). The research approach selected is experimental. As noted by Sukmadinata, experimental research is a method that is particularly suited for examining causal relationships (Sukmadinata, 2016). Sugiyono further explained that the experimental research method is utilized to investigate the effects of specific treatments on other variables. (Sugiyono, 2010)

The research design implemented in this study follows Pre-Experimental Designs, a framework aimed at testing research hypotheses without stringent control over external variables that may affect the experiment's outcomes. The chosen design is known as One Group Pretest-Posttest Design. Within this framework, one group undergoes a pretest to assess students' initial capabilities before engaging with the "Al-Maahirah" application. Following this, the treatment consists of incorporating the "Al-Maahirah" application into Arabic learning. After the treatment phase, a posttest is administered to evaluate the enhancement in students' Arabic learning results post-usage of the "Al-Maahirah" application.

Participant (Subject) Characteristics

The study's population comprises 10th-grade students from Al-Khairiyah senior high school Kelapian Banten during the 2024-2025 academic year, totaling 13 students. The researcher opted to include the complete population as the research sample (saturated sampling). Data analysis was conducted using descriptive analysis, tests for analysis requirements, hypothesis testing, N-Gain test, and effect size.

RESULT

نتائج

Descriptive Analysis**Table 1.** Result of descriptive analysis

Descriptive Statistics							
	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
Pretest Arabic	13	40	20	60	37.69	12.352	152.564
Posttest Arabic	13	30	60	90	74.62	8.771	76.923
Valid N (listwise)	13						

According to a descriptive analysis table generated using IBM SPSS 22, the sample size for both the pre-test and post-test consisted of 13 students. In the pre-test results, the mean score was 37.69, with a standard deviation of 12.352, a calculated difference value of 152.564, and a range of 40. The lowest score recorded was 20, while the highest score reached 60. In the post-test results, the mean score was 74.62, accompanied by a standard deviation of 8.771, a difference value of 76.923, and a range of 30, with the minimum score being 60 and the maximum score totaling 90.

Analysis Requirements Test**Normality test****Table 2.** Normality test result

Tests of Normality							
	Kelas	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Nilai Tes	Pre Test	.195	13	.190	.931	13	.353
	Post Test	.316	13	.001	.846	13	.025

a. Lilliefors Significance Correction

In examining the output provided, the Shapiro-Wilk normality test for the pre-test yields a significance value of 0.353, which exceeds the 0.05 threshold, suggesting that the data follows a normal distribution. In contrast, the post-test significance value is 0.025, falling below 0.05, indicating that the data distribution is not normal.

Homogeneity Test

Table 3. Homogeneity test result

Test of Homogeneity of Variance					
		Levene Statistic	df1	df2	Sig.
Nilai Tes	Based on Mean	1.871	1	24	.184
	Based on Median	1.765	1	24	.197
	Based on Median and with adjusted df	1.765	1	23.838	.197
	Based on trimmed mean	1.915	1	24	.179

Looking at the above output, the value is known to be significant (Say) To test homogeneity, it is $0.184 > 0.05$, so the distribution of data for the pre-test and post-test is homogeneous.

Hypothesis Test

According to the findings from the normality and homogeneity tests, the pre-test data showed a normal distribution, whereas the post-test data did not. The homogeneity test revealed that both the pre-test and post-test data were homogeneous. Consequently, the researcher applied a non-parametric statistical test, specifically the Wilcoxon test, to examine the effect of the "Al-Maahirah" application on the Arabic learning outcomes for tenth-grade students at Al Khairiyah Kelapian Banten High School.

Table 4. Result of test Wilcoxon Signed Ranks

Ranks		N	Mean Rank	Sum of Ranks
Posttest Bahasa Arab - Pretest Bahasa Arab	Negative Ranks	0 ^a	.00	.00
	Positive Ranks	13 ^b	7.00	91.00
	Ties	0 ^c		
	Total	13		

a. Posttest Bahasa Arab < Pretest Bahasa Arab

b. Posttest Bahasa Arab > Pretest Bahasa Arab

c. Posttest Bahasa Arab = Pretest Bahasa Arab

Based on the above table, shows that the Wilcoxon Signed Ranks test result shows the score changes before and after treatment is given. Positive ranks with an N value of 13 meant that the results of the thirteen samples improved from the pre-test to the post-test. On average The average rank or improvement is 7.00, and the total rank or number of positive ratings is 91.00. The value of Ties is 0, indicating that there is no similarity between the values of the pre-test and the post-test.

Table 5. Result of test Wilcoxon

Test Statistics ^a	
	Posttest Bahasa Arab - Pretest Bahasa Arab
Z	-3.239 ^b
Asymp. Sig. (2-tailed)	.001

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

The results from the "tes statistics" indicate that the Asymp.Sig. (2-tailed) significance value is 0.001, which is below the 0.05 threshold, so the null hypothesis (H0) is rejected, while the alternative hypothesis (Ha) is accepted. This suggests that there is a significant difference in Arabic language learning outcomes before and after implementing the "Al-Maahirah" application. Therefore, it can be inferred that the application has an influence on the Arabic language learning achievements of tenth-grade students at Al-Khairiyah Senior High School Kelapian Banten during the 2024-2025 academic year.

N-Gain Test

The researcher conducted an N-Gain test to determine the effectiveness of using the "Al-Maahirah" application in improving the results of learning the Arabic language among the tenth-grade students at Al-Kharyiah Kelapian Banten High School by measuring the improvement of the students' results before and after using it.

Table 6. Result of N-Gain Test

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
NGain	13	.50	1.00	.7150	.15597
NGain_Persen	13	50.00	100.00	71.5018	15.59702
Valid N (listwise)	13				

Based on the above table, indicates that the N-Gain score is 0.715, which is interpreted as a high score. The N-Gain percentage is 71.5%, indicating the "effective" category. This indicates that the "Al-Maahirah" application is effective in improving Arabic language learning outcome among the tenth-grade students at Al-Khairiyah Kelapian Banten High School.

Effect Size

The researcher calculated the effect size to determine how well the "Al-Maahirah" app improves the learning outcomes of the Arabic language among tenth-grade students at Al-Kharyiah Kelapian Banten High School. With the following calculation:

$$r = \left| \frac{z}{\sqrt{N}} \right|$$

$$r = \left| \frac{-3.23866}{\sqrt{13}} \right|$$

$$r = -0.89824$$

Based on the calculations above, the researcher concluded that the value of -0.89824 is in the large category.

DISCUSSION

مناقشة

The findings from the Wilcoxon test, conducted at a 5% significance level, reveal that the significance value is 0.001, which is lower than 0.05. This outcome leads to the rejection of the null hypothesis (H_0) and the acceptance of the alternative hypothesis (H_a), indicating a difference in Arabic language learning outcomes before and after using the "Al-Maahirah" application. Furthermore, the N-Gain test obtained a result of 0.715, and a percentage of 71.5%, which means that the results are effective. In addition, it is reinforced by the effect size results of 0.89824 with a large category. And the sample used in this study only amounted to 13 students which allows all students to get the same learning during the study using the "Al-Maahirah" application. For this reason, the average posttest result of 74.62 is greater than the average pretest result of 37.69. Thus, the researchers concluded that the "Al-Maahirah" application is effective in improving Arabic learning outcomes among the tenth-grade students at Al-Khairiyah senior high school Kelapian Banten for the academic year 2024-2025. However, because there is no control group, the researchers is less able to control other factors that influence samples outside the study.

This is possible because teaching the Arabic language before using the "Al-Maahirah" application was still boring, the teaching was centered on the teacher, and there was a lack of provision of listening material or exercises from the native Arabic speaker, and exercises after teaching. In addition, the student's accompanying book or workbook was not used while teaching Arabic in the classroom, and the students only acquired the material from what the teacher conveyed. The treatment presented in this research is the use of an exercise booklet based on the Android program in teaching the Arabic language, which causes the educational atmosphere to be more interactive by involving students in learning, providing listening material from a native Arabic speaker with which it facilitates students in understanding the use of words and phrases in different situations, and providing various exercises so that students can understand concepts better and mention the material for a longer period, and develop their critical thinking skills. Using an exercise booklet based on the Android program makes learning fun and interesting, and helps students understand and review the material. For this reason, the mean result of the posttest is 74.62, greater than The average result of the pretest was 37.69. It appears that the "Al-Maahirah" application is effective in improving the Arabic learning outcome for the tenth-grade students at Al-Khairiyah Kelapian Banten High School in the academic year 2024-2025.

The "Al-Maahirah" application includes technology-based learning media which has more advantages than print media. As stated by Rahmawati, et al, several advantages that can be obtained from Android application-based learning are that learning is not limited by space and time, the learning process is faster, and all learning material is presented digitally. (Rahmawati et al., 2021, pp. 1–2) Apart from that, Bustam, et al also stated that the use of technology in learning Arabic, especially the use of multimedia, audio, video, and images is very effective in enriching material and improving the quality of Arabic language learning, providing a more interactive and interesting learning experience for students. (Bustam et al., 2024, p. 68) This is also confirmed by Hasan, et al that the use of learning applications in learning Arabic can make it more fun because it uses interesting and interactive media. (Hasan et al., 2024, p. 193) Zulkepli added that learning applications significantly increase vocabulary mastery and student engagement, as well as encouraging positive learning experiences. (Zulkepli et al., 2024)

Moreover, the "Al-Maahirah" application can improve students' Arabic learning outcomes, especially maharah istima' and maharah qiroah, because it includes these two materials. In line with the opinion of Keshav, et al. that the use of learning applications can save time and energy,

and of course will improve the quality of learning outcomes, especially in learning Arabic. (Keshav et al., 2022, p. 93) This is confirmed by Nisa that the use of applications in learning Arabic can improve the listening skills of high school students. (Nisa, 2021, p. 119) Apart from that, Muhammad also stated that the use of applications in learning Arabic can improve the reading skills of students. (Muhamad et al., 2023, p. 159)

Additionally, the "Al-Maahirah" application features tools for explaining materials and evaluating learning, allowing users to deepen their understanding. An explanation of its grammar also accompanies the explanation of the material. The explanation also uses Indonesian, so that users can understand the material well, especially for users whose first language is Indonesian. Unlike the Mondly and Duolingo applications, which do not provide in-depth explanations of the material, especially in terms of grammar, the Duolingo application does not use Indonesian as the language of instruction. (Hapianingsih & Aziz, 2025) In terms of evaluation, both applications are not suitable for learning Arabic in class because this application is intended for the general public, while the "Al-Maahirah" application is specifically for high school/Islamic high school students, especially grade 10 students. In addition, in reading learning, both applications do not provide long texts studied in class. (Faroid et al., 2025) Thus, both applications can only support learning Arabic in class, while the "Al-Maahirah" application can replace learning Arabic in class, especially in listening and reading.

CONCLUSSION

خاتمة

The researcher determined that the average post-test score of 74.62 was greater than the average pre-test score of 37.69, indicating that the treatment had an impact. Based on the results of the Wilcoxon test, the Asymp.Sig. (2-tailed) value was 0.001, which means it is less than 0.05, so H_0 is rejected and H_a is accepted. Furthermore, the N-Gain test obtained a result of 0.715, and a percentage of 71.5%, which means that the results are effective. In addition, it is reinforced by the effect size results of 0.89824 with a large category. Thus, the researcher concluded that the "Al-Maahirah" application is effective in improving Arabic learning outcomes among the tenth-grade students at Al-Khairiyah senior high school Kelapian Banten for the academic year 2024-2025. The researcher acknowledges that this study has many flaws and errors that need to be addressed. Therefore, the researcher hopes that further studies are needed to test the Al-Maahirah application with a larger sample and RCT design.

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