



Impact Of Linguistic Intelligence And Motivation On Arabic Mastery Among Medical Student

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Abstract: Arabic language learning at UIN Maulana Malik Ibrahim Malang is part of the Special Arabic Language Development Program (PKPBA), which must be followed by all students, including students of the Medical Study Program. Diverse educational backgrounds and differences in study focus make mastering Arabic a challenge. On the other hand, medical students generally have high cognitive intelligence in a compound manner; in the context of language education, linguistic verbal intelligence is the key, accompanied by high learning enthusiasm as well. This study aims to analyze the effect of verbal linguistic intelligence and learning motivation on medical students' mastery of Arabic. This research uses a mixed-method approach with quantitative data as primary and qualitative data as supporting, collected through observation, interviews, questionnaires, and documentation. Quantitative analysis was conducted with multiple linear regression and partial test (t-test), while qualitative analysis used the Miles and Huberman model. The results showed that partially verbal linguistic intelligence has a significant effect on Arabic language mastery (sig. 0.004), as well as motivation (sig. 0.000). Simultaneously, however, only motivation remained significant (sig. 0.000), while intelligence became insignificant (sig. 0.259), indicating that learning motivation was the dominant factor. Qualitative findings support these results, showing that phonetic and semantic aspects are easier to master, while syntax and praxis still require more attention in the learning process.

Keywords: *Arabic Language Mastery, Learning Motivation, Linguistic Verbal Intelligence, Medical Students*

INTRODUCTION

State Islamic University of Maulana Malik Ibrahim Malang is a higher education institution that requires all students, including medical students, to take part in the Special Arabic Language Development Program (PKPBA) (Ubaid & Maghfur, 2021). This program is designed to equip students with basic Arabic language skills, namely reading, writing, listening, and speaking, in order to support understanding of Islamic literature and increase global competitiveness. Given that students come from ethnically diverse backgrounds, cultures, and language

interests, the level of Arabic language acquisition also varies. In this case, Arabic language ability for medical students is not only an additional skill, but also a major asset in building motivation to learn a foreign language.

According to (Azizah & Abdul Wahab, 2022) foreign language learning is a complex process that involves various complicated phenomena. This process is influenced by many factors whether it is factors outside the context of education or factors that are elements in education itself.

Moreover, according to (Sogutlu, 2018) The main factors closely related to foreign language learning include the learner's mother tongue, external factors, internal factors, and the individual characteristics of the learner himself. These factors often play an important role in the process of language acquisition, especially Arabic.

Generally, the factors that influence foreign language learning and acquisition come from the internal aspects of students, such as verbal-linguistic intelligence and learning motivation. Basically, humans have various types of intelligence as proposed by Gardner. However, in the context of learning, linguistic intelligence is an important factor for students in building their language vocabulary (2024, عبد الحليم).

In the context of practical linguistics as applied in education, according to (Rusu, 2024) verbal linguistic intelligence is an asset for second language teachers and a predictor of learning success. This intelligence is natural to humans; teachers simply need to cultivate it further. From a linguistic perspective, the output of this intelligence can master four linguistic components, namely phonetics, semantics, syntax, and pragmatics.

As for motivation, it acts as an additional force and drive for deep curiosity. Motivation can be reflected through an attitude of discipline, adherence to rules, not afraid of failure, and the courage to keep asking questions. According to Ryan and Deci, motivation is the main foundation that encourages a person to do something in order to maximize the potential that exists in him (Jama, 2022).

Students' success in mastering Arabic Linguistics is influenced by individual characteristics, especially cognitive and affective factors such as verbal-linguistic intelligence and learning motivation. Verbal-linguistic intelligence, according to Thomas Armstrong within the framework of Howard Gardner's multiple intelligence theory, is a person's ability to understand and use language effectively. Individuals with this intelligence tend to excel in reading, writing, listening and speaking. Therefore, this intelligence becomes one of the important determinants in the success of students' Arabic language acquisition (Armstrong, 2018).

The Intensive Arabic Language Learning Program (PKPBA) at UIN Maulana Malik Ibrahim Malang has been implemented since 2001 for all students, including medical students (Rasyidah et al., 2024).

The program lasts for two semesters with a duration of four hours per day. Although this program is systematically designed, students' Arabic language acquisition skills still show variations. This is influenced by internal factors such as verbal-linguistic intelligence, learning motivation, and the academic load of each study program. Therefore, research is needed to examine the influence of these two factors on the mastery of Arabic linguistic (Hilmi et al., 2024).

The linguistic mastery is defined as a collection of vocabulary that a person understands and uses in the context of listening, reading, and speaking. According to Katiah (2022, خابر & كاتية), emphasizes that vocabulary richness is an important requirement before one learns a language.

Al-Dib 'Ali Muhammad views it as the result of accumulated linguistic knowledge and experience over a period of time. Meanwhile, Abdul Rahman al-Hajj emphasizes aspects of vocabulary mastery and language structures used in communication, which reflect a person's lexical ability (2010, عبد الرحمن الحاج).

Meanwhile, it is different from the theory of language acquisition. The theory is a process that includes strategies and mechanisms for the development of language skills, both naturally and through learning (Sá-Leite et al., 2023).

Language acquisition theory aims to explain how individuals master the structure and function of language, and includes various approaches such as behavioristic, nativistic, interactionist, and constructivistic theories (Abidin & Fahmi, 2023).

Verbal-linguistic intelligence and learning motivation are two internal factors that have a significant role in the language acquisition process, especially in learning Arabic as a second language.

Ryan and Deci in (Fauzi & Anindiati, 2021) classify motivation into two main categories, namely intrinsic motivation that stems from individual curiosity, as well as extrinsic motivation that arises from external drives such as the desire to obtain high grades or meet academic demands.

In this context, the theory of achievement motivation proposed by McClelland, as cited by Wei & Yitong, asserts that the need to achieve is the main driver in learning activities. Therefore, students with high levels of achievement motivation tend to show seriousness in mastering Arabic in order to achieve optimal academic results and adequate communication skills (Wei, 2025).

The purpose of this study is to examine the effect of verbal-linguistic intelligence on medical students' Arabic linguistic mastery, analyze the contribution of learning motivation in improving such mastery, and evaluate the relationship and simultaneous influence between verbal-linguistic intelligence and learning motivation on Arabic linguistic mastery. This research is based on the theory of multiple intelligences developed by Howard Gardner and contextualized in the field of education by Thomas Armstrong, as well as the theory of learning motivation based on the self-determination theory approach developed by Ryan and Deci. Through the integration of these two theoretical approaches, the research is expected to provide a comprehensive understanding of the internal factors that influence the

achievement of linguistic competence in Arabic language learning.

Various previous studies have made important contributions in understanding the dynamics of Arabic language learning from various perspectives. Mu'awanah and Insani's (2025) research in Analysis of Multiple Intelligences in 'Arabiyah Baina Yadaik Book highlights the relevance of Gardner's multiple intelligences theory in Arabic language learning, particularly the role of verbal-linguistic intelligence in maximizing comprehension of authentic texts. It shows that cognitive aspects such as linguistic intelligence play an important role in learning effectiveness.

Meanwhile, Mulyanto and Kaltsum's (2025) research entitled *Ta'tsīr Barnāmaj Faṭḥ al-Kutub 'alā Targīb al-Ta'allum al-Dzātī li Ṭālibāt al-Ṣaff al-Khāmis Ma'had Dār al-Salām Gontor al-Ḥaram al-Tsāliṭs lil-Banāt* emphasizes the influence of learning strategies based on increasing motivation for self-learning. This research underscores the importance of intrinsic motivation and contextual programs in promoting successful Arabic language learning on an ongoing basis.

In the context of academic Arabic language learning, the study of (Fuad Hasim et al., 2025) on the "Psychological Impact of UIN Sunan Ampel Surabaya Students on Academic Arabic Language Mastery" examined the psychological aspects of students and their relationship with linguistic achievement. Their results show that academic load and psychological stress have an influence on learning outcomes, which signifies the importance of a holistic approach in understanding university-level Arabic language learning.

In addition, (Al Haqiqy et al., 2024) in his article "Effective Learning of Maharah Qira'ah for Non-Pesantren Students" highlights the importance of adaptive pedagogical approaches for students who do not have a background in Arabic language environment, including strategies to improve reading comprehension through vocabulary mapping and meaning context.

Based on a review of previous studies, it appears that research on Arabic language learning has been widely conducted with a focus on curriculum, teaching methods, and psychopedagogical approaches. However, studies that specifically examine the influence of verbal-linguistic intelligence and learning motivation on the mastery of Arabic linguistics, especially in non-educational student groups such as medical students, are still very limited. There have not been many studies that examine simultaneously these two aspects-cognitive and affective-in the context of intensive learning programs such as PKPBA. In fact, medical students have a high academic load and unique learning characteristics, so it is important to know how these two factors contribute to the success of Arabic language acquisition. This study is expected to fill this gap and provide an empirical basis for the

development of more personalized and effective Arabic learning strategies.

METHOD

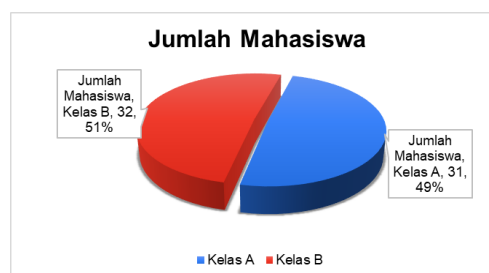
This research uses a mixed method approach with a sequential explanatory design, where quantitative data is used as the main data and qualitative data as supporting data (Dewhirst et al., 2025).

Mixed method research is an effort to explore data with a more complex perspective so as to achieve more comprehensive and unbiased analysis and interpretation results. Mixed research can also increase data validity. so that the data can be processed and tested further (Root & Lindström, 2024).

According to (Leko et al., 2023) Mixed method research is an approach that combines quantitative and qualitative techniques in one study to gain a more comprehensive understanding of the phenomenon under study. In the context of this study, a mixed approach was used to examine the influence of linguistic verbal intelligence and learning motivation on the mastery of Arabic linguistics in medical students. Quantitative data were obtained through distributing questionnaires to 63 respondents and analyzed using linear regression, while qualitative data were collected through in-depth interviews to gain further understanding of students' learning experiences and strategies as well as lecturers' views. The use of this mixed method allowed the researcher to corroborate the quantitative findings with qualitative explanations, making the research results more holistic and valid.

This approach was chosen in order to obtain a more comprehensive understanding of the influence of verbal-linguistic intelligence and learning motivation on the mastery of Arabic linguistics in students of the Medical Study Program of UIN Maulana Malik Ibrahim Malang who take part in the Special Arabic Language Development Program (PKPBA).

Quantitative data were collected through a closed questionnaire with a Likert scale designed to measure the level of verbal-linguistic intelligence, learning motivation, and Arabic linguistic mastery. Respondents in this study were first-year medical students who attended PKPBA, with a sample size of 63 students from 2 class determined through total sampling technique and 28 quisioners. Quantitative data analysis was carried out using multiple



linear regression tests and partial tests (t-test) to determine the effect of each independent variable simultaneously or partially on the dependent variable.

Figure 1. Total Number of Students (sample)

Qualitative data were obtained through in-depth interviews, classroom observations, and documentation. Qualitative informants consisted of 20 students who were purposively selected based on variations in linguistic mastery scores, as well as 4 lecturers who teach PKPBA. Qualitative data were analyzed using the Miles and Huberman interactive model, which includes data reduction, data presentation, and conclusion drawing/verification stages.

The descriptive statistical analysis was conducted to determine the general description of the three main variables in this study, namely Linguistic Intelligence, Learning Motivation, and Arabic Mastery in two sample groups: Class A and Class B. The data obtained were analyzed based on the mean value, minimum value, and maximum value for each variable. The results are presented in the form of bar charts below.

The use of this mixed approach allows researchers to not only test the significance of the relationship between variables statistically, but also explore in more depth how the process of mastering Arabic takes place in the classroom, as well as what factors are supporting or inhibiting it.

RESULT AND DISCUSSION

Responden Profile and Validity and Reliability Test Result

To test the validity of the research instrument, a questionnaire was distributed to students of the Pharmacy Study Program who were selected as respondents because they had similar characteristics to the target population, namely non-education students who took Arabic language learning at PKPBA UIN Maulana Malik Ibrahim Malang. The validity of the items was assessed based on the correlation between each statement item and the total score, and the results of the analysis showed that out of a total of 32 questions, there were 4 items that were declared invalid because they did not meet the criteria for significant correlation. Details of the validity test results are shown in the following table:

No.	Questionnaire Item	Variable	Description
1	Motivation – Item 6	Learning Motivation	Invalid
2	Mastery of Vocabulary – Item 9	Vocabulary Proficiency	Invalid

No.	Questionnaire Item	Variable	Description
3	Language Proficiency – Item 10	Vocabulary Proficiency	Invalid
4	Language Proficiency – Item 12	Vocabulary Proficiency	Invalid
	Total Number of Items		32
	Number of Invalid Items		4 (Motivation 1 + Vocabulary 3)
	Number of Items Selected		28

Table 1. Validity Test Result

Based on the results of the validity test conducted on Pharmacy students as a similar population, it was found that out of 32 statement items in the questionnaire, there were 4 items that were invalid because they did not meet the criteria for significant correlation, namely items number 1, 2, 3, and 4. These items were related to the variables of learning motivation and linguistic vocabulary acquisition, but did not show sufficient internal consistency with the total score. This suggests that although most of the items have proven to be valid and worth using, some need to be revised or eliminated to ensure that the instrument actually measures the intended construct accurately. This finding also confirms the importance of the validity testing process as the first step in the development of reliable and representative research instruments.

Variable	Description
Verbal-Linguistic Intelligence (X₁)	Reliable (Cronbach's Alpha = 0.760)
Learning Motivation (X₂)	Reliable (Cronbach's Alpha = 0.787) – after removing item 6
Vocabulary Mastery (Y)	Reliable (Cronbach's Alpha = 0.702) – after removing items 9, 10, 12

Table 2. Reliability Test Result

The results of the reliability test on the research instruments show that all variables have an adequate level of internal consistency, indicated by the Cronbach's Alpha value which is above the minimum threshold of 0.7. The Verbal-Linguistic Intelligence variable (X₁) obtained an alpha value of 0.760, which indicates that this instrument is reliable in measuring the intended construct. The Learning Motivation variable (X₂) also showed good reliability with an alpha value of 0.787 after deleting the 6th item to improve internal consistency. Similarly, the Vocabulary Mastery variable (Y) achieved an alpha value

of 0.702 after the deletion of items 9, 10, and 12, indicating that the instrument is quite reliable and can be used to measure the dependent variable consistently. These findings indicate that the overall instruments used in this study are worth retaining for further analysis.

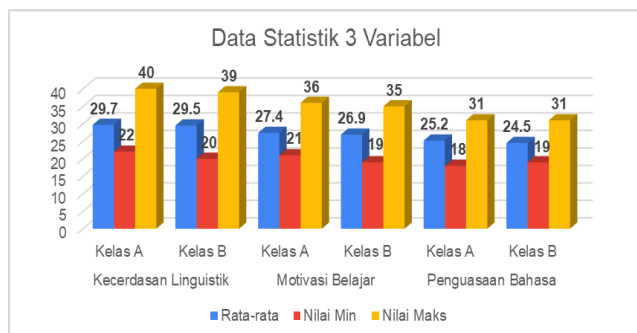


Figure 2. Statistical Data of 3 Variables

Based on the graph "Statistical Data of 3 Variables" between Class A and Class B, it can be seen that the average scores for the three variables-linguistic intelligence, learning motivation, and language acquisition-tend to be higher in Class A than Class B. Class A's average linguistic intelligence score was 29.7 with a maximum score of 40 and a minimum of 22, while Class B had an average of 29.5 with a maximum score of 39 and a minimum of 20. On learning motivation, Class A excelled with an average of 27.4 compared to Class B's 26.9, although the maximum scores were almost equal (36 vs 35). Meanwhile, for language acquisition, Class A recorded an average of 25.2 and Class B of 24.5, with a maximum score of 31. The considerable difference in minimum and maximum scores indicates the variation in individual abilities within each class, and in general Class A was slightly superior in all three aspects measured.

Before the researcher measured and analyzed the influence of two variables on Arabic linguistic mastery, the researcher conducted a classical assumption test. The classical assumption test consists of, Normality Test, Multicorrelationality Test, Heteroscedasticity Test. The results of the test are explained below.

• Normality Test

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		63
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	2.27784648
Most Extreme Differences	Absolute	.078
	Positive	.059
	Negative	-.078
Test Statistic		.078
Asymp. Sig. (2-tailed)		.200 ^{c,d}

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

Figure 3. Normality Test Result

Based on the results of the normality test using the Kolmogorov-Smirnov method, the Asymp. Sig. value is greater than 0.05, which indicates that the residual data is normally distributed and meets one of the main assumptions in multiple linear regression. This is reinforced by the average residual value of 0.000000 and the standard deviation of 2.2778, as well as the small extreme difference between the empirical distribution and the theoretical normal distribution. Thus, the regression model in this study can be declared valid and the results of its analysis can be interpreted scientifically and accurately.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.354 ^a	.125	.111	2.596

a. Predictors: (Constant), Kecerdasan

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	58.908	1	58.908	8.741	.004 ^b
	Residual	411.092	61	6.739		
	Total	470.000	62			

a. Dependent Variable: Y

b. Predictors: (Constant), Kecerdasan

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	
		B	Std. Error	Beta	
1	(Constant)	16.827	2.672		6.299
	Kecerdasan	.267	.090	.354	2.957

a. Dependent Variable: Y

• Multicorrelationality Test

Figure 4. Multicorrelationality Test Result

Based on the Coefficients table that presents collinearity statistics, the Tolerance value is 0.691 and the Variance Inflation Factor (VIF) value is 1.446 for both independent variables, namely Verbal Intelligence (X1) and Motivation (X2). The Tolerance value which is above 0.1 and the VIF value which is far below the critical threshold of 10 indicate that there is no multicollinearity problem among the predictor variables in the regression model. This means that the two independent variables are not highly correlated with each other and each makes an independent contribution to the dependent variable. Thus, the regression model that is built meets the assumption of no multicollinearity, so that the interpretation of the influence of each variable on Arabic language proficiency can be done validly and reliably.

• Heteroscedasticity Test

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	
		B	Std. Error	Beta	
1	(Constant)	1.850	1.599		1.157
	Kecerdasan	-.081	.059	-.210	-1.379
	Motivasi	.084	.060	.215	1.415

a. Dependent Variable: ABS RES

Figure 5. Heteroscedasticity Test Result

The results of the heteroscedasticity test using the regression method on the absolute residual values (ABS_RES) show that the two independent variables, X1 and X2, have significance values of 0.173 and 0.162,

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.559 ^a	.313	.302	2.301

a. Predictors: (Constant), Motivasi

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	147.033	1	147.033	27.771	.000 ^b
	Residual	322.967	61	5.295		
	Total	470.000	62			

a. Dependent Variable: Y

b. Predictors: (Constant), Motivasi

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	13.002	2.232		.000
	Motivasi	.426	.081	.559	.000

a. Dependent Variable: Y

respectively. Since both values are greater than 0.05, it can be concluded that there is no statistically significant relationship between the independent variables and the residuals. Therefore, the regression model does not encounter issues of heteroscedasticity, indicating that the variance of the residuals is constant (homoscedasticity), and the model is appropriate for further analysis.

Based on this data, the discussion is classified into 3 sections, as follows.

1. The effect of verbal-linguistic intelligence on medical students' Arabic linguistic mastery

Based on the results of the simple linear regression test or partial test, the linguistic intelligence variable on the mastery of Arabic linguistics, as follows.

Figure 6. Simple Linear Regression Test Results (X1)

Based on the results of a simple regression analysis, it is clear that verbal-linguistic intelligence has a significant effect on students' Arabic linguistic mastery. A significance value of 0.004 (<0.05) indicates that this effect is statistically significant. An R-squared value of 0.125 indicates that 12.5% of the variance in vocabulary proficiency can be explained by intelligence, while the remainder is influenced by other factors. A regression coefficient of 0.267 means that each unit increase in intelligence is followed by a 0.267 unit increase in vocabulary proficiency. Thus, intelligence makes a real contribution to students' language ability, albeit a moderate one.

Students with high verbal-linguistic intelligence tend to have a good command of Arabic, especially in sentence structure and text comprehension. This is shown by students such as PA and RR who are confident in speaking and understanding Arabic because of their experience and habit of interacting with Arabic texts from

an early age. A boarding school background or memorization of the Qur'an is a major supporting factor.

Some other students show linguistic intelligence that develops gradually. For example, AF and MN have a basic understanding from their madrasa background, but still face difficulties in classical syntax. The process of continuous learning and practice was seen to have an impact on improving their language acquisition, indicating that verbal intelligence can also be shaped through learning experiences.

Meanwhile, students with lower verbal intelligence tend to experience difficulties in aspects such as phonetics and syntax, especially if not supported by sufficient study time or appropriate learning strategies. As one lecturer put it, *"Linguistically active students have good sentence-building skills,"* suggesting that linguistic intelligence plays an important role in overall Arabic linguistic mastery.

2. The contribution of learning motivation on medical students' Arabic linguistic mastery

Figure 7. Simple Linear Regression Test Results (X2)

Based on the results of the simple linear regression test or partial test, the learning motivation variable on the mastery of Arabic linguistics, as follows.

The regression analysis reveals that motivation has a positive and statistically significant impact on Arabic language proficiency, with a correlation coefficient of 0.559 and an R^2 value of 0.313, indicating that 31.3% of the variance in proficiency is explained by motivation. The model is statistically significant ($F = 27.771$; $p < 0.001$), and the regression coefficient of 0.426 suggests that each unit increase in motivation improves proficiency scores by 0.426 points. The t-test ($t = 5.270$; $p < 0.001$) further confirms this effect, highlighting motivation as a key factor in enhancing Arabic linguistic mastery.

Based on interviews with students majoring in Medicine at UIN Malang, it was found that learning motivation has a significant influence on Arabic linguistic mastery. Most students show strong intrinsic motivation, characterized by a desire to learn Arabic because of personal interest or a love for the language. Some students revealed that they feel happy and satisfied when they successfully understand Arabic structures, especially when they can use them in the context of daily communication. This shows that motivation from within is the main driver in forming good linguistic awareness.

In addition, instrumental motivation is also evident in some students' statements. Many consider the ability to speak Arabic as an important asset to support their studies, especially in understanding medical terms in an Islamic context, as well as for future academic and professional interests. One of the students, P.A.N., said that *"learning Arabic for me is a new thing, at first I just wanted to graduate but the more I get here I like it"* which shows

the relationship between academic motivation and the development of semantic and syntactic aspects of language.

Extrinsic motivation also contributes to Arabic language acquisition, especially in the form of pressure to achieve grades and a supportive learning environment such as pesantren or intensive classes. Students from religious education backgrounds tend to be more accustomed and quicker in mastering Arabic, although the main impetus comes from the environment or habits that have been formed since early childhood. As stated by student R., *"I have been accustomed since childhood to Arabic texts because I was born in Makkah, so learning Arabic now feels easier."* Thus, the three types of motivation-intrinsic, instrumental, and extrinsic-have a real contribution in strengthening students' phonetic, semantic, syntactic, and praxis aspects in mastering Arabic linguistics.

3. Evaluate the Relationship and Simultaneous Influence between verbal-linguistic intelligence and learning motivation on Arabic linguistic mastery

Simultaneous regression is a measurement test for two independent variables simultaneously on the independent variable. In the context of this study, how linguistic verbal intelligence and learning motivation can simultaneously affect the mastery of Arabic linguistics. the results are as follows,

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.856 ^a	.733	.724	.949	

a. Predictors: (Constant), Motivasi, Kecerdasan

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	148.308	2	74.154	82.277	.000 ^b
	Residual	54.076	60	.901		
	Total	202.384	62			

a. Dependent Variable: Y1.1

b. Predictors: (Constant), Motivasi, Kecerdasan

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.341	1.076		11.470	.000
	Kecerdasan	.047	.040	.095	1.189	.239
	Motivasi	.399	.040	.799	9.960	.000

a. Dependent Variable: Y1.1

Figure 8. Multiple Linear Regression Test Results (X1&X2)

Based on the results of multiple regression analysis shown in the figure, it is known that the variables of motivation and verbal-linguistic intelligence simultaneously have a significant effect on Arabic language acquisition, with an F significance value of 0.000 (<0.05) and a coefficient of determination (R^2) of 0.723. This indicates that 72.3% of the variation in Arabic language

acquisition can be explained by the combination of the two independent variables. However, based on the results of the partial test (t-test), only the motivation variable showed an individually significant effect on Arabic language acquisition ($\beta = 0.796$; $t = 9.509$; $p = 0.000$), while verbal-linguistic intelligence was not statistically significant ($\beta = 0.095$; $t = 1.189$; $p = 0.239$). Thus, motivation proved to be the dominant predictor in this model, which theoretically corroborates the important role of affective factors in the language learning process, while verbal-linguistic intelligence showed a positive contribution but was not statistically strong enough in the context of this study.

Based on the results of in-depth interviews with a number of students of the Medicine study program at UIN Malang, it was found that the simultaneous influence between verbal-linguistic intelligence and learning motivation is very significant on the mastery of Arabic. Students with high linguistic abilities show better mastery of phonetic, semantic and syntactic aspects, especially in the pronunciation of Arabic letters correctly, the ability to memorize 50 mufrodat each chapter appropriately according to the deadline, and the preparation of fi'liyah and Ismiyah sentence structures. RA, for example, said that his pesantren background was very helpful in understanding Arabic sentence structure, *"I am used to interpreting classical Islamic books and memorizing the Qur'an, so I understand more quickly when taught grammar."* This shows that linguistic intelligence formed early on provides advantages in syntax and phonetic aspects which are the basis of students' linguistic competence. There is also like, VO with the same background he likes language games activities, or the practice of dialoguing with Arabic. *"Arabic or foreign languages need to be trained with practice, I myself like Arabic discussions, connect words and dialog in front of the class"*.

Learning motivation also strengthens Arabic language acquisition, especially in semantic and pragmatic aspects. VI, one of the respondents, said, *"I study Arabic because I want to maintain the skills I have had since high school."* Intrinsic motivation like this proves to be a significant driver in building mastery of word meanings and the ability to adapt language in certain contexts. Students with high motivation tend to show a better understanding of word meaning and implicit meaning (semantics), as well as the ability to use language in accordance with social situations (pragmatics), including in conversations or presentations.

From the lecturers' side, the interviews show that they view motivation as a crucial element in the Arabic learning process, especially for non-language students. One lecturer stated, *"their motivation is different, but when we give interactive media such as songs or quizzes, they become more enthusiastic and active."* This reinforces the

relevance of the pragmatics aspect in learning, as the strategy encourages students to use language contextually. This approach facilitates not only semantic improvement, but also strengthens students' pragmatic ability to respond and interact effectively. In addition, some students also have instrumental motivation, namely motivation related to the interests of their studies, such as supporting GPA scores, as well as supporting careers to become Hajj doctors.

The teaching strategies implemented by lecturers generally focus on communicative and participatory approaches, which include the development of all linguistic aspects. Activities such as language games, dialogues, and group presentations are designed to train phonetics (pronunciation), syntax (sentence structure), semantics (meaning), and pragmatics (use in context). Another lecturer explained, "we deliberately create conversation simulations so that they not only understand the theory but can practice directly." Thus, language learning is not only theoretical, but also applicable and communicative.

The four linguistic aspects identified in this finding phonetics, semantics, syntax, and pragmatics are the main dimensions of verbal-linguistic intelligence as explained by David Lazear in his book *Eight Ways of Knowing: Teaching for Multiple Intelligences*. Lazear emphasized that the development of linguistic intelligence includes the ability to understand sounds, meanings, structures, and contextual use of language (Lazear, 1999).

This finding is in line with the theoretical framework and strengthens the argument that the integration of cognitive (intelligence) and affective (motivation) aspects can encourage the effectiveness of comprehensive Arabic language learning in higher education environments, especially for non-language students such as medical students.

Grade Category	Medical Class A	Medical Class B	Total Students
High (≥ 86)	22	18	40
Medium (76-85)	9	12	21
Low (≤ 75)	0	2	2
Total	31	32	63

Figure 9. table of students' final grades

Based on the distribution table of students' final grades in Arabic language learning in Medical classes A and B, it can be seen that most students are in the high score category (≥ 86), as many as 40 out of 63 students (63.5%). Meanwhile, 21 students (33.3%) were in the medium score category (76-85), and only 2 students (3.2%) were in the low category (≤ 75), all of whom came from Medicine B class. This distribution shows that in general, students' academic achievement in learning Arabic is very good.

This finding is in line with the results of the previous analysis which states that verbal-linguistic intelligence and learning motivation have a positive influence on mastery of language competence. Students with high linguistic intelligence tend to understand the phonetic, semantic, syntactic, and pragmatic aspects of Arabic more easily. Meanwhile, motivation, both intrinsic and instrumental, encourages them to learn actively and consistently.

.... Based on the results of research that integrates quantitative and qualitative approaches, it was found that verbal-linguistic intelligence and learning motivation simultaneously influence Arabic language proficiency among medical students. Quantitatively, learning motivation shows a more dominant influence than linguistic intelligence, while qualitatively, interviews indicate that students with high motivation tend to actively develop linguistic skills in the areas of phonetics, semantics, syntax, and pragmatics, as explained by David Lazear. These findings can be reinforced and contextualized through comparison with previous studies.

Research by Desi Surlitasari Dewi and Eka Wilany (2019) shows that verbal linguistic intelligence is positively correlated with reading ability. This is in line with the findings of this study, where students with high linguistic intelligence demonstrate better mastery of Arabic linguistic skills, including in the syntactic and semantic aspects related to reading comprehension. This study shows that linguistic intelligence is not only relevant in the context of Indonesian or English but also in the learning of foreign languages such as Arabic.

The study by Azizah and Wahab (2022) also supports this finding by showing that the implementation of verbal linguistic intelligence in the learning of mahârat al-kalâm (speaking) and mahârat al-qirâ'ah (reading) is effective in improving Arabic language skills. In the context of medical students, even though they are not from a language program, learning strategies that activate linguistic intelligence potential still have a positive impact on language proficiency.

Meanwhile, the results of this study also emphasize the importance of motivation in Arabic language learning. The research by Bidaoui (2021) and Wei (2025) both emphasize the significant role of motivation based on Self-Determination Theory in the process of learning a second language. Researchers found that students with high intrinsic and instrumental motivation are more active in using Arabic, both academically and professionally. This is reflected in the qualitative data of this study, where students cited personal, spiritual, and academic reasons as the main drivers in learning Arabic.

Furthermore, the study by Billones and Gempes (2024), which highlights the moderating effect of linguistic intelligence on speaking anxiety, is also relevant, as this

study found that students with high linguistic intelligence appear more confident and communicative. This also supports the results of faculty interviews, which noted that students who are more verbally reflective and have high motivation tend to be more participatory in class.

In continuing the discussion of the results of this study, its relevance to a number of previous studies further strengthens the argument that verbal-linguistic intelligence and learning motivation play a central role in Arabic language proficiency. Ridwan et al.'s (2024) study highlights that the development of linguistic intelligence can be optimized through active involvement in intensive learning activities. This is in line with the qualitative findings in this study, where students involved in language activities such as presentations, group discussions, and the use of contextual vocabulary showed higher linguistic achievement. The participatory approach has proven to be effective in stimulating verbal-linguistic intelligence in a practical way, even in the context of non-language students such as medicine.

Research by Rizka Amalia and Nabilla (Rizka Amalia & Nabilla, 2024), which analyzed the application of multiple intelligences theory in the context of madrasahs, also provides conceptual justification for the variables used in this study. They emphasize that intelligence is not a single ability but a spectrum that must be developed holistically in the learning process. The emphasis on linguistic intelligence in this study aligns with this principle, namely that an individual's language potential can be optimized through adaptive and contextual learning strategies.

In terms of learning motivation, the article by الشيراني (2023) shows that the use of digital media such as interactive stories can significantly increase the learning motivation of young children. This finding is relevant in the context of adult students, where innovative and enjoyable learning strategies are also motivating factors in maintaining high learning motivation. Meanwhile, Fauzi and Anindiati (2021) prove that the use of a Learning Management System (LMS) can strengthen students' intrinsic motivation in Arabic language learning, which is also supported by the qualitative data of this study—students feel more motivated when learning involves technological media and a progressive evaluation system.

Thus, both quantitatively and qualitatively, the results of this study do not stand alone but are firmly rooted in previous scientific findings. Verbal-linguistic intelligence and learning motivation have been proven to be two key pillars in mastering Arabic language skills. In the context of medical students who typically lack a background in language education, these two factors are crucial for bridging the gap between academic requirements and the foreign language skills needed. These findings contribute both theoretically and practically to the design of more effective Arabic language

learning programs that are tailored to individual students' potential.

The high proportion of students who achieved high scores reinforces the conclusion that the combination of intelligence and motivation are two important factors that support success in learning Arabic. This finding is in line with David Lazear's view in *Eight Ways of Knowing*, that the development of multiple intelligences, including verbal-linguistic intelligence, will be more effective if accompanied by strong learning motivation.

Overall, the findings indicate that the success of Arabic language acquisition among medical students is determined by the integration of verbal-linguistic intelligence and learning motivation, and is supported by adaptive learning strategies from lecturers. Both work simultaneously in developing the four linguistic aspects in a balanced manner: phonetics, semantics, syntax, and pragmatics. Therefore, the design of the curriculum and Arabic language teaching methods in non-language environments such as the Faculty of Medicine need to be continuously improved by paying attention to the balance of cognitive and affective aspects that encourage the effectiveness of language acquisition as a whole.

The theoretical implication of this finding is the necessity of adopting an educational approach that not only develops students' cognitive aspects but also designs strategies that maintain and enhance learning motivation. Practically, educators at UIN Malang should consider learning strategies that focus on students' interests and needs, provide relevant learning experiences, and create space for personal and professional achievements. The use of innovative instructional media, constructive feedback, and a humanistic teaching approach can serve as strategic solutions to improve the quality of Arabic language learning.

Future research may be directed toward exploring the interaction between verbal-linguistic intelligence and motivation with other variables, such as learning strategies, interest in Arab culture, or perceptions of language as a tool for academic communication. Further qualitative research can also deepen the understanding of how motivation is formed and sustained in the long term. At the same time, to improve learning at the PKPBA Faculty of UIN Malang, there is a need to design a more adaptive and responsive curriculum that aligns with the characteristics of students from diverse backgrounds, especially those in non-language programs such as medicine.

CONCLUSION

Based on the results of the research that has been conducted, it can be concluded that

1. Verbal-linguistic intelligence contributes to the mastery of aspects of the Arabic language, especially phonetics and semantics, although it is not statistically

significant in multiple regression. Students show a sufficient level of intelligence, but there are still challenges in the syntax and pragmatic aspects. This finding confirms that verbal intelligence remains important in supporting language skills in academic contexts, especially in aspects that require precision of sound and meaning.

2. Learning motivation, both partially and simultaneously, has been shown to have a significant influence on Arabic vocabulary mastery, with a significance value below 0.05. Students show three types of motivation: intrinsic, extrinsic, and instrumental, with intrinsic and instrumental motivations dominating. This means that many students learn because of personal motivation as well as academic and professional needs. This strengthens the understanding that motivation is the main driving factor in the success of learning Arabic.
3. In the multiple regression analysis, motivation appears as a more dominant variable with a value ($\text{sig } t < 0.005$) than verbal-linguistic intelligence. Although verbal intelligence is not statistically significant, the coefficient value is still positive, indicating an influence, although not strong. The combination of high motivation and verbal intelligence support also increases the effectiveness of Arabic language learning. Theoretically and practically, these results indicate that learning success does not only depend on cognitive abilities, but is also greatly determined by affective strengths such as motivation.

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