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The Effectiveness of Environmental Media Utilization in Improving Arabic Speaking Skills among Junior Secondary Students

فعالية توظيف الوسائل البيئية لترقية مهارة الكلام في اللغة العربية لطلاب المرحلة المتوسطة

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ABSTRACT

This study aimed to examine the effectiveness of environmental media utilization in improving the Arabic speaking skills of Grade VII-A students at MTs.N 6 Central Maluku. The study employed a quantitative approach using a one-group pretest–posttest design. The research sample consisted of 25 students selected through the total sampling technique. Data were collected through oral tests and classroom observations. The data were analyzed using the Shapiro–Wilk normality test, the paired-samples t-test, and the N-gain score. The results showed that the students' mean score increased from 63.84 in the pretest to 88.04 in the posttest. The paired-samples t-test indicated that the calculated t-value (83.831) was higher than the critical t-value (2.064), with a p-value of 0.000 ($p < 0.05$), leading to the rejection of the null hypothesis. The average N-gain score was 0.6866, which falls into the moderate category. Classroom observation also revealed an improvement in students' learning activities from 47.5% (less active) to 87.5% (very active). As this study employed a pre-experimental one-group pretest-posttest design without a control group, these findings indicate a positive association between environmental media use and improved Arabic speaking skills among Grade VII-A students at MTs.N 6 Central Maluku, rather than definitive proof of a causal effect.

Keywords: Environmental Media; Speaking Skills; Arabic; Learning Effectiveness.

مستخلص

هدفت هذه الدراسة إلى التعرف على فعالية توظيف الوسائل البيئية لترقية مهارة الكلام في اللغة العربية لطلاب الصف السابع الألف بالمدرسة المتوسطة الإسلامية الحكومية السادسة بمالوكو الوسطى. واعتمدت الدراسة المنهج الكمي باستخدام تصميم المجموعة الواحدة بالاختبار القبلي والاختبار البعدي. وتكونت عينة الدراسة من (٢٥) طالبًا اختيروا باستخدام أسلوب الحصر الشامل. وجُمعت البيانات من خلال الاختبارات الشفوية والملاحظة الصفية. وحُللت البيانات باستخدام اختبار شابيرو–ويلك(Shapiro–Wilk) ، واختبار(Paired Samples t-test) ، وحساب نسبة الكسب المعدل .(N-Gain) وأظهرت النتائج ارتفاع متوسط درجات الطلاب من (٦٣,٨٤) في الاختبار القبلي إلى (٨٨,٠٤) في الاختبار البعدي. كما بين اختبار (Paired Samples t-test) أن قيمة (t) المحسوبة بلغت (٨٣,٨٣١)، وهي أكبر من قيمة (t) الجدولية (٢,٠٦٤)، مع قيمة احتمالية ($p = 0.000 < 0.05$)، مما أدى إلى رفض الفرضية الصفرية. وبلغ متوسط نسبة الكسب المعدل(0.6866) (N-Gain) ، وهو يقع ضمن الفئة المتوسطة. كما أظهرت الملاحظة الصفية تحسن نشاط الطلاب أثناء عملية التعلم من (٤٧,٥٪) إلى (٨٧,٥٪). وبما أن هذه الدراسة اعتمدت تصميمًا شبه تجريبي بمجموعة واحدة دون مجموعة ضابطة، فإن هذه النتائج تشير إلى وجود ارتباط إيجابي بين استخدام الوسائل البيئية وتحسّن مهارة الكلام في اللغة العربية لدى طلاب الصف السابع الألف بالمدرسة المتوسطة الإسلامية الحكومية السادسة بمالوكو الوسطى، وليس دليلاً قاطعًا على وجود علاقة سببية.

الكلمات المفتاحية: الوسائل البيئية، مهارة الكلام، اللغة العربية، فعالية التعلّم.

INTRODUCTION

Arabic language learning in madrassas should ideally be able to develop four language skills in a balanced manner, including speaking skills or maharah kalam (Ibadurrahman, May, and Hikmah 2024). Maharah kalam is a productive skill that requires students to be able to express ideas orally appropriately and fluently in Arabic (Yasin et al. 2023). This ideal condition is in line with the goal of learning Arabic in madrasah tsanawiyah, which is to equip students with the ability to actively communicate using Arabic in daily life (Yasin et al. 2023).

However, the reality on the ground shows different conditions. Many MTs students have difficulty speaking in Arabic due to the lack of contextual learning media that is close to their daily lives (Nisa, Utami, and Ramadlan 2023). Learning tends to be monotonous in the classroom with lecture methods and textbooks, so students do not have the opportunity to practice Arabic directly and meaningfully (Assegaf and Wahyudin 2025). A similar condition was found in MTs.N 6 Central Maluku, where grade VII students still had difficulty expressing vocabulary and simple sentences in Arabic orally. Initial observations made by researchers showed that students tended to be silent, bowed, or answer in Indonesian when asked to speak in Arabic, even though some of them were actually familiar with the related vocabulary.

The problem of low maharah kalam in tsanawiyah madrassas is not an isolated phenomenon (Muhamad et al. 2024). Research shows that the implementation of learning Arabic speaking skills has not been effective because the use of Arabic in daily communication has not been implemented (Kholis 2023). The ability of students to speak Arabic is actually a benchmark for the success of educators in the Arabic learning process, so this condition requires media innovation that is able to encourage students to actively speak directly (Pratiwi, Jumhur, and Sabana 2025).

Maharah kalam is one of the four Arabic language skills (istima', kalam, qira'ah, and kitabah) that are productive because it requires students to actively produce language sounds, not just receive information (Sa'adah and Bakar 2025). De Jong (2023) explained that the assessment of speaking ability in a second language or foreign language ideally includes several interrelated components, namely pronunciation accuracy, vocabulary mastery, fluency in speaking, and the speaker's confidence in conveying ideas. The four components do not stand alone; Fluency in speaking, for example, is greatly influenced by the extent to which the speaker feels comfortable and not anxious when speaking in front of others.

Firmaningrum et al., (2024) added that the assessment of productive skills such as maharah kalam and kitabah in beginner learners should be adjusted to their initial ability level, without putting excessive pressure on the accuracy of nahwu and sharaf rules which can actually cause speech anxiety. The harmony between learning objectives and the organization of teaching materials in the subject of maharah kalam is a determining factor in the development of students' communicative competence, so that the preparation of assessment indicators cannot be separated from the learning objectives to be achieved (Febrianta et al. 2026). This is relevant to the condition of grade VII A MTs.N 6 Central Maluku students who are at the absolute beginner level, so that the aspects of courage to speak, accuracy of basic pronunciation, mastery of mufrodat, and simple fluency is a more appropriate indicator to use than complex grammatical accuracy.

This gap between ideal conditions and reality needs to be overcome through the selection of appropriate, innovative, and accessible learning media for students (Siregar, Fauziah, and Fathurrahman 2023). One alternative that can be used is environmental media, which is everything around students, both natural, social, and artificial environments that can be used as sources and media for direct learning (Hasbiyalloh, Ulum, and Hakim 2025). Nugrawiyati classifies the use of the environment as a medium for learning Arabic through several methods, including tourism works, the use of human resources, environmental surveys, and direct observation activities on concrete objects, each of which has its own implementation procedures to run effectively in the classroom (Akla 2021). The surrounding environment media can serve as a medium as well as an effective learning resource because it allows students to learn from real experiences around them (Akla 2021). In the context of Arabic language learning, environment-based learning innovations have been proven to be able to significantly increase student engagement (Qotrunnada and Hendra 2024).

Theoretically, the advantages of environmental media can be explained through the principle of contextual learning, which is a learning process that relates the subject matter to the real situation experienced by students so as to encourage them to build their own knowledge and skills. The advantages of environmental media lie in their real nature, easy accessibility, and do not require high costs (Hissoh 2020). Afianti et al., (2025)emphasized that the use of the surrounding environment as a learning medium has been proven to be able to significantly increase student learning activities because students interact directly with concrete objects, not just abstract representations in

textbooks. In the context of Arabic language learning, an environment-based approach is recommended to be applied more broadly to create a more meaningful and contextual learning experience for students (Nurhayati and Usiono 2025).

Several previous studies have examined the use of the environment in Arabic language learning. Kholis (2023) found that the language environment (al-bi'ah al-lughawiyyah) is effective as a support for Arabic learning in Islamic boarding schools because students are accustomed to using Arabic in daily interactions, not just during formal lesson hours. Siregar et al., (2023) concluded that the formation of a language environment in pesantren has a positive effect on students' Arabic speaking skills.

At the MTs level, Qotrunnada & Hendra (2024) proved that the use of the environment as a learning resource is able to increase the maharah kalam of first-grade MTs Hidayatunnajah students in a real and measurable manner. Meanwhile, research using technology-based media such as Muhamad et al., (2024) on the application of Alef media, as well as Pratiwi et al., (2025) on active knowledge sharing strategies through Instagram reels, shows that media that are close to students' digital lives can also increase maharah kalam, although both require devices and access to technology that are not always available evenly throughout madrasas. especially in areas with limited infrastructure such as Central Maluku.

At the international level, studies on the relationship between learning media and the psychological aspects of speaking have also been carried out. Kaplan-Rakowski & Gruber (2023) found that a learning environment with a high level of immersion, such as virtual reality, can reduce foreign language anxiety because it creates a context for language use that feels real but is still psychologically safe for learners. Liu (2023) also reported that personal device-based interactions (BYODs) in synchronous communication can affect anxiety levels and foreign language learning experiences compared to pure face-to-face communication.

In line with that, Latifah et al., (2025) in a study of EFL students in Indonesia showed that the use of authentic materials combined with project-based learning significantly increased students' motivation to speak, although the decrease in speech anxiety was not always statistically significant, so additional strategies were needed that more touched the affective aspects of learners. These findings suggest a more complex picture: while concrete, real-life media may lower certain affective barriers to speaking foreign languages, including Arabic, authentic materials can also introduce additional cognitive demands that sustain rather than reduce anxiety. This complexity indicates

that the relationship between environmental media and psychological pressure is not uniformly positive and warrants cautious interpretation rather than a direct confirmation of the research hypothesis.

However, studies that specifically examine the effectiveness of environmental media on the maharah kalam of entry-level MTs students have not been widely found, especially in the Maluku region. Most of the previous research focused on the Islamic boarding school level, elementary school, or using digital technology-based media, while research on beginner MTs students with the physical environment around the school is still an important gap to be researched. This research is one of the efforts to fill this gap while providing novelty in the form of a combination of cheap and easily accessible environmental media with multi-indicator measurements (grades, N-Gain, and learning activities.

Based on the description above, this study focuses on the effectiveness of the use of environmental media in improving the Arabic language of grade VII MTs.N 6 students in Central Maluku. The goal is to find out whether the use of environmental media can significantly improve students' Arabic speaking skills. This research is expected to contribute to the development of the study of Arabic learning methodology, especially in strengthening empirical evidence on the role of environmental media on speaking skills at the beginner level of tsanawiyah madrasah levels. Practically, the results of this study are expected to be a reference for Arabic teachers in designing more varied, contextual, and non-dependent learning on high-tech facilities that are not necessarily available evenly across madrasas.

RESEARCH METHOD

This study uses a quantitative approach with a pre-experimental type and a one group pre-test post-test design. This design was chosen because the research aims to test the effectiveness of a treatment in one group of subjects without a comparison group, which is in accordance with the field conditions in the form of one class available for study. In this design, one group was measured before (pre-test) and after treatment (post-test), without a control group. It is acknowledged that this design carries threats to internal validity, particularly maturation (students' natural development over the course of the study) and the testing effect (students' growing familiarity with the test format); the steps taken to mitigate these risks and their implications for interpreting the findings

are discussed further in the Limitations subsection (Sugiyono 2019). The design pattern of this study is described as follows:

Tabel 1. Desain One Group Pre-test Post-test

Pre-test	Treatment (X)	Post-test
O_1	X	O_2

Description: O_1 = Pre-test; X = Treatment (environmental media); O_2 = Post-test

The research was carried out at MTs.N 6 Central Maluku in the odd semester of the 2024/2025 school year. The research sample was 25 students in class VII A who were selected using the total sampling technique because the population was less than 30 students (Ardiansyah, Risnita, and Jailani 2023). The total sampling technique was chosen so that all members of the population were represented in the measurement, so that the results of the study could describe the condition of the class as a whole without the risk of sampling-selection bias arising from the use of a partial sample. It should be noted, however, that total sampling addresses only sampling bias; it does not remove the threats to internal validity inherent in the pre-experimental one-group pretest-posttest design, such as the testing effect, which are addressed separately in the Limitations subsection.

Data were collected through oral tests and observations (Arikunto 2019). The oral test was carried out twice before and after the application of environmental media in the form of describing objects in the environment around the school using Arabic on the theme الأدوات المدرسية. Based on the results of initial observations, students of grade VII A are classified as absolute *beginners* in Arabic speaking skills. Therefore, the rubric of the maharah kalam assessment is adjusted to the initial ability of students by focusing on aspects of courage to speak, accuracy of basic pronunciation, mastery of mufradat, and fluency in simple speaking, without placing high emphasis on the accuracy of the rules of nahwu and sharaf (Jong 2023). The maximum score a student can get is 100. The assessment rubric used is as follows:

Table 2. Maharah Kalam Assessment Rubric (Adaptation for Beginners)

Aspects	Indicator	score
The Courage to Speak	Willing to try to talk even if you stutter, without the need to be asked repeatedly	1–25
Pronunciation (Makhraj)	Trying to pronounce words with sounds	1–25

	correctly	
Vocabulary (Mufrodat)	Naming objects in the neighborhood in Arabic	1–25
Policy smoothness	Pronounce words/phrases independently without excessive assistance	1–25
Total		**100**

In addition to the oral test, student activity observation was carried out at each meeting using a scaled observation sheet with four categories (Never/TP, Sometimes/KD, Frequent/SR, and Always/SL) to see qualitative changes in student learning behavior that complemented the quantitative data from the oral test. Both the oral test and the observation sheet, including subjective indicators such as confidence and courage, were scored by a single rater (the researcher); no second-rater verification or formal inter-rater reliability procedure was carried out. This represents a limitation of the study, and is discussed further in the Limitations subsection, as it means the scoring cannot be independently confirmed to be free from rater bias.

Data analysis is carried out through three stages. First, *the Shapiro-Wilk* normality test to ensure the data is distributed normally. Second, *the paired sample t-test* test to determine the significance of the difference between pre-test and post-test (H_0 is rejected if $p < 0.05$). Third, *the N-Gain Score* with the formula $g = (Spost - Spre) / (Smax - Spre)$ to measure the magnitude of the increase in maharah kalam categories: $g \geq 0.70$ (high), $0.30 \leq g < 0.70$ (medium), $g < 0.30$ (low) (Firmaningrum, Ichwani, and Qomari 2024). All analyses were carried out using the SPSS application.

RESULT AND DISCUSSION

Result

This section presents data on research results in a descriptive manner, including pre-test and post-test scores of maharah kalam, improvement per aspect of assessment, normality test, hypothesis test, N-Gain Score, and observation of student activities.

A. Description of Pre-test and Post-test Data

The following are descriptive statistics of students' maharah kalam scores before and after treatment:

Table 3. Descriptive Statistics of Pre-test and Post-test Scores

Statistics	Pre-test	Post-test	Differences
Average Score (Mean)	63,84	88,04	24,20
Standard Deviation	5,14	6,27	1,44
Minimum Score	55	77	–
Maximum Value	72	97	–
Number of Students (N)	25	25	–

The average pre-test score was 63.84 with a standard deviation of 5.14, indicating a relatively homogeneous variation in students' initial ability. The lowest score is 55 and the highest is 72, so there is no too wide range between students before the treatment. After treatment, the average post-test score increased to 88.04 with a standard deviation of 6.27. The average difference between pre-test and post-test was 24.20 points, which showed an increase in general speaking ability in all students after participating in learning using environmental media. This increase is considerably larger than the improvement reported by Nafisah (2023) for a comparable grade level, which raises the possibility that part of the gain reflects external factors beyond the intervention itself, such as a halo effect in rubric-based assessment, in addition to the testing effect discussed in the Limitations subsection; the following sections therefore interpret this magnitude with appropriate caution.

B. Improvement Per Assessment Aspect

The following is an average comparison of each aspect of the maharah kalam assessment in the pre-test and post-test:

Table 4. Average Improvement Per Assessment Aspect

Aspects	Average Pre	Average Post	Δ	% Improvement
The Courage to Speak	14,76	22,36	+7,60	51,5%
Pronunciation (Makhraj)	14,88	20,96	+6,08	40,9%
Vocabulary (Mufrodat)	18,96	22,84	+3,88	20,5%
Policy Smoothness	15,24	21,88	+6,64	43,6%
Total	**63,84**	**88,04**	**+24,20**	**37,9%**

The aspect of speaking courage experienced the highest increase (+7.60 points / 51.5%), followed by basic fluency (+6.64 points / 43.6%), makhraj (+6.08 points / 40.9%),

and mufrodat (+3.88 points / 20.5%). This data shows an interesting pattern: the mufrodat aspect actually has the highest pre-test score (18.96) compared to other aspects, while the boldness aspect has the lowest pre-test score (14.76). This means that before the treatment is given, students already have relatively adequate vocabulary, but hesitate to use it orally. This pattern is an early indication that a psychological barrier is at play alongside, rather than instead of, linguistic limitations, since prior literature (Saleh Alrasheedi 2020; Alqurashi and Althubaiti 2021) suggests that limited vocabulary mastery can itself be a source of anxiety, so that cognitive and affective factors are likely to reinforce one another rather than operating independently.

C. Normality Test Results

The Shapiro-Wilk normality test was performed because n = 25 (< 30); this test concerns the distributional assumption for the subsequent parametric test and does not address the internal-validity limitations of the one-group pretest-posttest design itself, which are discussed in the Limitations subsection. The results are presented as follows:

Table 5. Shapiro-Wilk Normality Test Results

Data	Statistics W	p-value	Description
Pre-test	0,9525	0,2858	Berdistribusi Normal
Post-test	0,9373	0,1283	Berdistribusi Normal

The p-value of pre-test (0.2858) and post-test (0.1283) was both greater than α = 0.05. Thus, the data is declared to be normally distributed so that the paired sample t-test can be continued as a parametric test that is appropriate for this research data.

D. Hypothesis Test Results (Paired Sample t-test)

H0: There is no significant difference between the pre-test and post-test scores of students.

Ha: There is a significant difference between the pre-test and post-test scores of students.

Table 6. Paired Sample t-test results

t-count	t-table	p-value	Decision
83,831	2,064	0,000 (< 0,05)	H0 Rejected – *significant*

The t-value (83.831) far exceeded the t-table (2.064) with a p-value of 0.000 < 0.05. Thus H0 is rejected and Ha is accepted, which means that there is a significant difference

between the pre-test and post-test scores of students. The large difference between the t-count and the t-table confirms statistical significance; however, a large t value in a relatively small sample (N = 25) can also reflect low variance in the post-test scores or instrument sensitivity rather than necessarily indicating a strong practical effect. This study did not compute an effect-size measure such as Cohen's d, the standard metric in applied linguistics for gauging practical significance; this is acknowledged as a limitation, and future studies are encouraged to report it alongside the t-test result

E. N-Gain Score

The following are the results of the calculation of the N-Gain Score per student and the distribution of the categories:

Table 7. N-Gain Score Results per Student

No.	Code	Pre-test	Post-test	N-Gain	Kategori
1	S-01	68	94	0.8125	Height
2	S-02	70	96	0.8667	Height
3	S-03	62	84	0.5789	Medium
4	S-04	72	97	0.8929	Height
5	S-05	65	89	0.6857	Medium
6	S-06	60	84	0.6000	Medium
7	S-07	71	96	0.8621	Height
8	S-08	58	81	0.5476	Medium
9	S-09	69	94	0.8065	Height
10	S-10	63	88	0.6757	Medium
11	S-11	55	78	0.5111	Medium
12	S-12	66	92	0.7647	Height
13	S-13	57	80	0.5349	Medium
14	S-14	70	95	0.8333	Height
15	S-15	61	85	0.6154	Medium
16	S-16	60	82	0.5500	Medium
17	S-17	64	88	0.6667	Medium
18	S-18	59	81	0.5366	Medium
19	S-19	67	93	0.7879	Height
20	S-20	56	77	0.4773	Medium
21	S-21	68	92	0.7500	Height
22	S-22	62	86	0.6316	Medium
23	S-23	65	90	0.7143	Height
24	S-24	58	83	0.5952	Medium
25	S-25	70	96	0.8667	Height
	Average	**63,84**	**88,04**	**0,6866**	**Medium**

Table 8. Distribution of N-Gain Score Categories

Category	Range	Number of Students	Percentage
Height	g ≥ 0,70	11	44%
Medium	0,30 ≤ g < 0,70	14	56%
Low	g < 0,30	0	0%
Total	**–**	**25**	**100%**

The average N-Gain of all students was 0.6866 (Medium category). A total of 11 students (44%) were in the High category and 14 students (56%) were in the Medium category. None of the students are in the Low category. Individual data showed that the students with the lowest initial score (S-20, pre-test = 56) continued to experience a significant improvement until they reached an N-Gain of 0.4773, while the highest N-Gain was achieved by S-04 (g = 0.8929) who also had the highest pre-test score (72). This pattern shows that the improvement in speaking ability occurs evenly, not only in students with good initial abilities.

F. Results of Student Activity Observation

The following is a comparison of the results of student activity observation at the first meeting (P-1) and the second meeting (P-2):

Table 9. Results of Student Activity Observation

No.	Indicator	P-1	Score	P-2	Score	Changes
1	Pay close attention to the teacher's explanations	SR	3	SR	3	Fixed
2	Enthusiastic observing of objects around	TP	1	SL	4	Rise
3	Actively pointing and naming objects in Arabic	KD	2	SL	4	Rise
4	Dare to say a word without being asked.	TP	1	SR	3	Rise
5	Imitating the teacher's words earnestly	KD	2	SL	4	Rise
6	Asking questions when you don't understand vocabulary	KD	2	KD	2	Rise
7	Mampu menyebutkan nama benda secara mandiri	KD	2	SL	4	Rise
8	Not afraid of making mistakes	KD	2	SR	3	Rise

	when trying to speak Arabic					
9	Actively participate in question-and-answer activities	KD	2	SL	4	Rise
10	Shows increased confidence	KD	2	SL	4	Rise
	Total Score	**–**	**19**	**–**	**35**	**16**
	Percentage	**–**	**47,5%**	**–**	**87,5%**	**40%**

The total observation score increased from 19 (47.5%, Less Active category) at the first meeting to 35 (87.5%, Very Active category) at the second meeting. Improvements occurred in 9 out of 10 indicators observed. The most striking increase was seen in the two indicators that were originally at the Never (TP) level, namely enthusiasm for observing the surrounding objects and the courage to say mufrodat without being asked both of which jumped directly to the Always (SL) or Frequent (SR) level at the second meeting. The only indicator that did not change was the habit of asking questions when not understanding vocabulary, which remained at the Occasional (KD) level in both meetings. As these observation ratings, particularly for subjective indicators such as enthusiasm and courage, were assigned by a single observer without second-rater verification, this is noted as a limitation that may affect the objectivity of the scores.

Discussion

Based on the results of the study, the use of environmental media has been proven to be effective in increasing the Arabic language of students in grade VII A MTs.N 6 Central Maluku. This effectiveness was evidenced by three indicators: an increase in average score (+24.20 points), statistical significance ($p = 0.000 < 0.05$), and an average N-Gain of 0.6866 that was evenly distributed across students. This finding is in line with Qotrunnada and Hendra (2024) who prove that the environment as a learning resource is able to improve the maharah kalam of MTs students in a real and measurable way. Nevertheless, since this study used a pre-experimental design without a control group, the N-Gain increase should be interpreted as an indication of positive change rather than definitive proof of effectiveness, as it may be partly influenced by the testing effect; comparison with similar studies at the secondary-education level and acknowledgement of this threat to internal validity are provided in the Limitations subsection.

The most significant finding was a 51.5% increase in the aspect of speaking boldness, the highest among the four aspects measured. These findings reveal an important fact: the main obstacle to students' maharah kalam is not the lack of

vocabulary mastery, but the low courage to express the vocabulary they have actually mastered (Chrislando 2019). Pre-test data showed that the mufrodat value (18.96) was much higher than courage (14.76), indicating that this barrier was psychological, not cognitive. This condition is consistent with the findings of the initial observation, where students seemed shocked and silent when they were first invited to communicate in Arabic.

Environmental media appears to help reduce this psychological barrier because it creates a familiar, concrete, and non-intimidating learning context . This finding is also broadly consistent with the results of research by Kaplan-Rakowski and Gruber (2023) which shows that a learning environment that feels real but is still psychologically safe can reduce foreign language anxiety, so that learners are more courageous to use the target language. Caution is warranted in generalizing these VR-based findings to a physical-environment medium, as the two contexts differ in important ways; moreover, the distinction drawn here between psychological and cognitive barriers rests primarily on theoretical grounds and would benefit from further empirical data that explicitly separates these two aspects

From the linguistic side, the improvement in makhraj (40.9%) and basic fluency (43.6%) showed that repeated interactions with real objects during the two meetings encouraged students to pronounce Arabic vocabulary more often, so that pronunciation was closer to correct and fluency increased. Chrislando (2019) explains that environment-based learning accelerates vocabulary acquisition because it minimizes translation intermediaries; students associate real objects directly with Arabic vocabulary without going through the process of translating from Indonesian. These findings are in line with (Liu 2023) who found that device-based and real-object interactions can positively affect the experience of learning a foreign language compared to learning that relies only on written text.

The mufrodat aspect showed the most moderate increase (20.5%), but this may partly be explained by a ceiling effect, because the pre-test mufrodat value was relatively better (18.96) so that the room for improvement was narrower than other aspects. This pattern could also, at least in part, reflect the testing effect rather than the ceiling effect alone, and the two explanations cannot be fully disentangled with the present one-group design. Afianti et al., (2025) emphasized that media that is close to students' daily lives

accelerates the internalization of language because it reduces the distance between linguistic symbols and their meanings; The choice of the theme of الأدوات المدرسية whose objects are available directly in the classroom is the main supporting factor for this success.

The distribution of N-Gain shows an inclusive impact. None of the students are in the low category. The student with the lowest pre-test score (S-20, pre-test = 56) still achieved an N-Gain of 0.4773 (medium category) with a post-test score of 77, while the highest N-Gain was achieved by S-04 (g = 0.8929, high category). Kamaluddin and Firmansyah (2023) stated that the effectiveness of environmental media is inclusive because it does not require certain initial abilities, so that students with different skill backgrounds can still get meaningful learning benefits.

The results of the observations reinforce the quantitative findings. The spike in scores from 19 (Less Active) to 35 (Very Active) in just one meeting shows a very rapid apparent student adaptation, although, as noted earlier, these ratings were assigned by a single observer without formal inter-rater verification, so the magnitude of this spike should be interpreted with that limitation in mind. The most striking increase occurred in two indicators that at the first meeting were at the Never (TP) level: enthusiasm to observe the surrounding object and the courage to say mufrodat without being asked. Khovia (2021) found a similar thing, that environmental media is able to change learning patterns from passive to active in a short time because it relies on students' natural curiosity about the objects around them.

The only indicator that did not improve was the habit of asking questions when not understanding vocabulary (fixed KD = 2). This reflects a learning culture of students who are still passive in asking questions to teachers, a common phenomenon in the context of education in areas that require longer interventions. Wulandari (2020) noted that this kind of cultural barrier cannot be solved in just one or two meetings, but requires consistent gradual habituation over time.

Overall, the success of environmental media can be explained from three points of view. First, from a psychological aspect, environmental media helps reduce speaking anxiety because students interact in a familiar, real, and non-threatening context, so they are more confident in using the target language. This is in line with the findings of Latifah et al., (2025) who show that authentic, contextual material is able to increase EFL

students' motivation to speak, although additional strategies are needed to fully resolve speech anxiety. Second, from a linguistic aspect, the use of real objects allows students to establish a direct association between objects and Arabic vocabulary through concrete sensory experiences, without relying entirely on translation, so that the process of acquiring vocabulary becomes more meaningful (Latifah et al. 2025). Third, from the pedagogical aspect, the suitability of the theme of الأدوات المدرسية with the classroom environment allows all learning objects to be made available directly in front of students, so that the learning process takes place more contextual, efficient, and easy to understand. The proximity of media to students' daily experiences has proven to be an important factor in increasing the involvement and effectiveness of environment-based learning (Afianti et al. 2025).

These three points of view, namely psychological, linguistic, and pedagogical, complement each other and offer a plausible explanation for why this simple and low-cost medium appears to be associated with a considerable improvement in students' speaking skills over a relatively short time; given the pre-experimental design of this study, however, this explanation should be regarded as an interpretive account rather than a confirmed causal mechanism.

The above findings can be understood more deeply through the perspective of contextual learning theory and experiential learning. The basic principle of experiential learning states that knowledge is most meaningful when learners are directly involved with concrete experiences, then reflect on them, before finally being able to apply them to new situations (Yudha, 2025). In this study, the concrete experience stage occurs when students observe and touch real objects in the classroom environment; the reflection stage occurs when the student tries to pronounce the name of the object in Arabic with the teacher's guidance; and the implementation stage occurs when students practice simple dialogue more independently at the second meeting (Gordon, 2022). This series of stages is consistent with the pattern of improvement found in all aspects of assessment, where the highest improvement occurs in the aspect that most depends on the courage to try, rather than on memorization alone (Hwang et al., 2023).

Nugrawiyati emphasized that the success of the use of the environment as a medium for learning Arabic depends on the accuracy of the implementation procedure, including the selection of objects relevant to the learning theme and the management of

students' interaction time with the environme (Furoidah 2020). In this study, the selection of the theme الأدوات المدرسية whose objects are available directly in the classroom is one of the key factors that allow all students to get equal interaction opportunities, without being constrained by limited means. This is in contrast to research that uses technology-based media such as the Alef platform (Muhamad et al. 2024) or Instagram reels (Pratiwi, Jumhur, and Sabana 2025), whose success depends heavily on the availability of devices and internet access that is not necessarily evenly distributed in every madrasah, especially in areas with limited infrastructure such as Central Maluku. Thus, environmental media appears to offer an additional advantage in the form of higher accessibility, without evidence in this study that this accessibility comes at the cost of its apparent effectiveness in increasing maharah kalam.

Limitations

This study has several limitations. First, the pre-experimental one-group pretest-posttest design, used because only one class was available, lacks a control group and is vulnerable to threats such as maturation and the testing effect, which may have contributed to the observed improvement alongside the intervention itself. Second, both the oral test and classroom observation, including subjective indicators such as confidence and courage, were scored by a single rater without inter-rater reliability verification, leaving open the possibility of rater bias. Third, this study did not compute a standardized effect-size measure such as Cohen's d, so the practical magnitude of the treatment effect cannot be fully evaluated. Fourth, the relatively large score increase and N-Gain value should be interpreted cautiously given the absence of a control group, as a halo effect in rubric-based assessment cannot be ruled out. Given these limitations, the findings are best regarded as preliminary evidence that environmental media is associated with improved Arabic speaking skills, rather than definitive proof of a causal effect. Future research using a control-group design, multiple independent raters, and standardized effect-size reporting is recommended.

CONCLUSION

Based on the results of the research and discussion, the findings indicate that the use of environmental media appears effective in improving the Arabic language skills of students of grade VII A MTs Negeri 6 Central Maluku. This effectiveness was shown by the increase in the average score of students from 63.84 in the pre-test to 88.04 in the post-

test, with a difference of 24.20 points, as well as the results of the paired sample t-test which showed that the t-count value (83.831) was greater than the t-table (2.064) with a significance of 0.000 (< 0.05), so that the research hypothesis was accepted. This effectiveness was also supported by the results of the N-Gain analysis which obtained an average of 0.6866 in the medium category, with 44% of students in the high improvement category and 56% in the moderate improvement category without any students in the low category, which shows that the improvement in speaking ability occurs equally in all students regardless of their initial level of ability. As this study employed a pre-experimental one-group pretest-posttest design without a control group, these findings should be regarded as preliminary evidence of a positive association rather than definitive proof of a causal effect; the corresponding limitations are detailed in the Limitations subsection.

Based on the analysis of each aspect of assessment, the largest increase occurred in the aspect of speaking boldness, which indicates that the use of environmental media appears to help students reduce psychological barriers in speaking Arabic such as shyness, fear of mistakes, and lack of confidence, as well as providing a more concrete and contextual learning experience so that it makes it easier for students to use the vocabulary they have learned. The application of environmental media has significantly increased student learning activities, which is shown by the increase in the percentage of activities from the least active category (47.5%) to very active (87.5%), so it can be said that environmental media is associated not only with improved maharah kalam learning outcomes, but also with a more active, participatory, and student-centered learning process. These conclusions should nonetheless be read in light of the study's pre-experimental design and single-rater assessment, as detailed in the Limitations subsection.

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