

Reduction Polarization Arabic Language Ability of PTKIN Students: An Experimental Study of Image- Based Flashcards

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ABSTRACT

Study This motivated by heterogeneity ability Arabic language students' new matriculation program Intensive Foreign Language Learning (PPBAI) at UIN Raden Intan Lampung which triggers gap competence. Research This aim for analyze effectiveness use of flashcard- based media picture in increase mastery vocabulary students. The research method used is quantitative with design pre-experiment One Group Pretest Posttest Design to sample in pairs as many as 20 students. Data collected through instrument test and analyze using paired samples t- test as well as Normalized Gain (N-Gain) Score. Research results show improvement the average value from 71.05 in the pretest to 85.30 in the posttest, with decline standard deviation from 16.385 to 6.053. Paired t-test show difference significant in a way statistics ($t = -3.769$; $p = 0.001 < 0.05$). N-Gain analysis confirmed improvement effective with 75% of students is in the category medium and high. Research This conclude that visual-verbal integration through flashcard-based picture effective strengthen retention memory vocabulary and reduction polarization ability students. This media recommended as solution learning innovative in matriculation program language at PTKIN.

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1. INTRODUCTION

Mastery Language foreign is one of the competence essential things that must be owned students at college tall as supplies for follow development knowledge knowledge, access literature academic international, as well as build ability communication scientific in environment academics are increasingly competitive (Khvalyboha et al., 2025). For students State Islamic Religious College (PTKIN), ability Arabic speaking has more position strategic. Arabic is not only functioning as means communication, but also an instrument main in integration science for understand the Qur'an, hadith, traditional books, and various reference academic Islam (Nazhimah & Mohammad, 2023). Because that, mastery Arabic becomes competence base absolute since beginning lectures so that students capable follow the learning process optimally.

Although thus, the condition real in (PTKIN) show that ability beginning student in Arabic is still very diverse (Azizah et al., 2023). Student new originate from background behind heterogeneous education, such as Madrasah Aliyah, Islamic boarding schools Islamic boarding school, school Upper Middle School, and School Vocational High School. Students MA and Islamic boarding school graduates generally has got experience Study Arabic in general intensive. On the other hand, high school and vocational school graduates have very limited experience, even part big Not yet Once learn it in a way systematic. Differences fundamental This cause gap significant competencies so that hinder effectiveness of the learning process in the early semester.

As effort reduce gap said, UIN Raden Intan Lampung set policy academic must through implementation of the Intensive Foreign Language Learning Program (PPBAI) which is managed directly by the Language Development Center (PPB) UIN Raden Intan Lampung (Adminppb., 2025). In implementation, matriculation program This focus its activities in mastery base Arabic language which includes aspect mufradat, qawa'id, qira'ah, as well as skills receptive and productive others. This strengthening projected as foundation main before student go through eye Arabic language courses are mandatory for universities in their respective study programs.

However, in reality, the implementation of PPBAI Arabic in the field Still face challenge great pedagogical. Based on the data from the student pretest results at the beginning implementation Session II PPBAI, average results Study student is in the category low with minimum value reached 42. Findings This confirm that part big student experience difficulty Serious in understand, remember, and apply vocabulary new. In fact, mastery vocabulary is the main pillar and prerequisite absolute underlying development skills speaking others, good listening, speaking, reading, and write (Nugraheni et al., 2024). The low results Study This No only triggered by factors heterogeneity background behind education students, but also intertwined with methodology classroom learning. Based on results observation to Participants (PPBAI) session II, totaling 21 students, obtained an average score of of 71.00, with mark highest 96 and value lowest 42. Empirical data the reflect existence polarization wide capabilities.

On the other hand, the learning process dominated by conventional verbal explanations and the use of textbooks with minimal visualization. As a result, the knowledge transfer process walk crippled and make student tend passive in absorb material. Learning model one way This make things difficult learners in linking word form with meaning concretely, so that the coding process information to in memory term long walk slow. The impact is that students become fast forgetfulness and difficulty actualize vocabulary in the context next. Condition the confirm that the matriculation program Arabic requires restructuring of learning media that is capable stimulate attention, simplify understanding concept, as well as strengthen retention memory student.

One of the potential visual media for overcome this problem is a flashcard-based image. Flashcards are sheet card loaded symbols, words, or designed image for stimulate student mental association in a way fast (Kurniawati, 2023). Use element picture capable concretize abstract vocabulary, so that help student catch essence meaning in a way direct without depends full on translation process literally (Hang & Ho, 2025). In addition, the characteristics of flexible flashcards push occurrence repetition in a way independent, creating climate active, interactive, and learning student-oriented.

Effectiveness this visual integration own runway strong theoretical basis for the Dual Coding Theory developed by Allan Paivio. This theory postulate that cognition man processing information through two systems separate representation However each other related, namely verbal and verbal paths non-verbal. Storage information involving second track This in a way simultaneously will produce footsteps distant memory stronger and more resistant to forgetfulness (Haddad et al., 2025). Views This strengthened by the Cognitive Theory of Multimedia Learning from Richard E. Mayer, who stated that construction knowledge become Far more meaningful when text and images served simultaneously Because capable optimize capacity processing limited cognitive abilities (Mayer, 2009). Therefore that, the application of flashcard-based picture in a way very relevant conceptual applied to the matriculation program Language.

A number of literatures previously has proved that optimization of visual media in the form of card picture proven give contribution significant to acceleration acquisition vocabulary foreign (Fakhruddin et al., 2021). Although thus, the majority study the Still focus on levels school elementary and school medium with characteristics psychology development children and adolescents. Empirical study about effectiveness of flashcard-based images at college level tall especially in the matriculation program intensive is still very rare. In fact, students classified as learners' adults (adult learners) who have independence cognitive, accumulation experience, internal motivation, and totally different learning strategy preferences with student school, so that effectiveness a media does not can generalized so just (Chakraborty, 2024).

Here it is location gap underlying research urgency study this. Research previously tend test flashcards on the subject age school, meanwhile study on groups student participants (PPBAI) in the environment (PTKIN) who have heterogeneity ability extreme start Still limited. New study This lies in testing effectiveness of flashcard- based media image implemented in the matriculation program intensive (PTKIN) with use design One Group Pretest Posttest experiment anchored by a framework theoretical Dual Coding Theory. Through approach this research aims for analyze in a way comprehensive influence use of flashcard- based media picture to results Study vocabulary Arabic language for PPBAI students. Research results This expected can give contribution theoretical for development of learning media Arabic in college tall at a time become recommendation practical for manager center Language in designing innovative, effective, and adaptive matriculation programs to need student new.

2. METHODS

Study This use approach quantitative with design pre-experiment type One Group Pretest Posttest Design For measure change results Study vocabulary student in a way objective before and after given treatment without involving group control. Research This implemented in the matriculation program mandatory, namely the Intensive Foreign Language Learning Program (PPBAI) managed by the Language Development Center (PUSBA) of UIN Raden Intan Lampung. Population study covers all over student PPBAI program participants in the 2026/2027 Academic Year. Through purposive sampling technique, selected One PPBAI Class Session II as sample assessed experiments own characteristics heterogeneity ability representative start. Of the total 23 participants in class said, the final data is worthy used in analysis statistics in pairs is as many as 21 students, because two students No attend session test end (posttest) so that the data No fulfil condition analysis in pairs.

Data collection techniques in study This depend on method test in the form of instrument mastery vocabulary Arabic language that is composed in a way systematic based on achievements PPBAI PUSBA program learning. Instruments test This consists of from 25–30 grains questions that combine form choice double and fill short for measure competence student in recognize, understand meaning, remembering, and using vocabulary in accordance context learning. Before used, instruments the through the validation process content validity by lecturer's guardian or Arabic tutor at PUSBA for ensure suitability material, level difficulties, and indicators competence, as well as tested level consistency internal use Cronbach's Alpha coefficient. Series procedure study This executed through three stages main : starting with administering a pretest for map ability beginning students ; continued with giving treatment in the form of learning vocabulary using flashcard -based media picture online via Zoom Meeting where students stimulated in a way simultaneous through verbal path (text vocabulary) and nonverbal (visual illustrations) to strengthen retention memory in accordance principle Dual Coding Theory ; and ended with implementation of the posttest using equivalent instruments for measuring level change results Study student .

Analysis of the results data study done in a way gradually through statistics descriptive and inferential use help device soft statistics for ensure accuracy results analysis. Statistics descriptive used for describe profile pretest and posttest scores through mean calculation, standard deviation, and minimum and maximum values. Effectiveness flashcard media intervention then measured in a way

specific use Normalized Gain Score (N-Gain) calculation, which classifies level improvement results Study student to in category high, medium, and low. Before do testing hypothesis, data first formerly tested the prerequisites through normality test with Shapiro-Wilk method, which was chosen in a way special Because amount sample study was under 50 respondents. After assumptions normal distribution is met, testing hypothesis done through paired samples t-test at the level significance $\alpha = 0.05$ for determine whether there is average difference in results significant learning in a way statistics between before and after use of flashcard- based media image of student's matriculation the.

Penelitian ini menggunakan metode studi pustaka untuk mengidentifikasi dan menganalisis faktor-faktor yang mendukung kepatuhan santri di pondok pesantren. Studi pustaka ini dilakukan dengan mengumpulkan dan menelaah berbagai literatur yang relevan, termasuk artikel jurnal, buku, dan laporan penelitian sebelumnya yang berkaitan dengan kepatuhan santri dan pendidikan di pesantren. Sumber-sumber ini dipilih berdasarkan kriteria relevansi, kredibilitas, dan kontribusinya terhadap pemahaman tentang faktor-faktor internal dan eksternal yang mempengaruhi kepatuhan santri. Dalam proses ini, penulis mengeksplorasi berbagai teori dan konsep yang mendasari kepatuhan, seperti kontrol diri, dukungan sosial, kecerdasan emosi, dan pengaruh lingkungan, serta bagaimana semua faktor ini berinteraksi dalam konteks pendidikan pesantren.

Analisis dilakukan dengan cara mengelompokkan informasi yang diperoleh dari sumber-sumber yang telah dikaji, kemudian mengidentifikasi tema-tema utama yang muncul terkait dengan kepatuhan santri. Penelitian ini juga mempertimbangkan perspektif psikologis dan sosial untuk memberikan pemahaman yang lebih komprehensif tentang kepatuhan santri. Hasil dari studi pustaka ini diharapkan dapat memberikan wawasan baru bagi pengelola pesantren dalam mengembangkan strategi pendidikan yang lebih efektif, serta membentuk karakter santri yang baik. Dengan demikian, penelitian ini tidak hanya berfokus pada pengumpulan data, tetapi juga pada interpretasi dan penerapan temuan untuk meningkatkan kualitas pendidikan di pondok pesantren.

3. FINDINGS AND DISCUSSION

Findings

Study This aim For analyze effectiveness use of flashcard- based media picture to results Study Arabic vocabulary of students of the Intensive Foreign Language Learning Program at the Language Development Center (PUSBA) of UIN Raden Intan Lampung . Research use approach quantitative with design *One Group Pretest Posttest* Design involving 21 students as subject research . Learning process implemented online via the Zoom Meeting platform with utilizing flashcard- based media picture as treatment . Research data obtained through test mastery given vocabulary before treatment (pretest) and after treatment (posttest). Only data from students who participated in the second stages analyzed tests so that fulfil paired data principle in analysis statistics .

Analysis Results Descriptive

Table 1. Statistics Descriptive Pretest and Posttest Values

Variables	N	Minimum	Maximum	Mean	Standard Deviation
Pretest	20	42	96	71.05	16,385
Posttest	20	72	94	85.30	6,053

Source: Data processing results using SPSS version 25 (2026).

Based on Table 1 it is known that that average (mean) pretest score of students of 71.05 with standard deviation 16.385. After given treatment in the form of learning using flashcard -based media image, average value posttest increases to 85.30 with standard deviation 6.053. With thus happen average yield increase Study by 14.25 points. In addition, the decline mark standard deviation shows that ability student after follow learning become more evenly compared to before treatment.

Normality Test (Shapiro-Wilk)

Due to the number sample research of 20 students ($N < 50$), then testing normality using (Shapiro–Wilk).

Table 2. Results of Data Normality Test

Variables	Shapiro-Wilk Statistics	Sig.	Information
Pretest	0.951	0.385	Normal
Posttest	0.929	0.151	Normal

Source: Data processing results using SPSS version 25 (2026).

Normality test results use Shapiro–Wilk method shows that mark pretest significance of 0.385, while posttest of 0.151. Second mark the bigger than 0.05, so that can conclude that the pretest and posttest data normally distributed. Therefore that, the data meets assumptions normality and can analyzed using the parametric Paired Samples t-test.

With fulfillment assumptions normality, then the research data has fulfilled condition for analyzed using statistical tests parametric. Therefore that, analysis to be continued with paired samples t-test for know influence use of flashcard- based media picture to improvement mastery vocabulary student Matriculation of PUSBA UIN Raden Intan Lampung. Summary results testing presented in Table 3.

Table 3. Paired Samples t-test results

Variables	Mean Difference	Standard Deviation	t	df	Sig. (2-tailed)
Pretest – Posttest	-14.25	16,908	-3,769	19	0.001

Source: Data processing results using SPSS version 25 (2026).

Based on the results of the *Paired Samples t-* test were obtained t value = -3.769 with mark significance (Sig. 2-tailed) of 0.001. Because the value significance more small of 0.05 ($0.001 < 0.05$), then H_0 is rejected and H_1 is accepted. With Thus, there are significant difference between pretest and posttest results after student follow learning using flashcard -based media image. This result show that use of the media gives significant influence to improvement results Study vocabulary students of the Intensive Foreign Language Learning Program (PPBAI) UIN Raden Intan Lampung.

Analysis Effectiveness Using N-Gain

Table 4. Distribution Student N-Gain Category

Category	N-Gain Range	Frequency	Percentage
Tall	$g > 0.70$	4	20%
Currently	$0.30 \leq g \leq 0.70$	11	55%
Low	$g < 0.30$	2	10%
Decline	$g < 0$	3	15%
Total		20	100%

Source: Results of data processing using Microsoft Excel and SPSS version 25 (2026).

The results of the N-Gain analysis show that part big student experience improvement results study. As many as 55% of students is in the category moderate, while 20% are in the category high. Meanwhile that, 10% of students is in the category low, and 15% of students experience decline mark posttest compared to the pretest. Decrease the influenced by several students who have own very high pretest score so that room the increase relatively small. Therefore that, effectiveness use of flashcard-based media picture No only reviewed from the average value of N-Gain, but is also supported by the

results of the Paired Samples t-test which shows existence improvement results significant learning in a way statistics.

Use of flashcard- based media picture proven effective increase results Study vocabulary Arabic language skills of PPBAI UIN Raden Intan Lampung students, shown by an increase significant on the average value of students by 14.25 points (from 71.05 to 85.30 $p = 0,001 < 0,05$). In addition to improving overall achievement scores, the decrease in the standard deviation from 16.385 to 6.053 indicates that this medium also succeeded in equalizing student abilities and narrowing the gaps resulting from differences in their initial educational backgrounds.

Discussion

Findings study shows that average value (mean) of the results Study vocabulary students' Arabic language skills during the pretest were 71.05 with standard deviation amounting to 16,385, which then increase in a way significant on posttest to be of 85.30 with standard shrinking deviation up to 6,053 after given intervention. An average increase of 14.25 points This indicates in a way real existence impact positive from use of flashcard- based media picture to mastery vocabulary Arabic language students. Interpretation on depreciation mark standard sufficient deviation sharp This signifies that level ability vocabulary student after treatment become Far more homogeneous and even compared to condition beginning those who are very unequal. This visual media intervention succeed bridging and reducing polarization ability extreme Arabic consequence difference background behind education origin students, such as between graduate of Islamic boarding school / Madrasah Aliyah with high school/vocational school graduates who have not yet Once learn Arabic in general systematically. In a theoretical, efforts equalization competence base this is very crucial Because mastery vocabulary is the main pillar and prerequisite absolute underlying development skills speak more Arabic continued (Mardiyah & Sofa, 2025).

Findings testing statistics inferential using the paired samples t-test produces t value of -3.769 with degrees freedom (df) 19 and mark significance (Sig. 2-tailed) of 0.001. Based on quantitative data said, the value significance obtained proven Far more small from level significance $\alpha = 0.05$ ($0.001 < 0.05$), so that hypothesis zero (H_0) is rejected in a way empirical and hypothetical alternative (H_1) is accepted in a way absolute. Interpretation statistics This give proof very strong empirical that difference achievements student pretest and posttest scores is consequence direct from use of flashcard- based media image, not Because factor Coincidentally. The online learning process via Zoom Meeting with help card illustrated This give stimulation effective cognitive for improvement results Study vocabulary student in a way significant. Success experiment One group This in a way methodological strengthen use design pre-experiment type *One Group Pretest Posttest Design* in measure change results Study in a way objective in the group subject pairs (Beth et al., 2026).

Findings analysis effectiveness improvement results Study student individually measured using the Normalized Gain (N-Gain) Score, which shows that 55% of students is in the category moderate (11 people), 20% in the category high (4 people), 10% in the category low (2 people), and 15% of students experience decline value (3 people). This data confirm that flashcard media is based on very effective image increase results Study for majority respondents, namely reached a total of 75% of students in the category medium and high. Interpretation on there is 15% of students who experience decline score post-treatment influenced by facts that students the has own very high pretest scores at the start experiment. Conditions the cause room improvement their value (room for improvement) on the posttest was very limited in a way mathematical, not reflect decline competence current they are in the field. In methodological, findings evaluation cognitive This show importance analyzes variability characteristics sample in a way comparative so as not to generalization bias occurs in study quantitative (Pollet et al., 2024).

In implementation action (treatment), mufradat Arabic does not serve conventional verbally but combined in a way direct with illustration relevant visual images through card media. Findings in the field prove that assimilation word forms and elements this visual image make it easier student linking

meaning vocabulary new in a way direct without depends full on translation process literal. Interpretation psycholinguistics on this process show that verbal stimulation (text vocabulary) and nonverbal (images) that occur in a way simultaneous capable speed up the coding process information cognitive to in memory term long students. The impact is that students capable remembering, pronouncing, and actualizing vocabulary new in a way more fast as well as resistant to forgetfulness. Findings empirical This gives validation very solid theoretical to *Dual Coding Theory* states that that cognition man processing information through two systems mutual representation related, where the storage information double will produce footsteps distant memory (memory trace) stronger (Seyyedrezaei et al., 2026).

Learning vocabulary Arabic language spoken online via the Zoom Meeting platform with rely on flashcard- based media picture proven succeed stimulate attention active students. Findings observational show that student No Again behave passive as during the learning process dominated by conventional verbal explanations and textbooks with minimal visualization. Interpretation on change behavior Study This indicates that integration picture concrete capable simplify understanding draft abstract language become easy mental representation digested. The ongoing knowledge transfer process in a way interactive This capable eliminate saturation cognitive student during session distance learning far away. Success This visual-verbal intervention is very much in tune with principle *Cognitive Theory of Multimedia Learning* which confirms that learning ongoing Far more meaningful when text and images served simultaneously Because capable optimize capacity processing limited cognitive (Mayer, 2024).

Study This implementing flashcard- based media image of the matriculation program students, which is psychological classified as group learners' adult learners. Findings at the location study show that student give response positive to convenience, practicality, and flexibility card image used. Interpretation on response This signify that characteristics practical stimulating flashcards independence Study student for do exercise repetition vocabulary in a way independent and in groups in pleasant atmosphere. The flexibility of this media give freedom cognitive for student for construct understanding Language based on accumulation experience cognitive they itself. This is very relevant with runway theoretical andragogy that affirms that adults own internal motivation and preferences typical learning, where are they will Study in a way optimal if material lesson own relevance real, involving role active, and appreciative independence cognitive they (Clair, 2024).

Success application of flashcard- based media image at level college tall This gives contribution different sciences compared to with trend study previous findings literature show that majority similar visual research previously almost all of it focused on children or teenagers at the level school elementary and secondary. Interpretation on findings comparative This prove existence novelty of study this, namely that effectiveness of visual media in the form of card picture No reduce when applied to learners' adults who have complexity cognitive higher. The results of the experiment at PPBAI UIN Raden Intan Lampung strengthen findings empirical previously done about the influence of flashcards on mastery mufradat, as well as analysis theoretical about the vital role of visual media in acceleration vocabulary Language foreign (Widiarti et al., 2024).

Success data improvement the average value from 71.05 to 85.30 and reduction gap ability PPBAI students provide implications policy practical for institutions. Findings This reflect that the Language Development Center (PUSBA) UIN Raden Intan Lampung requires media restructuring and methodology learning Arabic is mandatory so that it does not Again dominate by one-way verbal methods. Interpretation on implications This show that adoption of learning media proven visual based capable become solution innovative and applicable for overcome constraint management skills language in college tall consequence heterogeneity ability students. In general academic, recommendations practical this is very supportive achievement objective PPBAI curriculum in equip student new with competence strong basic Arabic as instrument integration science Islamic religion since beginning lectures.

4. CONCLUSION

Based on results research, can concluded that use of flashcard- based media picture effective in increase results Study vocabulary Arabic language students of the Intensive Foreign Language Learning Program (PPBAI) of the Language Development Center (PPB) of UIN Raden Intan Lampung. This indicated by an increase in the average value from 71.05 in the pretest to 85.30 in the posttest, with difference by 14.25 points, and the results of the Paired Samples t-test show difference significant in a way statistics (Sig. = 0.001 < 0.05). Findings This show that integration visual and verbal elements through flashcard- based media picture capable help student understand and remember vocabulary Arabic in general more effective, at the same time support the equalization process competence for student with ability diverse beginnings. Therefore that, flashcard-based media picture can recommend as innovative and effective alternative learning media in implementation of the Intensive Foreign Language Learning Program (PPBAI) in the environment State Islamic Religious College (PTKIN).

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