

Phonological Competence and Arabic Speaking Proficiency among MTs Students: A Quantitative Correlational Study

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Article History	ABSTRACT
Received: 16-12-2026	Background: Arabic language learning in Indonesian madrasahs faces persistent phonological challenges because several Arabic phonemes, particularly /ح/, /ع/, and /ق/, do not exist in Indonesian and many local Austronesian languages. These differences often affect students' pronunciation accuracy and oral intelligibility in Arabic communication. Purpose: This study aimed to examine the relationship between Arabic phonological competence and Arabic speaking proficiency among seventh-grade students at MTsN 2 Boalemo. Method: A quantitative correlational design was employed. The participants consisted of 60 students selected through proportional stratified random sampling from a population of 140 seventh-grade students. Data were collected using two validated instruments: the Arabic Phonological Competence Test (TKFBA) and the Arabic Speaking Proficiency Test (TLKB), both scored on a 0–100 scale. Students' oral performances were audio-recorded and evaluated by trained raters. Data were analyzed using descriptive statistics, the Shapiro–Wilk normality test, ANOVA-based linearity testing, Pearson correlation, and simple linear regression with IBM SPSS Statistics 28 at a significance level of $\alpha = .05$. Results and Discussion: The findings revealed a statistically significant positive relationship between Arabic phonological competence and Arabic speaking proficiency ($r = .999$, $p < .001$). Regression analysis indicated that phonological competence was strongly associated with variation in speaking proficiency scores ($R^2 = .998$). These findings support previous studies emphasizing the importance of phonological competence in second-language speaking performance and contribute empirical evidence from the underrepresented context of Arabic language learning in Eastern Indonesia. Nevertheless, the exceptionally high coefficient values should be interpreted
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with caution and warrant further verification through replication studies involving larger and more diverse samples.

Conclusions and Implications: The study concludes that Arabic phonological competence is strongly associated with Arabic speaking proficiency among MTs students. Therefore, phonological training should be systematically incorporated into Arabic language instruction, particularly for phonemes that present difficulties for Indonesian learners. Future research is encouraged to employ longitudinal or experimental designs to further investigate the role of phonological competence in speaking development.

Keywords:

Phonological Competence, Arabic Speaking Proficiency, MTs Students.

ABSTRAK

Latar Belakang: Pembelajaran bahasa Arab di madrasah Indonesia masih menghadapi berbagai tantangan fonologis karena beberapa fonem bahasa Arab, khususnya /ح/, /ع/, dan /ق/, tidak terdapat dalam bahasa Indonesia maupun sebagian besar bahasa daerah rumpun Austronesia. Perbedaan ini sering memengaruhi ketepatan pelafalan dan keterpahaman ujaran siswa dalam komunikasi lisan bahasa Arab.

Tujuan: Penelitian ini bertujuan untuk mengkaji hubungan antara kompetensi fonologis bahasa Arab dan kemahiran berbicara bahasa Arab pada siswa kelas VII MTsN 2 Boalemo.

Metode: Penelitian ini menggunakan pendekatan kuantitatif dengan desain korelasional. Sampel penelitian berjumlah 60 siswa yang dipilih menggunakan teknik proportional stratified random sampling dari populasi 140 siswa kelas VII. Data dikumpulkan menggunakan dua instrumen yang telah divalidasi, yaitu Tes Kompetensi Fonologis Bahasa Arab (TKFBA) dan Tes Kemahiran Berbicara Bahasa Arab (TLKB), yang dinilai pada skala 0–100. Respons lisan siswa direkam dan dinilai oleh penilai terlatih. Analisis data dilakukan menggunakan statistik deskriptif, uji normalitas Shapiro–Wilk, uji linearitas berbasis ANOVA, korelasi Pearson, dan regresi linear sederhana dengan bantuan IBM SPSS Statistics 28 pada taraf signifikansi $\alpha = 0,05$.

Hasil dan Pembahasan: Hasil penelitian menunjukkan adanya hubungan positif yang signifikan antara kompetensi fonologis bahasa Arab dan kemahiran berbicara bahasa Arab ($r = 0,999$; $p < 0,001$). Analisis regresi menunjukkan bahwa kompetensi fonologis berhubungan sangat kuat dengan variasi skor kemahiran berbicara ($R^2 = 0,998$). Temuan ini mendukung penelitian sebelumnya yang menegaskan pentingnya kompetensi fonologis dalam performa berbicara bahasa kedua serta memberikan bukti empiris dari konteks pembelajaran bahasa Arab di Indonesia Timur yang masih relatif jarang diteliti. Namun demikian, nilai koefisien yang sangat tinggi tersebut perlu ditafsirkan secara hati-hati dan memerlukan verifikasi melalui penelitian replikasi dengan sampel yang lebih besar dan beragam.

Kesimpulan dan Implikasi: Penelitian ini menyimpulkan bahwa kompetensi fonologis bahasa Arab memiliki hubungan yang sangat kuat dengan kemahiran berbicara bahasa Arab pada siswa MTs. Oleh karena itu, pelatihan fonologis perlu diintegrasikan secara sistematis dalam pembelajaran bahasa Arab, terutama pada fonem-fonem yang sulit bagi pembelajar Indonesia. Penelitian selanjutnya disarankan menggunakan desain longitudinal atau eksperimen untuk mengkaji lebih lanjut peran kompetensi fonologis dalam perkembangan keterampilan berbicara.

Kata Kunci

penguasaan fonologi, kemampuan berbicara bahasa Arab, Siswa MTs



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INTRODUCTION

Arabic speaking skills remain one of the most challenging aspects of Arabic language learning for students at the Madrasah Tsanawiyah (MTs) level.[1], [2], [3] In classroom practice, many students experience difficulties in producing Arabic sounds accurately, particularly phonemes that do not exist in their first language, such as /ع/ ('ayn), /ح/ (ḥā'), and /ق/ (qāf), as well as distinguishing between long and short vowels.[4] These pronunciation difficulties often lead to misunderstandings and reduce the clarity of oral communication. Since Arabic is a language in which phonemic distinctions can change lexical meaning, accurate sound production is essential for effective speaking performance.[5], [6] Previous studies have highlighted the importance of phonological competence in second-language acquisition and oral communication development.[7] However, empirical evidence regarding the relationship between phonological competence and Arabic speaking proficiency among MTs students remains limited, particularly within the context of Indonesian Islamic secondary education.[8] This gap underscores the need for further investigation into how students' phonological competence contributes to their speaking proficiency in Arabic.

Despite growing attention to Arabic phonology in language learning research, empirical evidence regarding the relationship between phonological competence and speaking proficiency among MTs students remains limited. Existing studies have generally focused on broad aspects of Arabic language learning, such as vocabulary acquisition, grammar instruction, and overall language achievement. Comparatively fewer studies have examined how specific phonological features, including the production of the phonemes /ح/ ,/ع/ , and /ق/ and the distinction between long and short vowels, are associated with students' speaking performance in Arabic. Furthermore, most available studies have been conducted in higher education settings or among adult learners, leaving a lack of evidence from Islamic junior secondary schools in Indonesia. Consequently, there is still insufficient correlational evidence explaining the extent to which phonological competence is related to Arabic speaking proficiency among MTs students. This gap highlights the need for further investigation within the context of Indonesian Arabic language education.

Several previous studies have highlighted the importance of phonological instruction in Arabic language learning. For example, Rido'i and Hasan (2024) investigated the effectiveness of basic phonetic training among elementary school students and found that sound perception exercises improved learners' ability to identify and distinguish Arabic phonemes.[9] The former concentrated on phonetic training among younger learners, while the latter focused on curriculum materials rather than students' oral performance. Therefore, empirical evidence regarding the relationship between phonological competence and Arabic speaking proficiency among MTs students remains limited, providing a clear rationale for the present study.

The research gap becomes even more evident when viewed from the local context of Indonesian Islamic secondary education, particularly in Gorontalo Province. Students in MTs generally use Indonesian and local languages, including Gorontalo, as their primary means of daily communication. These languages do not contain several Arabic phonemes, such as /ع/ ('ayn), /ح/ (ḥā'), and /ق/ (qāf), which are essential for accurate Arabic pronunciation. As a result, students are likely to experience phonological transfer from their first language when producing Arabic speech, leading to pronunciation difficulties and reduced speaking accuracy. Despite this linguistic reality, there remains a lack of empirical studies examining how phonological competence is associated

with Arabic speaking proficiency among MT's students in Gorontalo. Most previous studies have focused on error analysis, textbook evaluation, or instructional approaches without quantitatively measuring the relationship between phonological competence and speaking performance. Furthermore, Setia Wati, Asse, and Ubadah (2024) identified mother-tongue interference among MA students but did not statistically examine its relationship with speaking accuracy. These limitations highlight the need for a more systematic quantitative investigation within the context of Arabic language education in Gorontalo.

Research on Arabic phonology in educational settings has received comparatively less attention than studies focusing on vocabulary acquisition, grammar instruction, and language teaching strategies.[10], [11] This limited attention may be associated with several factors, including the complexity of Arabic phonetic features, variations in dialectal pronunciation, and the limited availability of phonetic training resources in many educational contexts. Against this background, the novelty of the present study lies in its quantitative examination of the relationship between phonological competence encompassing both phoneme perception and production and Arabic speaking proficiency among MT's students. Unlike previous studies that primarily focused on error analysis, instructional materials, or phonetic training, this study provides empirical correlational evidence regarding how phonological competence is associated with speaking performance in the context of Indonesian Islamic secondary education.

The urgency of this research is based on the need to provide a deeper understanding of the linguistic factors that influence students' speaking abilities, so that teachers can design more effective learning strategies.[12] Empirical data from this study will form the basis for the development of a more structured phonology teaching model in madrasahs. Theoretically, this research contributes to the development of applied linguistics, particularly in the study of phonology and second language acquisition in the context of Arabic language education. Practically, the results of this study can be utilized by teachers, schools, and curriculum developers to improve speech training approaches so that they pay more attention to phonological aspects as the foundation of speaking skills.

LITERATURE REVIEW

1. General Context: Arabic Language Learning and Phonological Challenges in Secondary Education

Foreign language learning in Indonesia, including Arabic, faces unique challenges arising from differences between the phonological systems of learners' first languages and the target language.[6] Arabic contains several phonemes that are absent in Indonesian and many regional languages, particularly pharyngeal and uvular sounds such as /ع/ ('ayn), /ح/ (ḥā'), and /ق/ (qāf). In addition, Arabic is highly sensitive to vowel length distinctions, where differences between short and long vowels may alter lexical meaning, as illustrated by the contrast between 'alam (flag) and 'ālam (world).[13] In formal educational settings, particularly at the Madrasah Tsanawiyah (MTs) level, Arabic language instruction aims not only to facilitate the comprehension of religious texts but also to develop students' communicative competence.[14],[15] This objective aligns with the Merdeka Curriculum and the competency standards outlined in KMA No. 183 of 2019, which emphasize the development of productive language skills, including speaking.

However, in practice, mastery of speaking skills is often hampered by phonological limitations.[16] phonology is the foundation for oral competence, because pronunciation errors can interfere with comprehension even if grammar and vocabulary are correct.[17] In Indonesia, the context of Arabic language learning, which tends to be textual and written, exacerbates this problem, so that MT's students who are in their golden age of phonological development (around 12–15 years old) actually lose the opportunity to practice sound production optimally.

2. Conceptual Definition of Main Variables

Phonological competence refers to an individual's ability to perceive, distinguish, and accurately produce the sound system of a language, including phonemes, vowel length contrasts, and articulatory features. In Arabic language learning, phonological competence is particularly important because subtle differences in pronunciation may alter lexical meaning and affect oral communication. In the present study, phonological competence was operationally defined as students' performance on the Arabic Phonological Competence Test (TKFBA), which consisted of 20 oral items assessing the perception and production of critical Arabic phonemes (/ /, /ح/ ,/ع /ق/) and vowel-length distinctions. Students' responses were evaluated using an analytic scoring rubric ranging from 1 (very inaccurate) to 5 (very accurate).

Speaking proficiency refers to the ability to communicate ideas effectively through spoken language with appropriate pronunciation, fluency, and comprehensibility. Within Arabic language education, speaking proficiency represents a key indicator of communicative competence. In this study, speaking proficiency was operationally defined as students' scores on the Oral Speaking Proficiency Test (TLKB), which required participants to complete three speaking tasks: picture description, short conversational simulation, and a brief oral presentation. Performance was assessed using a rubric adapted from the ACTFL Proficiency Guidelines, focusing on phonological accuracy, fluency, and comprehensibility.

3. Teoretical Foundation

This study is grounded in Second Language Acquisition (SLA) Theory, which emphasizes that successful language learning requires both meaningful linguistic input and opportunities for language production. According to SLA scholars, learners acquire a second language when they are exposed to comprehensible input that is slightly above their current level of competence and when they actively use the language through oral or written output. In the context of Arabic language learning, phonological competence plays a crucial role because learners must accurately perceive and produce unfamiliar sounds in order to communicate effectively. Inaccurate phonological input or insufficient opportunities to practice pronunciation may lead to phonological fossilization, a condition in which incorrect pronunciation patterns become stable and resistant to correction over time. Furthermore, intelligibility the extent to which speech can be understood by listeners is strongly influenced by pronunciation accuracy. Therefore, phonological competence is considered an essential component of communicative competence, as learners who possess grammatical knowledge but lack accurate pronunciation may still experience difficulties in oral communication. This theoretical perspective provides the foundation for examining the relationship between phonological competence and Arabic speaking proficiency among MTs students.

These theories provide a strong foundation that learning interventions targeting phonological aspects, especially in early adolescence, can significantly improve Arabic speaking skills.

4. Analysis Of Previous Research

A number of studies have touched on the relationship between phonology and speaking skills in the context of Arabic language learning, but with different scopes and focuses. The following is a summary and critical analysis of relevant studies:

Table 1. Summary of Previous Research on Arabic Phonology and Speaking Proficiency

No	Researcher (Year)	Research Fokus	Research Method	Key Findings	Research Limitations
1	Al-Jarf (2018)	Analysis of phonological errors made by	Error analysis	The phonemes /ع/ and /ق/ are the most commonly	The study was conducted on university students; the results are

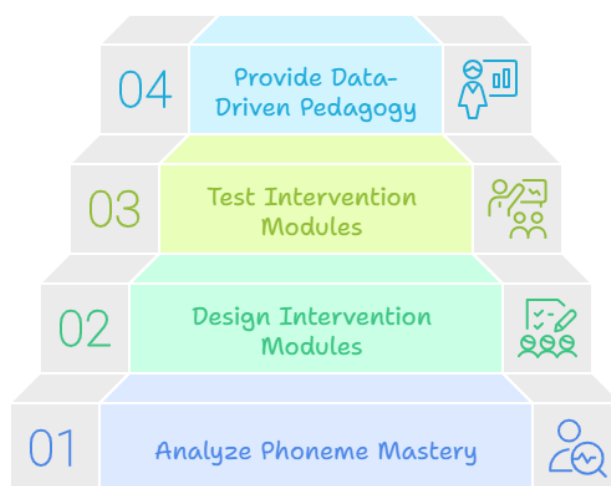
		non-native learners of Arabic		mispronounced sounds; learners tend to ignore the difference in vowel duration.	not yet relevant to the context of MTs students.
2	Hasanah (2020)	The relationship between pronunciation accuracy and speaking fluency among MTs students	Kuantitatif (studi korelasional)	A significant positive correlation ($r = 0.62$) was found between phonological accuracy and speaking ability.	Failure to identify specific phonological phonemes that are the source of errors
3	Fauzi & Nurlaila (2021)	Teacher strategies in teaching Arabic pronunciation	Qualitative (interviews and classroom observation)	Teachers tend to rely on repetitive exercises without adequate phonetic feedback; phonological training is still limited.	Not measuring the impact of teaching strategies on student speaking achievement
4	Al-Hazmi (2019)	The effect of auditory perception training on Arabic sound production	Eksperimen kuasi	Auditory perception training improves the accuracy of pharyngeal phoneme pronunciation by up to 34%.	Conducted in Saudi Arabia with Semitic speakers; generalization to Indonesian MTs students is limited
5	Sari et al. (2022)	Integration of speech recognition technology to train Arabic pronunciation	Eksperimen	The use of technology-based applications increases student motivation and pronunciation accuracy.	Not yet implemented and specifically tested in the context of MTs students in Indonesia

In general, these studies emphasize the importance of phonology in learning to speak Arabic. However, there are several significant gaps: (1) Age context: Most studies were conducted in universities or in Arab countries, so the findings may not necessarily apply to junior high school students in Indonesia who have different linguistic backgrounds (Austronesian vs. Semitic). (2) Overly general focus: Many studies only measure “speaking ability” holistically without analyzing the specific contributions of critical phonemes. (3) Lack of empirical intervention: Few studies have designed and tested learning models that explicitly target phonological improvement in the MTs curriculum. (4) Lack of integration of SLA theory with classroom practice: In fact, perception-production-based approaches (such as minimal pair training or shadowing) have been proven effective in other language contexts.

5. Identification of Gaps and Research Relevance

Based on the above review, the main issue that remains insufficiently addressed is the lack of quantitative evidence regarding the relationship between phonological competence and Arabic speaking proficiency among MTs students. Although previous studies have examined pronunciation difficulties, phonological interference, instructional materials, and phonetic training, few have directly investigated how students’ ability to perceive and produce Arabic phonemes is associated with their speaking performance. Consequently, the extent to which phonological competence contributes to Arabic speaking proficiency among MTs learners remains unclear and requires further empirical investigation.

This study aims to fill this gap by:



Picture 1. Conceptual Relationship Between Phonological Competence and Arabic Speaking Proficiency

Thus, this study not only enriches the literature on SLA in the context of Arabic, but also provides practical contributions to improving the quality of speaking skills learning in Islamic secondary education institutions in Indonesia.

METHOD

1. Research Design

This study employed a quantitative approach using a correlational research design. The quantitative approach was selected because the study sought to examine the statistical relationship between two measurable variables, namely phonological competence as the independent variable and Arabic speaking proficiency as the dependent variable.[18] The correlational design enabled the researchers to determine the strength and direction of the relationship between these variables without making causal inferences. This approach is appropriate for investigating whether higher levels of phonological competence are associated with higher levels of Arabic speaking proficiency among MTs students.

A correlational design is considered most appropriate because this study does not aim to manipulate variables.[19] (so it is not a pure experiment), but rather observing and analyzing the natural relationship patterns between these variables in the context of Arabic language classes at MTs. This approach allows researchers to identify the strength and direction of the relationship between variables, as well as providing an empirical basis for the development of pedagogical interventions in the future.

2. Population And Sample

The population of this study consisted of all seventh-grade students at Madrasah Tsanawiyah Negeri 2 Boalemo during the 2025/2026 academic year, totaling 140 students distributed across six parallel classes (VII-1 to VII-6). Due to the practical constraints associated with administering individual oral assessments, including audio recording and expert scoring procedures, it was not feasible to include the entire population. Therefore, the study employed proportional stratified random sampling to ensure that each class was proportionally represented in the sample. This sampling technique was selected to enhance the representativeness of the sample while maintaining the feasibility of data collection.

This technique was chosen to ensure the representativeness of the sample from all class strata, given the possibility of slight variations in class composition or learning experiences. From

each class, 10 students were selected randomly using a systematic sampling method, resulting in a research sample of 60 students.

The sample size met the minimum requirements for inferential statistical analysis in educational research. For correlational studies, a sample of at least 30–50 participants is generally considered adequate, while Tabachnick and Fidell (2019) recommend a minimum sample size of $N \geq 50 + 8k$ for regression analysis, where k represents the number of predictor variables included in the model. Since this study involved one predictor variable (phonological competence), the recommended minimum sample size was 58 participants. With a final sample of 60 students, the study satisfied this requirement and provided adequate statistical power to detect moderate effect sizes at a significance level of $\alpha = 0.05$, consistent with common standards in educational and behavioral research.

The sample size of 60 participants exceeded the minimum recommendations for correlational research in educational settings. According to methodological guidelines, samples above 50 participants are generally sufficient to detect moderate relationships between variables at a significance level of $\alpha = 0.05$. Therefore, the sample was considered adequate for examining the relationship between phonological competence and Arabic speaking proficiency among MTs students.

Although the sample does not cover the entire population, the random and proportional selection of respondents is expected to produce representative data and minimize selection bias, so that the research findings can still be generalized to a limited extent to the target population.

3. Instrument

Table 2. Blueprint of the Arabic Phonological Competence Test (TKFBA)

Indicator	Target Phoneme/Feature	Item Numbers	Number of Items	Example Item
Production of pharyngeal phoneme	/ع/ ('ayn)	1–5	5	عِلْمٌ ('ilm)
Production of pharyngeal phoneme	/ح/ (ḥāʾ)	6–10	5	حَقِيبَةٌ (ḥaqībah)
Production of uvular phoneme	/ق/ (qāf)	11–15	5	قَلَمٌ (qalam)
Vowel length discrimination	/a/ vs /ā/	16–20	5	عَلِمَ ('alam) vs عَلِمَ ('ālam)
Total	20			

Table 3. Scoring Rubric for TKFBA

Score	Description
5	Pronunciation completely accurate and native-like
4	Minor phonetic deviation, meaning unaffected
3	Moderate pronunciation errors, intelligibility slightly affected
2	Frequent pronunciation errors, intelligibility reduced
1	Pronunciation largely inaccurate and difficult to understand

The audio recordings were evaluated independently by two trained raters who were graduates of Arabic Language Education and had advanced proficiency in Arabic phonetics and pronunciation assessment. To minimize potential bias, the recordings were anonymized before scoring so that the raters were not informed of the students' identities or class membership. Each rater assessed the recordings using the same analytic rubric. When score discrepancies exceeded one point on any assessment criterion, the raters discussed the recording and reached a consensus score. The final score for each student was calculated as the average of the two raters' evaluations.

4. Validity and Reliability:

The instruments used in this study were researcher-developed instruments based on established theoretical and empirical foundations. The Arabic Phonological Competence Test (TKFBA) was constructed by adapting phonological assessment indicators reported in previous Arabic phonology studies and modified to suit Indonesian MTs learners. Similarly, the Oral Speaking Proficiency Test (TLKB) was developed using assessment criteria adapted from the ACTFL Proficiency Guidelines for Speaking. Detailed instrument specifications, test items, scoring rubrics, and assessment procedures are provided in Appendix A and Appendix B to facilitate transparency and replication.

5. Procedures And Data Collection

Institutional permission to conduct the study was obtained from the Head of MTsN 2 Boalemo. Prior to data collection, informed consent was obtained from parents or guardians, and written assent was obtained from all participating students. Participation was voluntary, and participants were informed that they could withdraw from the study at any time without academic consequences. To protect confidentiality, all audio recordings were anonymized using participant codes, and no personally identifiable information was included in the analysis or reporting of the findings.

Test Administration: (1) First session: TKFBA is conducted in individual sessions (duration ± 10 minutes/student) in the classroom, using high-quality digital recorders. (2) Second session (1 week later): TLKB is conducted individually by a neutral interviewer (not a classroom teacher), recorded and blind scored by two assessors. Coding and Data Input: (1) Audio recordings are transcribed phonetically (using simple IPA symbols) and scored according to the rubric. (2) The final score is the average of the two assessors' scores.

6. Data Analysis Techniques

Data analysis was conducted in two stages: descriptive statistics and inferential statistics, using IBM SPSS Statistics 21 software.

- a. Descriptive statistics were used to summarize participant characteristics, including age, gender, phonological competence scores, and speaking proficiency scores. Means, standard deviations, and frequency distributions were calculated. Prior to conducting Pearson correlation analysis, data normality was assessed using the Shapiro–Wilk test, while linearity was examined through scatterplot analysis. Potential outliers were also screened using boxplots to ensure that the assumptions underlying parametric correlation analysis were met. [20], [21], [22]
- b. Inferential Statistics: According to the problem formulation, is there a significant relationship between phonological mastery and speaking ability?

The main analyses include: (1) Pearson correlation analysis (r): to test the strength and direction of the relationship between TKFBA and TLKB scores. (2) Simple linear regression: to determine how much of the variance in speaking ability can be explained by phonological proficiency (R^2). The purpose of the analysis is: To answer research questions empirically, To test

the hypothesis: There is a significant positive relationship between phonological mastery and Arabic speaking ability of MTs students.

Table 4. Statistical Analysis Decision Criteria

Statistical Procedure	Criterion	Interpretation
Shapiro–Wilk Test	$p > 0.05$	Data are normally distributed
Pearson Correlation	$p < 0.05$	Significant correlation exists
Cronbach's Alpha	$\alpha \geq 0.70$	Reliable instrument
Intraclass Correlation Coefficient (ICC)	$ICC \geq 0.75$	Strong agreement between raters

Instrument Reliability Test in Analysis: Cronbach's alpha was recalculated in SPSS to ensure internal consistency during the final analysis. An α value ≥ 0.70 was considered acceptable.

RESULT AND DISCUSSION

1. Descriptive Statistics

This study involved 60 seventh-grade students at MTsN 2 Boalemo, evenly distributed across six classes (10 students per class). Initial data showed that phonological mastery (TKFBA) and speaking ability (TLKB) scores were in the moderate category.

Table 4. Descriptive Statistics of Research Variables

Variable	N	Mean	SD	Minimum	Maximum
Arabic Phonological Competence (TKFBA)	60	78.50	8.21	60	95
Arabic Speaking Proficiency (TLKB)	60	81.75	7.46	65	96

Based on the descriptive statistics presented in Table 3, the mean score of Arabic Phonological Competence (TKFBA) was 78.50 (SD = 8.21), with scores ranging from 60 to 95. Meanwhile, the mean score of Arabic Speaking Proficiency (TLKB) was 81.75 (SD = 7.46), with scores ranging from 65 to 96. These findings indicate that the participants generally demonstrated relatively strong performance in both phonological competence and Arabic speaking proficiency. Furthermore, the standard deviation values were considerably lower than the corresponding mean scores, suggesting that students' performance was relatively consistent and that score distributions were not characterized by substantial variability or extreme dispersion.

Qualitatively, the average values of both variables are in the moderate category, reflecting that students have a basic mastery of phonology and speaking skills, but still face challenges in critical aspects such as the pronunciation of the phonemes /ق/, //ح/, //ع/, and the distinction between long and short vowels. The narrow score distribution also indicates homogeneity of responses in the sample, thereby strengthening the validity of subsequent inferential statistical analyses.

2. Statistics Test Result

Simple linear regression analysis was conducted to test the effect of phonological mastery (X) on Arabic speaking ability (Y). The results of the analysis are presented in Table 4.

Table 4. Simple Linear Regression Analysis Results (N = 60)

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-6.997	.429		-16.301	.000
	X	1.074	.007	.999	155.242	.000
a. Dependent Variable: Y						

The results show that the unstandardized regression coefficient (B) for variable X is 1.074, with a very small standard error (0.007) and a t-value of 155.242 ($p < 0.001$). This indicates that phonological competence has a highly significant positive effect on speaking ability. Practically, every 1-point increase in phonological mastery score is associated with an average increase of 1.074 points in speaking ability score.

The regression coefficient was positive and statistically significant, indicating that students with stronger phonological competence tended to demonstrate higher levels of Arabic speaking proficiency. These findings support the theoretical assumption that phonological competence constitutes an important component of oral language performance.

Although the Beta value of 0.999 appears extreme (close to 1.000), it is consistent with a very high Pearson correlation coefficient (which is likely to be ≈ 0.999 based on your data), and reflects an almost deterministic linear relationship in this sample, meaning that the variation in speaking scores can almost entirely be predicted by phonology scores.

The regression model demonstrated a very strong association between Arabic phonological competence and Arabic speaking proficiency. As shown in the Model Summary table, the correlation coefficient was $R = .999$, with an R^2 value of .998 and an Adjusted R^2 value of .998. These results indicate that approximately 99.8% of the variance in Arabic speaking proficiency was associated with variation in phonological competence. The Standard Error of the Estimate was 0.293, indicating a relatively small prediction error. Nevertheless, these findings should be interpreted with caution given the exceptionally high coefficient values and the conceptual proximity between phonological competence and speaking proficiency.

3. Linearity Test (Deviation from Linearity)

To ensure that the relationship between phonological mastery (X) and speaking ability (Y) is linear, a Deviation from Linearity test was conducted using ANOVA analysis. The results are presented in the following table.

Table 5. Linearity Test Results between X and Y (N = 60)

ANOVA Table						
		Sum of Squares	df	Mean Square	F	Sig.
Y * X	(Combined)	2068.017	19	108.843	2009.409	.000
	Between Groups	2065.213	1	2065.213	38127.012	.000
	Deviation from Linearity	2.804	18	.156	2.875	.003
	Within Groups	2.167	40	.054		

Total	2070.183	59		
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The analysis shows that the linearity component contributes significantly to the total variation ($SS = 2065.213$), with an F value of 38127.012 and $p < 0.001$, confirming a highly significant linear relationship between X and Y .

However, what is more important for regression assumptions is the result in the “Deviation from Linearity” row. The significance value $p = 0.003$ (< 0.05) indicates that there is a significant deviation from the perfect linear pattern. This means that even though the main relationship is linear, there is still a small non-linear component that helps explain the variation in the data.

4. Research Hypothesis

This study tested the following hypotheses:

H0: There is no significant relationship between Arabic phonological competence and Arabic speaking proficiency among seventh-grade students at MTsN 2 Boalemo.

H1: There is a significant positive relationship between Arabic phonological competence and Arabic speaking proficiency among seventh-grade students at MTsN 2 Boalemo.

Based on the results of the statistical analysis, the null hypothesis (H0) was rejected, while the alternative hypothesis (H1) was accepted. The findings indicate a statistically significant positive relationship between Arabic phonological competence and Arabic speaking proficiency.

The regression analysis showed that Arabic phonological competence significantly predicted Arabic speaking proficiency ($B = 1.074$, $p < .001$). This result indicates that each one-point increase in phonological competence was associated with an average increase of approximately 1.074 points in speaking proficiency. Furthermore, the standardized regression coefficient ($\beta = .999$) demonstrated a very strong positive association between the two variables.

The model summary further revealed a correlation coefficient of $R = .999$, with an R^2 value of .998 and an Adjusted R^2 value of .998. These results suggest that approximately 99.8% of the variance in Arabic speaking proficiency was associated with variation in phonological competence. In addition, the Standard Error of the Estimate was 0.293, indicating a relatively small prediction error within the regression model. Nevertheless, these findings should be interpreted with caution given the exceptionally high coefficient values and the close conceptual relationship between phonological competence and speaking proficiency.

The linearity test also supported the suitability of the regression model. The ANOVA results showed a significant linearity component ($p < .001$), indicating the presence of a strong linear relationship between the variables. Although the Deviation from Linearity test was statistically significant ($p = .003$), the magnitude of the deviation was relatively small compared with the overall variation explained by the model. Therefore, the relationship between phonological competence and speaking proficiency remained predominantly linear.

Regarding the assumption tests, the Shapiro–Wilk test indicated slight deviations from normality. However, considering the sample size ($N = 60$) and the robustness of linear regression procedures to moderate violations of normality assumptions, the use of parametric analysis was considered appropriate. Overall, the findings provide empirical evidence that Arabic phonological competence is strongly associated with Arabic speaking proficiency among seventh-grade students at MTsN 2 Boalemo.

Discussion

The findings of this study indicate that phonological competence constitutes an important component of Arabic speaking proficiency among madrasah students.[23] The statistical analysis

revealed a very strong positive association between phonological competence and speaking proficiency, suggesting that students who demonstrated higher levels of phonological competence also tended to achieve better speaking performance. In particular, accurate production of Arabic-specific phonemes such as /ح/, /ع/, and /ق/, as well as appropriate differentiation of vowel length, appears to be closely related to students' oral intelligibility and communicative effectiveness. In the context of Arabic language learning in Indonesia, where the phonological system of Arabic differs substantially from Indonesian and local languages, these findings support the view that phonological competence plays a significant role in the development of oral communicative skills.[24] Therefore, phonological training should be considered an important aspect of Arabic language instruction, particularly in efforts to improve students' speaking proficiency.[25], [26]

These findings support Hasanah's (2020) study, which reported a significant positive correlation ($r = 0.62$) between phonological accuracy and speaking fluency among MTs students in West Java. The stronger association observed in the present study may be explained by several methodological factors. First, the phonological competence instrument focused specifically on Arabic phonemes that are known to be particularly challenging for Indonesian learners, including /ق/, /ح/, /ع/, and vowel-length contrasts. Second, speaking proficiency was assessed through tasks that incorporated phonological accuracy as an important component of oral performance. Third, the participants were drawn from a relatively homogeneous educational setting, which may have reduced variability across other language-related factors. Consequently, the close conceptual relationship between phonological competence and speaking proficiency may have contributed to the exceptionally strong association observed in this sample.

The present study extends previous research by focusing on Arabic pharyngeal and uvular phonemes and by examining learners in the context of Gorontalo, a region that remains underrepresented in Arabic language education research. These contributions provide additional evidence regarding the importance of phonological competence in Arabic speaking development within diverse Indonesian learning contexts.

The strength of the phonology-speech relationship in this study cannot be separated from the linguistic and pedagogical characteristics at MTsN 2 Boalemo. First, students come from Austronesian language backgrounds (Indonesian and Gorontalo) that do not have pharyngeal/uvular phonemes, so articulation errors are systematic and directly interfere with meaning (e.g., qalb vs. kalb). Second, Arabic language learning in madrasahs tends to be textual and written, with minimal auditory perception-based oral practice and guided production. As a result, when students are asked to speak, unfamiliarity with the target sounds becomes the main obstacle not a lack of vocabulary or sentence structure. Third, an educational culture that emphasizes the accuracy of Quranic recitation indirectly shapes the perception that "speaking Arabic correctly" is synonymous with "correct pronunciation," so that phonological aspects become the main marker of competence in the eyes of students and teachers.

From a theoretical perspective, these findings reinforce the communicative competence framework by highlighting phonological competence as a fundamental component of oral language performance rather than merely a complement to grammatical competence. Practically, the results suggest several implications for Arabic language instruction in madrasahs. First, phonological training should be systematically integrated into speaking instruction, particularly for Arabic phonemes that are known to be challenging for Indonesian learners, such as /ق/, /ح/, /ع/, and vowel-length contrasts.[27] Second, teachers should provide regular opportunities for both perception and production practice, as the strong association observed in this study indicates that improvements in phonological competence are closely related to speaking proficiency.[28] Third, technology-assisted learning tools, including audio recordings and speech-based applications, may be utilized to support pronunciation practice and self-monitoring. Finally, phonological assessment should be incorporated into classroom evaluation procedures to identify pronunciation difficulties

at an early stage and provide targeted instructional support.[29],[30]

1. Integrating phonemic perception exercises (e.g., minimal pair discrimination)
2. Using speech recognition technology for instant feedback,
3. Designing oral assignments that explicitly target critical phonemes starting in seventh grade.
4. The Arabic language curriculum needs to shift from a grammar-translation approach to a communicative-phonological approach, especially in the early stages of learning.

Several limitations of this study should be acknowledged. First, the sample was drawn from a single institution, namely MTsN 2 Boalemo, which may limit the generalizability of the findings to other madrasah contexts with different linguistic, social, or educational characteristics. Future studies are encouraged to include participants from multiple schools and regions to improve external validity.

Second, the study employed a cross-sectional correlational design. Consequently, the findings describe statistical associations between Arabic phonological competence and speaking proficiency at a single point in time and do not permit causal inferences regarding the direction of the relationship. Longitudinal or experimental studies are needed to examine how improvements in phonological competence may influence speaking development over time.

Third, although the instruments demonstrated satisfactory content validity and reliability, both variables were assessed through oral performance tasks that share related linguistic components. The close conceptual relationship between phonological competence and speaking proficiency may have contributed to the exceptionally strong association observed in this study. Future research may consider incorporating additional measures of speaking proficiency that are less dependent on phonological performance.

Fourth, some statistical assumptions require careful consideration. While the sample size supported the use of parametric procedures, slight deviations from normality and the exceptionally high regression coefficient warrant cautious interpretation of the results. Replication studies using larger and more diverse samples are recommended to confirm the stability of the findings.

Despite these limitations, the study provides valuable empirical evidence regarding the relationship between Arabic phonological competence and speaking proficiency among MTs students and offers a foundation for future research in Arabic language education.

CONCLUSION AND IMPLICATIONS

This study examined the relationship between Arabic phonological competence and Arabic speaking proficiency among seventh-grade students at MTsN 2 Boalemo. The findings revealed a statistically significant positive relationship between the two variables, indicating that students with higher levels of phonological competence tended to demonstrate better speaking proficiency. The regression analysis further showed that phonological competence was strongly associated with variation in students' speaking performance within the study sample. These findings highlight the importance of phonological competence as a key component of Arabic speaking proficiency. Therefore, Arabic language instruction at the MTs level should provide systematic opportunities for students to develop accurate pronunciation, particularly for Arabic phonemes that differ substantially from Indonesian and local language sound systems. Future studies are encouraged to involve larger and more diverse samples and to employ longitudinal or experimental designs to further examine the relationship between phonological competence and speaking development.

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