The Effectiveness of Learning Arab Pegon Gorontalo Through the *Kitab Dikili* in Strengthening Islamic Cultural Values Among Students of Muhammadiyah Unggulan Islamic Senior High School, Gorontalo City

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Article Info

ABSTRACT

Arab Pegon Gorontalo has been widely examined in linguistic and phonological studies; however, its pedagogical use as a formal medium for strengthening Islamic cultural values in schools remains limited. One local tradition that employs Arab Pegon is Dikili, a dhikr ritual containing narratives of the life of Prophet Muhammad (peace be upon him) delivered in the Gorontalo language written in Arab Pegon script. This tradition has not yet been optimally integrated into Arabic language instruction at the Madrasah Aliyah level. This study aims to examine the effectiveness of Arab Pegon learning through the Dikili tradition in strengthening Islamic cultural values among students at Muhammadiyah Unggulan Islamic Senior High School in Gorontalo City. The research employed a quasi-experimental method using a pretest–posttest control group design. Sixty students from grades X and XI were divided equally into an experimental group and a control group. The experimental group received Arab Pegon instruction integrated with the Dikili tradition for four months, while the control group followed conventional Arabic learning. Data were collected using Arab Pegon comprehension tests, questionnaires on Islamic cultural values, classroom observations, and semi-structured interviews. Quantitative data were analyzed using descriptive statistics and nonparametric tests, including the Wilcoxon and Mann–Whitney U tests, while qualitative data were analyzed through content analysis. The results show that students in the experimental group demonstrated significantly higher improvement in Arab Pegon comprehension and Islamic cultural values than those in the control group ($p < 0.05$). Qualitative findings reveal stronger emotional engagement, deeper contextual understanding, and greater internalization of Islamic values among experimental group students. This study concludes that integrating the Dikili tradition into Arab Pegon instruction is an effective and meaningful strategy for strengthening Islamic cultural identity and revitalizing local religious literacy within formal education

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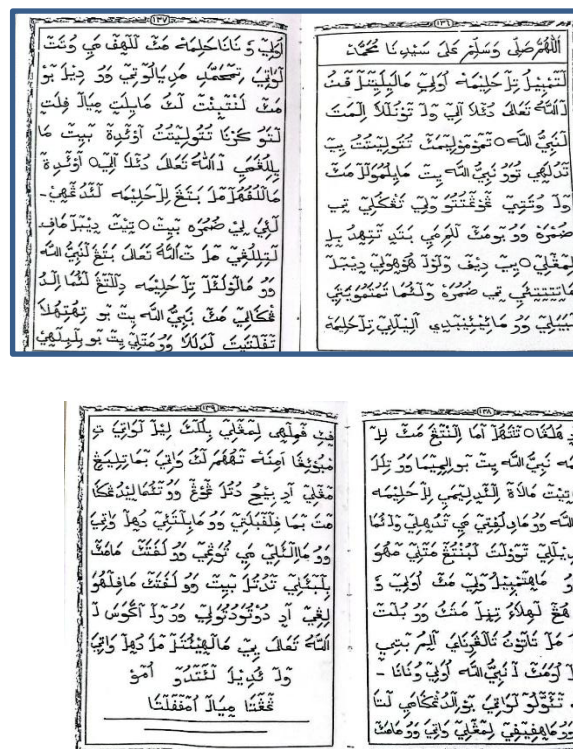Email: lsntl@ccu.edu.tw

Introduction

Arabic language instruction in madrasahs occupies a strategically significant role in preparing students not only to acquire Arabic as a communicative tool but also to comprehend and internalize the Islamic cultural values that underpin their worldview. Arabic language learning is a process of transferring knowledge and understanding, both related to the elements of the Arabic language and Arabic language skills, to students. Within the national curriculum framework, Arabic learning functions as an entry point for introducing students to the historical trajectory of Islamic civilization and for cultivating an informed understanding of their Islamic identity. Indonesia, as a nation with a rich heritage of Islamic literacy, possesses diverse forms of local religious knowledge that remain underutilized in formal educational settings. One such heritage is Arab Pegon, a modified Arabic script adapted to local languages to facilitate the dissemination of Islamic teachings within communities. Arab Pegon is a form of creative adaptation by the Nusantara community in using Arabic script to write local languages therefore, it is not merely a writing system, but also a symbol of cultural acculturation and a medium for Islamic propagation in Java and its surrounding regions. The Gorontalo *Dikili* tradition exemplifies a religious learning practice utilizing Arab Pegon—specifically a dhikr ritual conducted during the month of Rabiul Awal to commemorate the birth of Prophet Muhammad (peace be upon him), in which narratives of the Prophet's life and virtues are recited in Arabic, Indonesian, and the Gorontalo language using Arab Pegon (Arab–Malay script). In contemporary contexts, Arab Pegon and traditions such as Dikili have regained scholarly and pedagogical attention because of their potential to link Arabic language instruction with students' local cultural environments and thereby strengthen their internalization of Islamic values in a substantive and meaningful manner. The application of the Tamyiz method in translating Arabic texts in madrasahs helps students understand sentence structures in a more systematic and contextual manner

Prior research has demonstrated that Arabic language education necessitates an approach that integrates multiple dimensions, including grammatical mastery (*nahwu*), language skills (*maharah*), and comprehension of Islamic ethical–spiritual values. Learning media have been shown to significantly influence student motivation and learning outcomes, particularly when these media are culturally and historically congruent with learners' backgrounds. Project-based learning models and contextual pedagogies have proven effective in enhancing students' holistic understanding of instructional content, especially within Islamic education. Literature on Qur'anic exegesis and traditional religious manuscripts written in local languages indicates that local epistemic resources hold the potential to enrich students' religious understanding and reinforce their interpretation of Islam within their socio-cultural contexts. Specifically in Gorontalo, empirical studies reveal that community-based Islamic learning programs positively influence students' character formation and spiritual intelligence. Assessment practices in Madrasah Aliyah typically evaluate cognitive, psychomotor, and affective dimensions through structured instruments such as the End-of-Semester Assessment (PAS) and End-of-Year Assessment (PAT). Listening skills are the initial process that humans engage in before developing speaking skills.

Despite the acknowledged potential of culturally grounded learning media and traditional manuscripts, empirical investigations specifically measuring the effectiveness of Arab Pegon as a pedagogical medium for Arabic instruction in modern Madrasah Aliyah remain absent. Existing studies on Arab Pegon in Gorontalo predominantly focus on linguistic features, phonological structures, script morphology, and syntactic forms, yet its pedagogical application has rarely been examined through systematic inquiry. This study introduces a novel approach by positioning Arab Pegon not only as a linguistic object but also as an active instructional medium subjected to quantitative evaluation in relation to its capacity to strengthen Islamic cultural values. The *Kitab Dikili* of Gorontalo, as a traditional instructional resource that integrates Arab Pegon with localized Islamic teachings, has likewise not been systematically or empirically assessed in contemporary academic discourse. Quantitative evidence demonstrating how the use of Arab Pegon through the *Kitab Dikili* contributes to the reinforcement of Islamic cultural values among students remains extremely limited. Current literature does not yet incorporate structured assessment instruments capable of producing concrete and measurable indicators of cultural value internalization associated with Arab Pegon learning. Consequently, a substantial gap exists between the theoretical potential of Arab Pegon as an instructional medium and the empirical evidence required to substantiate its pedagogical impact on strengthening Islamic cultural values among Madrasah Aliyah students, particularly in the Gorontalo region. Moreover, growing global and national trends emphasize the importance of culturally responsive pedagogy and local literacy revitalization, situating this study within broader contemporary educational priorities. Language is one of

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the fundamental aspects that reflects the culture, history, and identity of a community. Online learning is considered one of the solutions to address educational problems related to the implementation of teaching and learning processes.

Research examining the effectiveness of Arab Pegon instruction through the *Kitab Dikili* of Gorontalo is therefore crucial, as it can generate concrete empirical data regarding the pedagogical relevance of local learning media within modern Arabic language education. The potential loss of Arab Pegon traditions and Gorontalo's local religious knowledge underscores the urgency of producing research that demonstrates the practical significance of Arab Pegon in formal schooling before these forms of knowledge are marginalized by younger generations. The findings of this study are expected to offer significant contributions to the development of a more contextualized and culturally responsive curriculum, while simultaneously revitalizing Arab Pegon as a living component of Indonesia's Islamic literacy heritage. Furthermore, this research is positioned to enrich the academic discourse on the integration of traditional manuscripts within Arabic language instruction at the Madrasah Aliyah level and to provide practical recommendations for educators seeking to optimize the use of local resources in enhancing students' Islamic cultural values. In the context of Qur'anic learning, proficiency in reading and reciting the sacred text is extremely important. *Maharatul Qirā'ah*, or the ability to read the Qur'an properly and correctly, requires consistent practice and appropriate guidance. Arabic language learning in schools includes several language skills, namely listening, speaking, reading and writing skills. In order to improve these four skills, students must have a lot of vocabulary (mufrodite)

Picture 1. Dikili Text

Lotombilu tilo Halimah uwaliyo ma layi-layitolo ponu lo Allahu taala duola oliyo   wolo   tonulola umopiyohu wolo tonulola ilomata lo Nabiyullah SAW. Tomomoliyo   mao   tutuliyotutu   todulahe tuwawu Nabiyullah yito mayilumuwalao wolo wutatiyo   ngotilutuwa   woliyo   ta   tanggula   te Dhumurah wawu bomao molami mayi batade totihedu bele limongoliyo. Dipo wololo hihewoliyo debolo matete-teteayi te Dhumura wolou mabo tamu-tamu wayatayi lo bayaliyo wawu maiibode oliloliyo tilo Halimah uwaliyo wu nana Halimah mao lolohepo mayi wutato lowatiya te Muhammadi madiyaluwo tiyo wawu dila bomao lonto bento tiyo mayilate lou pilate lotawu karna tutuliyo tutu oodito boyito mayililunga lo

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Allahu taala duola oliyo. Oodito mayi lolupuhulo mola batanga lilo Halimah lo odungohe loiya le Dhumurah teto debolo ma pilotililungiyo mola to Allahu taala batanga lo Nabiyullah wawu ma lolaolo tilo Halimah. Wawu tau mailodunggaliyo mao Nabiyullah yito bo tihu-tihula to polotayita lo dalalo wawu mato liyo bo bilo-bilohe mola ode hulungo.

Tontahu tou mailontonga mao lilo Halimah Nabiyullah yito bo ilimiyoma wawu botilala ii. Teto malato mota iloodeliyo mayi lilo Halimah Nabiyullah wawu mapilo podupitiyo mayi to toduheliyo lilo Halimah wawu ma hedidila liyo mao towolota lo buntungo matoliyo mohu-mohuwaliya, wawu mahepotombilu liyo uwaliyo wu' walau mao totonu tamame longarinaya olemu botiye wu' walau hungo lohilau, carumini lo matau buloto batangau. Bolo uwamao lo Nabiyullah uwaliyo wu nana Halimah toowoluwo lowatiya botiya bo ilodungga mayi lota towulota wawu mahepiyo-piyolimongoliyo watiya wawu mai pomilohe limongoliyo biluloa lilo lowatiya li mbuinga Aminah. Tohuhama lo uwatiyaboma tiliyangi mongoliyo ode bihu dutula ngongo, wawu tou maledungga mota boma mota pi lopobalati mongoliyo wawu ma bilotaiyo duhelo watiya wawu ma iloaliyo mayi tuwango duhelo watiya. Wawu lapatao ma biloboa limongoliyo tobutaiyo ngongo tangguliyo TASNIMU deboboliyomao taluhe molango wawu boli motolanga. Tolapatao leto mapilohuwalingiyo to todutuwaliyo. Wolo okawasa lo Allahu taala loheutalomola duhelo watiya wolo udila lootoduwo umongongota meyalo umopopolota.

Meaning :

Lotombilu (Halimah) expresses profound gratitude and praise to Allah Ta'ala for the mercy and blessings bestowed upon her, and she faithfully follows the path and teachings of the Prophet Muhammad (peace be upon him). She recounts in detail the life of the Prophet during her care and describes her experiences while living in Dhumurah (likely the name of a region or locality). Halimah felt immense happiness and contentment during her stay in Dhumurah due to the abundance of goodness and blessings she experienced together with the infant in her care. She considered herself exceptionally fortunate and grateful for being entrusted with the responsibility of raising and nurturing Muhammad (the Prophet). She never encountered any difficulty in caring for him, as everything proceeded smoothly by the grace and assistance of Allah Ta'ala.

Halimah witnessed abundant blessings from the moment she began to care for the Prophet in Dhumurah, firmly believing that all such blessings came from Allah Ta'ala through the presence of the young Muhammad. It is undeniable that even in childhood, the Prophet already exhibited signs of virtue, nobility, and exemplary character. Throughout the period in which Halimah cared for the Prophet Muhammad, she experienced deep tranquility and happiness. When the time came for her to return him to his family, she felt profound sorrow and reluctance to part with him. She had developed immense affection and love for the child she had raised. Nevertheless, Halimah remained obedient and steadfast—whether in ease or hardship, joy or sorrow—maintaining patience and sincerity in all circumstances.

When the Prophet Muhammad was returned to his mother, Aminah, Halimah felt a deep sense of loss and was overcome with grief at his departure. Aminah expressed her utmost gratitude to Halimah for her loving and devoted care, acknowledging and deeply appreciating the sacrifices Halimah had made. In the end, Halimah returned home carrying the precious and unforgettable memories referred to as Tasnim (likely a name or expression denoting a blessed or cherished memory). Until the end of her life, she continued to cherish those moments. By the will of Allah Ta'ala, the experience became a valuable lesson and an incomparable source of pride in her life.

Method

This study examines the effectiveness of Arab Pegon instruction through the Gorontalo Dikili tradition in strengthening Islamic cultural values among students. The independent variable is the Arab Pegon learning model integrated with the Dikili ritual, while the dependent variable is the strengthening of Islamic cultural values, measured through students' understanding of Islamic principles such as moderation, tolerance, and depth of ritual comprehension. The research was conducted at Madrasah Aliyah Muhammadiyah Unggulan, Gorontalo City, an educational institution known for its commitment to culture-based instruction. The site was selected based on considerations of adequate learning facilities, strong institutional support for culturally grounded pedagogy, and proximate access to the Dikili tradition, which remains a living practice within the local community. The study was carried out over six months, encompassing the preparation phase (1 month), the treatment phase (4 months), and data analysis and reporting (1 month). The scheduling of Arab Pegon instruction through the Dikili tradition was adjusted to align with the academic calendar and the implementation of the ritual within the local community, particularly during Rabiul Awal in the Hijri calendar.

The study employed a quasi-experimental design with a pretest–posttest control group structure. This design was selected because it allows for a comparative assessment of the effectiveness of Arab Pegon learning through the Dikili tradition against conventional Arabic instruction, while simultaneously controlling for extraneous variables that may influence student learning outcomes. The experimental group

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received treatment in the form of Arab Pegon instruction integrated with the Dikili ritual, whereas the control group received conventional Arabic language instruction. Measurements were conducted in three stages: pretest (prior to treatment), observation (during implementation), and posttest (after treatment completion).

The population consisted of all students enrolled at Madrasah Aliyah Muhammadiyah Unggulan, spanning grades X, XI, and XII. Using purposive sampling, 60 students from grades X and XI were selected based on the consideration that students at these levels possess sufficient cognitive and affective maturity to engage in culturally based learning. The sample was divided into two groups: an experimental group (30 students) and a control group (30 students), with group assignment conducted randomly to minimize bias. Inclusion criteria were: (1) active student status, (2) willingness to participate in all phases of the study, and (3) possession of basic Arabic language proficiency. Exclusion criteria included: (1) absence exceeding 20% of instructional sessions and (2) failure to complete all research instruments.

1. The study employed four primary data collection instruments:
   Islamic Cultural Values Reinforcement Questionnaire (25 items), used to assess the level of understanding and internalization of Islamic cultural values such as moderation, tolerance, responsibility, and ritual comprehension.
2. Arabic Comprehension Test (multiple choice and short-answer items) designed to evaluate students' ability to comprehend Arab Pegon texts from the Dikili tradition (20 items for pretest and 20 parallel items for posttest.
3. Classroom Observation Checklist, documenting student participation, emotional engagement, and responses during the Arab Pegon learning process.
4. Semi-Structured Interviews, conducted with 10 selected students from each group to explore their learning experiences and their perceptions of the Islamic values gained. All instruments were validated by experts in Arabic language pedagogy and Islamic education prior to use.

The research procedure consisted of several stages:
1. Preparation Phase, including coordination with the school, dissemination of study information, and preparation of learning materials and research instrument.
2. Pretest Phase, administered in the first week to assess baseline Arabic comprehension and Islamic cultural values using the designated test and questionnaire.
3. Treatment Phase (4 months), during which the experimental group received Arab Pegon instruction through the Dikili tradition twice per week for 90 minutes per session, while the control group received conventional instruction of equal duration. Lessons in the experimental group included reading Arab Pegon texts, interpreting their meanings and associated Islamic values, discussing the relevance of these values to students' daily lives, and completing individual reflections on Islamic cultural value reinforcement.
4. Observation Phase, conducted concurrently with the treatment to document student engagement and learning responses.
5. Posttest Phase, conducted after treatment using the same instruments as in the pretest, along with semi-structured interviews.
6. Analysis and Reporting Phase, involving data processing and compilation of the research report.

Quantitative data were analyzed using descriptive and nonparametric statistics due to violations of normality assumptions. Descriptive analysis included mean, median, standard deviation, and frequency distribution to illustrate the characteristics of pretest and posttest scores. Inferential analysis employed the Wilcoxon Signed Rank Test to examine within-group pretest–posttest differences, and the Mann–Whitney U Test to assess between-group differences in posttest scores and gain scores, using a significance level of $\alpha = 0.05$. Gain scores were calculated using the formula:
Gain Score = (Posttest – Pretest) / (Maximum Score – Pretest) × 100%, which served to depict the magnitude of students' performance improvement.

Qualitative data from observations and interviews were analyzed through content analysis to identify thematic patterns related to students' learning experiences, their interpretation of Arab Pegon instruction, and the internalization of Islamic cultural values. Integration of quantitative and qualitative findings provided a comprehensive account of the effectiveness of Arab Pegon learning through the Dikili tradition in strengthening students' Islamic cultural values.

The study received ethical approval from the Research Ethics Committee of Madrasah Aliyah Muhammadiyah Unggulan, Gorontalo City. Informed consent was obtained from students and their parents or guardians after providing a full explanation of the study's purpose, procedures, benefits, and potential risks. Anonymity and confidentiality were ensured by using coded identifiers rather than participants' real names. Student participation was voluntary without coercion or excessive incentives, and participants were informed of their right to withdraw at any stage without academic consequence. All data were securely stored

and accessed only by the researchers. Findings are reported objectively without data manipulation and will be communicated to the school for future instructional improvement. The study adhered to the principles of Good Clinical Research Practice (GCRP) and the Declaration of Helsinki.

Results and Discussions

A. Description of Pretest and Posttest Data

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-Test Eksperimen	28	20	65	37,50	14,751
Post-Test Eksperimen	28	55	100	79,46	16,574
Pre-Test Kontrol	28	20	75	45,00	17,374
Post-Test kontrol	28	20	100	48,75	18,985
Valid N (listwise)	28				

Table 1. **Description of Pretest and Posttest Data**

Based on the descriptive analysis of the pretest and posttest scores in both the experimental and control classes, an overall picture of the students' initial abilities and the extent of improvement following the instructional intervention was obtained.

In the experimental class, the pretest scores showed a mean of 37.50, with a minimum score of 20 and a maximum of 65, and a standard deviation of 14.751. These values indicate that the students' initial ability level was categorized as low, with a relatively wide variation in performance across individuals. After the instructional treatment was implemented, a substantial improvement was observed in the posttest results. The posttest mean increased to 79.46, with a minimum score of 55 and a maximum of 100, and a standard deviation of 16.574. The mean score increase of 41.96 points demonstrates that the instructional intervention had a highly positive and strong impact on improving students' abilities. Moreover, the increase in the minimum score from 20 to 55 suggests that even students with the lowest initial ability experienced significant progress.

Meanwhile, in the control class, the pretest scores showed a mean of 45.00, with a minimum score of 20, a maximum of 75, and a standard deviation of 17.374. This indicates that the students' initial abilities were within the low-to-moderate category, accompanied by a considerable variation in scores. Following conventional instruction, the control class posttest scores showed a mean of 48.75, with a minimum score of 20 and a maximum of 100, and a standard deviation of 18.985. The mean score increase of only 3.75 points indicates that the improvement in the control class was minimal and not substantial. The stagnant minimum score (remaining at 20) further demonstrates that a portion of the students did not experience meaningful development.

Overall, the experimental class demonstrated a significantly greater increase in scores compared to the control class. The improvement of 41.96 points in the experimental group far exceeded the 3.75-point increase observed in the control group. These descriptive findings provide preliminary evidence that the instructional treatment applied in the experimental class had a positive and substantial influence on student improvement, which will be further validated through inferential statistical testing in the subsequent section.

B. Test Of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre-Test Eksperimen	,230	28	,001	,885	28	,005
Post-Test Eksperimen	,216	28	,002	,864	28	,002
Pre-Test Kontrol	,163	28	,054	,933	28	,073
Post-Test kontrol	,106	28	,200[*]	,953	28	,234

Table 1. Result **Test Of Normality**

Based on the results of the Shapiro–Wilk normality test, the pre-test and post-test data of the experimental group obtained significance values of 0.005 and 0.002, respectively (< 0.05), indicating that the data were not normally distributed. In contrast, the pre-test and post-test data of the control group showed significance values of 0.073 and 0.234 (> 0.05), indicating that these data were normally distributed.

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Accordingly, since part of the dataset did not meet the assumption of normality, the data analysis was continued using non-parametric statistical tests (the Mann–Whitney U test and the Wilcoxon Signed Rank Test).

C. Non-Parametric Tests

   a.   Man White Nay Test

Test Statistics[a]

	Hasil Belajar
Mann-Whitney U	90,000
Wilcoxon W	496,000
Z	-4,985
Asymp. Sig. (2-tailed)	,000

Based on the results of the Mann–Whitney U test, the values obtained were U = 90.000, Z = –4.985, and an Asymp. Sig. (2-tailed) value of 0.000. Since the significance value is lower than 0.05, it can be concluded that there is a significant difference between the posttest learning outcomes of the experimental class and the control class. This indicates that the students' learning outcomes in both groups do not originate from the same distribution. These findings demonstrate that the Arabic Pegon learning through the Dikili tradition has a greater influence on improving students' learning outcomes compared to the conventional learning model implemented in the control class.

Next, the effect size is calculated using the following formula:

$$r = \frac{z}{\sqrt{N}}$$

With Z=4.985Z = 4.985Z=4.985 and N=60N = 60N=60, the calculated effect size is r=0.643r = 0.643r=0.643, which falls into the **large effect** category. This indicates that the treatment or instructional method implemented in the experimental class exerted a strong and significant influence on the improvement of students' learning outcomes.

Overall, these results confirm that the learning approach applied in the experimental class is substantially more effective than the instructional method implemented in the control class.

   b.   Wilcoxon Test

Ranks

		N	Mean Rank	Sum of Ranks
Post-Test Eksperimen - Pre-Test Eksperimen	Negative Ranks	0[a]	,00	,00
	Positive Ranks	28[b]	14,50	406,00
	Ties	0[c]		
	Total	28		
Post-Test kontrol - Pre-Test Kontrol	Negative Ranks	0[d]	,00	,00
	Positive Ranks	10[e]	5,50	55,00
	Ties	18[f]		
	Total	28		

Tabel 1. Wilcoxon signed ranked test

Keterangan :

Test Statistics^a

	Post-Test Eksperimen - Pre-Test Eksperimen	Post-Test kontrol - Pre-Test Kontrol
Z	-4,629^b	-2,842^b
Asymp. Sig. (2-tailed)	,000	,004

a. Wilcoxon Signed Ranks Test
b. Based on negative ranks.

The Wilcoxon Signed-Rank Test was conducted to determine the difference in learning outcomes between the pretest and posttest scores within each group, both the experimental and control groups. The use of this nonparametric test was based on the results of the normality test, which indicated that the data were not normally distributed; therefore, parametric analysis could not be applied.

The results of the analysis show a significant difference between the pretest and posttest scores in the experimental group. This is indicated by a Z value of 4.629 with a significance value of 0.000 (< 0.05). These findings indicate a significant improvement in learning outcomes following the treatment administered to the

a. Post-Test Eksperimen < Pre-Test Eksperimen
b. Post-Test Eksperimen > Pre-Test Eksperimen
c. Post-Test Eksperimen = Pre-Test Eksperimen
d. Post-Test kontrol < Pre-Test Kontrol
e. Post-Test kontrol > Pre-Test Kontrol
f. Post-Test kontrol = Pre-Test Kontrol

experimental group. Thus, it can be concluded that the instructional treatment or learning model applied to the experimental group had a significant effect on enhancing students' learning outcomes.

In the control group, the Wilcoxon test also revealed a significant difference between the pretest and posttest scores. The Z value obtained was 2.842 with a significance value of 0.004 (< 0.05). This indicates that an improvement in learning outcomes also occurred in the control group, although the magnitude of improvement was not as strong as that observed in the experimental group.

Based on the results of both tests, it can be concluded that learning outcomes improved in both the experimental and control groups. However, the improvement in the experimental group was considerably stronger compared to the control group. This indicates that the instructional model or treatment provided to the experimental group was more effective in improving students' learning outcomes than the conventional learning approach implemented in the control group.

D. N Gain Score Test

Descriptives

N Gain	Kelas			Statistic	Std. Error
N_GainPersent	Eksperimen	Mean		67,18	4,916
		95% Confidence Interval for Mean	Lower Bound	57,10	
			Upper Bound	77,27	
		5% Trimmed Mean		67,68	
		Median		61,25	
		Variance		676,682	
		Std. Deviation		26,013	
		Minimum		22	
		Maximum		100	
		Range		78	
		Interquartile Range		56	
		Skewness		,105	,441
		Kurtosis		-1,475	,858
	Kontrol	Mean		8,45	3,774
		95% Confidence Interval for Mean	Lower Bound	,70	
			Upper Bound	16,19	
		5% Trimmed Mean		4,89	
		Median		,00	
		Variance		398,906	
		Std. Deviation		19,973	

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	Minimum	0	
	Maximum	100	
	Range	100	
	Interquartile Range	11	
	Skewness	3,907	,441
	Kurtosis	17,248	,858

Based on the descriptive analysis of the normalized gain (n-gain) scores for both research groups, the following results were obtained.

In the experimental class, the n-gain scores indicated a relatively high level of improvement in learning outcomes. The mean n-gain reached 67.18, with a median of 61.25 and a score range between 22 and 100. The standard deviation of 26.013 shows considerable variation in improvement among students. The interquartile range (IQR) of 56 further indicates a wide spread of data. A skewness value of 0.105 reflects a relatively symmetrical distribution, while the kurtosis value of −1.475 indicates a platykurtic distribution, which is flatter than a normal distribution. Overall, the learning gains in the experimental group fall within the high category, as the mean n-gain exceeds 56%.

In contrast, the control class demonstrated very low learning improvement. The mean n-gain was only 8.45, with a median of 0.00. The minimum score of 0 and maximum of 100 indicate that most students experienced no improvement, while only a few achieved substantial gains. The standard deviation of 19.973 and IQR of 11 indicate considerably lower variation compared to the experimental group. A skewness value of 3.907 denotes a highly right-skewed distribution, showing that most students had low n-gain scores. The kurtosis value of 17.248 reflects a leptokurtic distribution, indicating that the scores are heavily concentrated at the lower end. Overall, the n-gain scores in the control group fall within the low category ($\leq 40\%$).

Taken together, the results indicate significant differences in learning improvement between the experimental group, which used the Arab Pegon learning model based on the Kitab Dikili, and the control group, which received conventional instruction. This difference is evident from the n-gain values, where the experimental class achieved high improvement (mean = 67.18), while the control class showed only minimal improvement (mean = 8.45). These findings suggest that learning through Arab Pegon using the Kitab Dikili had a positive effect on enhancing students' learning outcomes.

In the experimental class, the significant improvement can be attributed to the contextualized learning facilitated by the Kitab Dikili. This approach not only enhanced students' cognitive understanding but also supported the internalization of Islamic cultural values through the use of local language and tradition (Arab Pegon Gorontalo). Consequently, the learning experience became more culturally relevant and meaningful to students.

In contrast, the low n-gain in the control group indicates that conventional instruction was less effective in providing meaningful learning experiences. Traditional textual methods, with limited cultural contextualization, made it difficult for students to connect the lesson content with their cultural identity, resulting in minimal improvement. This is reflected in the very low mean n-gain (8.45) and a median of 0, indicating that most students experienced no significant learning gains.

This study further confirms that the use of local culture–based media and approaches, such as the Kitab Dikili, can enhance student motivation, engagement, and participation. When instructional materials incorporate familiar language, symbols, and cultural contexts, students develop stronger emotional and cognitive connections with the learning content, thereby optimizing learning outcomes.

Overall, learning through Arab Pegon using the Kitab Dikili proved to be more effective than conventional instruction, both in terms of improving academic achievement and strengthening Islamic cultural values. This culture-based instructional approach aligns with the principles of contextual learning, which emphasize the importance of linking instructional content with students' lived experiences and cultural identity. Thus, the findings of this study reinforce previous literature and affirm that the use of the Kitab Dikili constitutes a relevant, effective, and culturally appropriate learning approach for Madrasah Aliyah students in Gorontalo.

Conclusions

Based on the findings of this study, it can be concluded that learning through Arab Pegon using the *Kitab Dikili* has been proven effective in improving students' learning outcomes as well as strengthening Islamic cultural values among Madrasah Aliyah students. This conclusion is supported by the significant difference in learning gains between the experimental and control groups.

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The n-gain score in the experimental class reached an average of 67.18, which falls into the high category, whereas the control class achieved only 8.45, categorized as low. The substantially greater improvement in the experimental group indicates that the Arab Pegon–based learning process using the *Kitab Dikili* enabled students to understand the material in a more contextual, meaningful, and culturally relevant manner. The use of language closely related to students' daily lives also facilitated the internalization of Islamic cultural values, which is a central goal of the instruction. Thus, learning through the *Kitab Dikili* not only enhanced academic achievement but also strengthened the students' character and their understanding of the distinctive Islamic cultural heritage of Gorontalo. This instructional approach is relevant and aligned with the needs of learners who live within a strong local cultural environment.

The findings of this study present several important implications for education, particularly for Islamic culture–based learning in madrasah:

- Theoretical Implications

  This study reinforces the theory that culture-based learning can significantly enhance instructional effectiveness. The *Kitab Dikili*, as a representation of Gorontalo's local wisdom, demonstrates that contextualized learning materials can facilitate both cognitive understanding and the internalization of Islamic cultural values. These findings enrich the body of knowledge on local wisdom–based education and Arab Pegon literacy.

- Practical Implications

  Teachers may employ the *Kitab Dikili* as an alternative instructional medium to increase student interest and comprehension. Educators can also develop various learning activities based on local texts to ensure instructional relevance to students' sociocultural context. Madrasah are encouraged to develop and integrate local culture–based learning programs into the curriculum, particularly for religious and language subjects. The use of the *Kitab Dikili* has been shown to be effective and may serve as a model for character-oriented instructional development. Moreover, integrating the *Kitab Dikili* into learning can strengthen students' appreciation for their local culture while reinforcing their identity as young Muslim generations of Gorontalo. Meaningful learning experiences contribute to enhanced motivation, better content mastery, and stronger character formation.

- Policy Implications

  These findings may serve as a reference for developing local wisdom–based educational policies at both the madrasah and regional government levels. The use of Arab Pegon Gorontalo and the *Kitab Dikili* can be adopted as a strategic instrument for preserving local Islamic cultural heritage, which is increasingly at risk of being forgotten.

- Implications for Future Research

  Future studies may develop learning models based on the *Kitab Dikili* for other subjects or test their effectiveness at different educational levels. Further research may also explore its impact on students' affective and psychomotor domains.

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