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Fostering *Mahārah Kitābah* through Picture-Based Controlled Writing with AI-Generated Visual Stimuli

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Abstract

Although visual-based approaches have been applied in Arabic writing instruction, their integration with controlled writing remains underexplored. This study examines the effectiveness of Picture-Based Controlled Writing in improving Arabic writing skills, known as *mahārah kitābah*, among tenth-grade students at MA Al-Falah Klender. Using a quantitative quasi-experimental design, 22 students were divided into experimental and control classes. The treatment combined sequenced visual stimuli with controlled writing tasks through guided sentence completion to help students organize ideas and use Arabic grammatical structures more accurately. To strengthen the quality and consistency of learning resources, generative AI was employed to create the visual stimuli and selected sentence prompts used in instructional materials as well as the pre-test and post-test. The experimental class showed a moderate learning gain with an N-Gain value of 0.53, suggesting the potential of the Picture-Based Controlled Writing approach in supporting Arabic writing development.

Keywords: *controlled writing, picture-based learning, arabic writing skills and generative artificial intelligence*

Abstrak

Meskipun pendekatan berbasis visual telah diterapkan dalam pembelajaran menulis bahasa Arab, integrasinya dengan penulisan terkontrol masih belum banyak dikaji. Penelitian ini bertujuan untuk mengkaji efektivitas *Picture-Based Controlled Writing* dalam meningkatkan keterampilan menulis bahasa Arab (*mahārah kitābah*) siswa kelas X di MA Al-Falah Klender. Penelitian ini menggunakan metode kuantitatif dengan desain kuasi-eksperimen yang melibatkan 22 siswa yang dibagi ke dalam kelas eksperimen dan kelas kontrol. Perlakuan pembelajaran mengombinasikan rangkaian stimulus visual dengan tugas penulisan terkontrol melalui penyelesaian kalimat terpandu untuk membantu siswa mengorganisasi ide dan menggunakan struktur gramatikal bahasa Arab secara lebih akurat. Untuk meningkatkan kualitas bahan pembelajaran, AI generatif digunakan dalam pembuatan stimulus visual dan beberapa contoh kalimat pada materi pembelajaran serta instrumen pre-test dan post-test. Hasil penelitian menunjukkan bahwa kelas eksperimen mengalami peningkatan hasil belajar pada kategori sedang dengan nilai *N-Gain* sebesar 0,53, yang menunjukkan potensi pendekatan *Picture-Based Controlled Writing* dalam mendukung pengembangan keterampilan menulis bahasa Arab.

Kata Kunci: *menulis terpimpin, stimulus visual, kemampuan menulis dan kecerdasan buatan generatif*

Introduction

Writing skills in Arabic (*mahārah kitābah*) constitute a crucial productive competence in foreign language learning; however, their instruction remains challenging for many learners. This skill requires learners to convey ideas, thoughts, and information in written form through appropriate and accurate linguistic structures, making writing an essential indicator of meaningful language mastery. In practice, many learners experience difficulties in generating ideas, organizing them systematically, and applying grammatical rules accurately when producing Arabic written texts. Such difficulties often result in fragmented writing, weak coherence, and limited development of writing competence; therefore, as emphasized by Zubaidi, writing proficiency requires the systematic organization of ideas supported by correct linguistic structures[1].

[1] Ahmad Zubaidi and others, 'Enhancing Arabic Writing Skills Using Chat GPT-Based AI Learning Models : A Tridimensional Human-AI Collaboration Framework', *Indonesian Journal of Applied Linguistics*, Vol. 15.No. 1 (2025), pp. 87–101.

Writing instruction occupies a central position in language learning theory, particularly in discussions of how learners develop productive skills through instructional guidance, structural control, and cognitive support. Writing instruction is commonly divided into implicit and explicit approaches, in which implicit instruction relies on exposure and meaningful use, whereas explicit instruction emphasizes conscious, systematic, and structured guidance in presenting linguistic forms and writing conventions, as reflected in Raimes' concept of controlled writing such as fill-in-the-gap activities, is designed to reduce cognitive load[2]. From a cognitive perspective, visual representation supports learners' understanding and meaning construction, as proposed in Bruner's theory of representation[3]. At the pedagogical level, images are widely used to provide context and facilitate idea development in language learning, as emphasized by Wright[4]. However, the effectiveness of visual media depends on structured guidance that enables learners to organize ideas into coherent written texts[5]. Consequently, learners may generate ideas yet experience difficulty in sequencing information and maintaining coherence, highlighting the need to integrate visual support with controlled guidance to reduce cognitive load in writing.

These pedagogical conditions can be observed in the learning context of MA Al-Falah, which serves as the research setting of this study. At this *Madrasah Aliyah*, Arabic writing (*mahārah kitābah*) is taught as part of the Arabic language curriculum to develop students' ability to express ideas in written form. In practice, however, significant challenges in Arabic writing instruction were evident, particularly in students' ability to generate ideas and organize coherent written texts[6]. Interviews with Arabic language teachers

[2] Ann Raimes, *Techniques In Teaching Writing* (Oxford University Press, 1983).

[3] Jerome S. Bruner, *Toward a Theory of Instruction* (Harvard University Press, 1966).

[4] Andrew Wright, *Picture for Language Learning* (Cambridge University Press, 1989).

[5] Cut Mukramah, Faisal Mustafa, and Diana Fauzia Sari, 'The Effect of Picture and Text Prompts on Idea Formulation and Organization of Descriptive Text', *Indonesian Journal of English Language Teaching and Applied Linguistics*, Vol. 7.No. 2 (2023), pp. 325–41.

[6] Arif Ahmed and others, 'English Writing Proficiency and Apprehensions Among Saudi College Students : Facts and Remedies', *TESOL International Journal*, Vol. 16.No. 1 (2021), pp. 34–56.

indicate frequent errors in students' sentence construction and organization of ideas. These difficulties persist during pre-instructional stages, particularly in sentence construction and idea organization, as students struggle to complete controlled sentences and interpret visual cues accurately.[7] This situation suggests that the instructional objectives of Arabic writing at MA Al-Falah have not yet been optimally achieved.

Field evidence indicates that difficulties in Arabic writing at MA Al-Falah are shaped by interrelated factors related to instructional practice. Variations in students' educational backgrounds result in unequal levels of writing readiness, which affects their ability to organize ideas coherently. Writing instruction also remains largely conventional, with limited variation and guided support to assist students in developing written texts. This instructional condition is reflected in teacher interview data, which indicate that many students tend to be passive during writing activities and rely heavily on imitation rather than producing texts independently. Moreover, during the experimental teaching sessions, limited instructional time restricted opportunities for sustained writing practice and systematic idea development. Taken together, these conditions indicate that the instructional objectives of Arabic writing at MA Al-Falah have not yet been optimally achieved and require more pedagogically effective instructional support.

Recent studies on Arabic writing instruction have increasingly shifted attention toward how writing skills can be developed through pedagogical support that facilitates idea organization and linguistic accuracy. Rather than focusing solely on the mastery of linguistic forms, contemporary research emphasizes the importance of instructional strategies that help learners connect ideas systematically and transform them into coherent written texts. In this line, writing is no longer viewed merely as a product of linguistic knowledge, but as a complex process that requires cognitive, pedagogical, and representational support to enable learners to express ideas meaningfully in written form.

Findings from experimental and quasi-experimental research on Arabic writing instruction indicate that instructional design plays

[7] Nastaran Seify and Saeid Najafi Sarem, 'The Impact of Interactional Scaffolding on the Complexity and Accuracy of Argumentative Writing : A Study of Iranian EFL Learners', *Journal of Applied Linguistics Studies*, Vol. 5.No. 1 (2025), pp. 128–37.

a decisive role in improving students' ability to organize ideas into coherent written texts. Hendratno (2025) found that the use of visual and sequential illustrations played a significant role in supporting learners' comprehension of context and narrative progression, thereby facilitating clearer paragraph development in writing[8]. Similarly, Musril et al (2025) emphasized that controlled writing instruction provides essential structural guidance, enabling learners to construct sentences systematically and develop paragraphs in a more organized manner[9]. In line with this perspective, Kufi (2023) highlighted the importance of scaffolding in Arabic writing instruction, arguing that gradual and guided support helps learners maintain coherence across sentences and develop ideas more effectively[10]. Taken together, these findings indicate that visual media alone are insufficient to ensure effective writing development. Rather, writing instruction becomes pedagogically effective when visual support is integrated with structured and guided instructional practices that assist learners in transforming initial ideas into coherent, meaningful, and logically organized written texts.

Beyond instructional strategies, several empirical studies have directed attention toward the role of guided and visually supported techniques in improving writing outcomes. Riana Julita et al. (2021), through a quasi-experimental study at the secondary education level, reported that the use of guided questions significantly improved students' ability to produce descriptive texts, as structured prompts helped learners connect ideas and maintain textual coherence[11]. In a related experimental study, Alali and Al-Barakat (2023) examined the pedagogical use of instructional visual aids and found that visually

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[8] Fajar Nur Yasin Hendratno, Nurul Istiq'faroh, 'Students ' Comprehensions Ability on a Digital Storybook : A Quasi Experiment Research with Fry Readability Analysis', *International Journal of Language Education*, Vol. 9.No. 1 (2025), pp. 114–31.

[9] Musril Zahari and others, 'Optimizing Student Writing Performance in Higher Education : A Quantitative Study of Teacher Feedback and Classroom Environment', *Social Sciences & Humanities Open*, Vol. 11.No. 10 (2025), p. 101286, doi:10.1016/j.ssaho.2025.101286.

[10] Elmaziye Özgür Küfi, 'Activation of Content - Schemata for Scaffolding L2 Writing : Voices from a Turkish Context', *Journal of Psycholinguistic Research*, Vol. 52.No. 6 (2023), pp. 2405–27, doi:10.1007/s10936-023-10002-3.

[11] Riana Julita Nunun Indrasari, 'Guided Questions Technique for Teaching Writing Skill of Descriptive Text', *Englis Education: Jurnal Tadris Bahasa Inggris*, Vol. 11.No. 1 (2021), pp. 160–72.

supported instruction led to higher levels of learner comprehension and engagement when visual representations were systematically aligned with instructional objectives[12]. Taken together, these findings suggest that writing difficulties are shaped not only by learners' linguistic limitations, but also by the pedagogical organization and visual representation of ideas. Nevertheless, existing empirical studies have largely examined guided instruction and visual support as separate instructional components, while their systematic integration within a single instructional design remains underexplored and merits further experimental investigation.

From a cognitive writing perspective, Allagui (2024) demonstrated that structured instructional scaffolding significantly reduces learners' cognitive load and enhances their ability to organize ideas coherently during text production[13]. Although the study did not specifically examine Arabic writing instruction or picture-based controlled writing in classroom contexts, the findings provide empirical support for the claim that guided and structured instructional support exerts measurable cognitive effects on learners' writing performance, thereby offering important implications for the instructional design of writing pedagogy.

Despite consistent evidence indicating that visual media and guided activities can enhance idea generation and learner engagement in Arabic writing instruction, existing research on Arabic writing still tends to examine visual stimuli and writing guidance as separate interventions rather than as an integrated design that scaffolds the writing process. Pedagogically, pictures are often positioned primarily as idea triggers, while controlled writing guidance is discussed in parallel strands, not within a unified framework that systematically supports learners in producing coherent texts. Consequently, empirical studies that explicitly investigate the integration of picture-based visual support with controlled writing guidance to foster *mahārah kitābah* remain limited.

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[12] Rommel Mahmoud Alali and Ali Ahmad Al-barakat, 'Role of Teacher Understanding about Instructional Visual Aids in Developing National and International Student Learning Experiences', *Journal of International Students*, Vol. 13.No. 4 (2023), pp. 331–54.

[13] Besma Allagui, 'A Scaffolding Intervention to Improve Self-Efficacy in Source-Based Argumentative Writing', *Frontiers in Education*, no. November (2024), pp. 1–14, doi:10.3389/fpsyg.2024.1454104.

This study therefore foregrounds Picture-Based Controlled Writing as an instructional framework for developing Arabic writing (*mahārah kitābah*). Rather than introducing new writing techniques, the framework integrates sequenced visual representations with controlled sentence construction to scaffold learners from idea generation to coherent text organization. Although visual prompts and controlled writing have each been widely used in classroom practice, systematic empirical research testing their integration within a controlled instructional sequence remains limited. Here, AI-generated visual stimuli are used only to standardize and align instructional prompts, serving as material preparation rather than an independent pedagogical intervention[14]. Investigating this framework is therefore essential for strengthening empirical evidence on how combined visual scaffolding and writing control can improve learners' coherence, organization, and idea development in Arabic writing.

Grounded in the conceptual framework and empirical findings from the field, this study aims the effectiveness of Picture-Based Controlled Writing in developing Arabic writing skills (*mahārah kitābah*) at MA Al-Falah Klender. Specifically, the study focuses on students' ability to select and construct appropriate Arabic words and sentence elements within a controlled writing (fill-in-the-gap) task, guided by visual context to support accurate sentence production taught in the tenth grade during the second semester. The study is guided by the following research questions: (1) Is the implementation of Picture-Based Controlled Writing using AI-generated visual stimuli effective in improving students' Arabic writing skills (*mahārah kitābah*)? (2) How does the improvement in Arabic writing skills (*mahārah kitābah*) differ between students taught using Picture-Based Controlled Writing and those taught through conventional instruction? Accordingly, this study examines instructional effectiveness in terms of students' writing performance as an indicator of pedagogical improvement.

[14] David Pérez-jorge and others, 'Technologies Applied to Education in the Learning of English as a Second Language', *Frontiers in Education*, Vol. 10.No. 3 (2025), doi:10.3389/feduc.2025.1481708.

Method

Research Design and Participants

This design was selected to examine the effectiveness of Picture-Based Controlled Writing using AI-generated visual stimuli in improving students' Arabic writing skills (*mahārah kitābah*). A Nonequivalent Control Group Design was applied[15], The research population consisted of 22 tenth-grade students from the same grade level at MA Al-Falah Klender. Although the sample size was relatively small, it represented the entire population of the selected grade and reflected the actual classroom context of the study. A total sampling technique was therefore employed, with 11 students assigned to the experimental class (X-A) and 11 students to the control class (X-B). The study was conducted during the odd semester of the 2025/2026 academic year, from November 3 to November 26, 2025. The experimental group received instruction using the Picture-Based Controlled Writing method, while the control group was taught using conventional instructional methods. In this study, the Picture-Based Controlled Writing method functioned as the independent variable, whereas students' Arabic writing skills (*mahārah kitābah*) served as the dependent variable.

Instructional Materials and Treatment

The instructional materials for both groups were adapted from the official Arabic textbook for tenth-grade students used at MA Al-Falah Klender, particularly from a unit entitled *(اَلْمَدْرَسَةُ)*. The original textual content of the textbook was not used directly; instead, the thematic focus was retained and developed by the researcher. Both groups were exposed to the same material and received the same pre-test and post-test; the distinction lay solely in the instructional method applied. Data were collected through documentation and testing, with both groups completing a pre-test and a post-test consisting of picture-based controlled writing tasks. The visual stimuli and controlled sentence prompts were prepared with the assistance of artificial intelligence (AI) tools, which were used to generate initial visual representations and draft sentence prompts based on curriculum-aligned themes. These outputs were reviewed, adapted, and finalized by the researcher to ensure alignment with instructional objectives

[15] Hawa Qolami and Ahmad Rizki Nugrahawan, 'The Effectiveness of BARUSIDA Application on Arabic Learning Outcomes of Students at Junior High School', *Journal Indonesia Institute for Conselling, Education and Therpy*, Vol. 4.No. 2 (2023), pp. 75–81.

and students' proficiency levels. The instructional approach implemented in the classroom remained the Picture-Based Controlled Writing method and use of AI was limited to the material design stage and did not involve instructional delivery, assessment, or data collection processes.

Research Instrument

Table 1. Scoring Weight

No.	Picture A	Picture B	Picture C	Picture D	Total
1-5 (Easy)	0,5	0,5	0,5	0,5	2 (Each Number)
6-13 (Medium)	2	2	2	2	8 (Each Number)
14-15 (Hard)	3,25	3,25	3,25	3,25	13 (Each Number)
Maximum Score = 100					

The primary instrument used in this study was a picture-based controlled writing test (mahārah kitābah), administered as both the pre-test and post-test. The test was designed to measure students' ability to complete guided Arabic sentences based on visual stimuli related to the theme الْمَدْرَسَةُ. In completing the items, students were expected to demonstrate overall accuracy in writing, including appropriate use of ḥarakāt, correct letter formation/spelling, grammatical accuracy (e.g., *fi'l muḍāri', fi'l māḍī, ḥurūf jarr*, and *ḥurūf 'aṭf*), and the relevance of the completed sentence to the picture context, with an emphasis on overall accuracy in writing form and sentence construction. The instrument was developed by the researcher based on the curriculum content and the learning material taught in Grade X. Prior to implementation, the instrument was examined through validity and reliability testing to ensure that it was appropriate for use in the study[16]. Students' answers were scored manually using the same scoring procedure for both the pre-test and post-test to ensure assessment consistency. The scoring weights were determined based on the difficulty level of the items (easy, medium, and hard), as presented in Table. 1 (Scoring Weight), with the maximum total score set at 100.

[16] Nor Hasnida Md Ghazali, 'A Reliability and Validity of an Instrument to Evaluate the School-Based Assessment System : A Pilot Study', *International Journal of Evaluation and Research in Education*, Vol. 5.No. 2 (2016), pp. 148–57.

Data Collection and Analysis Technique

Research data were drawn from the pre-test and post-test scores of students' Arabic writing skills (*mahārah kitābah*) in the experimental and control groups. The data were processed using IBM SPSS Statistics. Prior to hypothesis testing, prerequisite analyses were conducted, including the Shapiro–Wilk normality test and Levene's homogeneity test, to confirm that the data met parametric assumptions. Further analyses were then carried out to identify score improvements within each group and differences between groups. A paired-samples t-test was used to compare pre-test and post-test scores within each group, while an independent-samples t-test was applied to compare post-test scores between the experimental and control groups. All statistical decisions were made at a 0.05 significance level to determine the effect of Picture-Based Controlled Writing with AI-generated visual stimuli on students' *mahārah kitābah*.

To determine the magnitude of students' improvement from pre-test to post-test, the normalized gain (N-Gain) was calculated using the following formula, and the values were interpreted using Hake's classification[17] :

Formula & Classification

$$\text{N-Gain} = \frac{Score\ Postest - Score\ Pretest}{Score\ Ideal - Score\ Pretest}$$

Hake's Classification	
High	> 0.70
Moderate	0.30–0.69
Low	< 0.30

Results and Discussion

This research examines the effectiveness of the Picture-Based Controlled Writing method in improving students' writing abilities (*mahārah kitābah*). This study entailed administering a pre-test and a post-test to students of class X-A to assess their writing proficiency in *qawāʿid* material within a school *(الْمَدْرَسَةُ)*. The experimental class achieved an average pre-test score of 35, which increased to an average post-test score of 71, indicating a substantial improvement in students' writing proficiency from the initial assessment to the final

[17] Vincent P Coletta and Jeffrey J Steinert, 'Why Normalized Gain Should Continue to Be Used in Analyzing Preinstruction and Postinstruction Scores on Concept Inventories', *Physical Review Physics Education Research*, Vol. 16.No. 1 (2020), p. 10108, doi:10.1103/PhysRevPhysEducRes.16.010108.

evaluation after implementing the Picture-Based Controlled Writing method. This section presents the results of the normality and homogeneity tests, the paired-sample t-test, the independent-sample t-test, and the N-Gain Score analysis to assess the significance and magnitude of the improvement.

Upon obtaining the pre-test and post-test scores, the first step was to evaluate the normality of the data to determine whether the score distribution met the requirements for parametric analysis. The normality test was conducted using the Shapiro–Wilk method, given a sample size of 22 students[18]. The assessment of normality was based on the significance level (p-value), with data considered normally distributed if $p > 0.05$. The findings of the normalcy test are summarized in Table 1 below:

Table 2. Normality Test Results

	Shapiro-Wilk	
Control Class (X-B) Pre-test	0,418 > 0,05	Normally distributed
Control Class (X-B) Post-test	0,462 > 0,05	Normally distributed
Experiment Class (X-A) Pre-test	0,623 > 0,05	Normally distributed
Experiment Class (X-A) Post-test	0,139 > 0,05	Normally distributed

According to Table 2, the Exact Sig. (2-tailed) value for the experimental class pre-test is 0.623, but the post-test value for the same class is 0.139. In the control group, the Exact Sig. (2-tailed) value for the pre-test is 0.418, and for the post-test, it is 0.462. All Exact Sig. (2-tailed) values exceed 0.05. The null hypothesis, H_0, is accepted, signifying that the data exhibit a normal distribution. The subsequent phase of the study involves performing a homogeneity test to assess the equivalence of variances between the experimental and control groups. The homogeneity test was conducted with Levene's Test, with the stipulation that the data is deemed homogenous when the significance > 0.05. Table 2. Homogeneity Test Results for Posttest Scores

[18] Prabhaker Mishra, Chandra M Pandey, and Uttam Singh, 'Descriptive Statistics and Normality Tests for Statistical Data', *Annals of Cardiac Anaesthesia*, Vol. 22.No. 1 (2020), pp. 67–72, doi:10.4103/aca.ACA.

Table 3. (Levene's Test)

Levene's Test for Equality of Variances		Description:
f	Sig. (2-tailed)	
.018	0.894	Homogeneous

Following the confirmation of normal distribution of the data, a homogeneity of variance test was performed on the post-test scores to ascertain the comparability of variances between the experimental and control groups. According to Table 2, the Sig. (2-tailed) value in the "Based on Mean'' row is 0.894, which exceeds 0.05. This outcome signifies the acceptance of H_0, indicating that the variances of the two groups are equivalent, whereas H_1, which posits that the variances differ, is rejected. Consequently, the data are deemed homogenous, facilitating the study of variations in pre-test and post-test scores via a paired-samples t-test.

Table 4. Paired Sample t-Test Results

Statistic	Value
Number of Student (N)	11
Pre-test Mean	35.18
Post-test Mean	71.09
Mean Difference (D)	35.91
Standard Deviation (SD)	13.910
Significance Level (p)	0,001
Degrees of Freedom (df)	10
Decision	**H_0 rejected**
Interpretation	**Statistically significant effect**

The results from Table 4 reveal a statistically significant difference between the pre-test and post-test scores in the experimental group, as determined by the paired-samples t-test. The average pre-test score of 35.18 rose to 71.09 in the post-test, resulting in a mean difference of 35.91. The significance value (p) is 0.001, substantially lower than 0.05, showing that the enhancement is statistically significant. Consequently, H_0 is dismissed and H_1 is affirmed. The data indicate that students' writing proficiency improved following the application of the Picture-Based Controlled Writing approach in the experimental class. To ascertain if the enhancement in learning outcomes between the experimental and control groups was statistically significant at the final assessment, an independent-samples t-test was conducted on the post-test scores of both cohorts.

Table 5. Independent Sample t-Test Results for Post-test Scores

Statistic	Value
Number of Student (N)	22
Post-test Experiment Class (X-A)	71.27
Post-test Control Class (X-B)	61.09
Mean Difference (D)	10.18
Significance Level (p)	0,006
Degrees of Freedom (df)	20
Decision	**H_0 rejected**
Interpretation	**Statistically significant effect**

Table 5 indicates that the independent-samples t-test had 22 students as the subjects of study. The mean post-test score of the experimental group (X-A) was 71.27, whereas the mean post-test score of the control group (X-B) was 61.09, yielding a mean difference of 10.18. The significant value (p) of 0.006, which is less than 0.05, shows the rejection of H_0 and the acceptance of H_1. This indicates a statistically significant disparity in the post-test results of the experimental and control groups, with the experimental group attaining superior post-test scores in the final assessment. The research involved assessing the significance of changes in post-test results using parametric statistical testing, while calculating the N-Gain Score to evaluate the extent of progress in writing skill within each group. The N-Gain was employed to evaluate the efficacy of learning by measuring the variation in scores from pre-test to post-test. A summary of the N-Gain Score calculation results is presented in Table 5 below:

Table 6. N-Gain Score Result for Experiment Class

N- Gain Score	Mean	Minimum	Maximum
Experiment Class (X-A)	0,53	0,10	0,71

According to Table 5, the mean N-Gain Score in the experimental class (X-A) is 0.53, with a minimum value of 0.10 and a maximum value of 0.71. This number signifies that an enhancement in writing proficiency transpired following the adoption of the Picture-Based Controlled Writing technique. The N-Gain Score assesses the extent of progress in participants from the pre-test to the post-test[19], indicating that the majority of students exhibited moderate enhancement in their writing skills following the intervention.

[19] Coletta, Vincent P, and Jeffrey J Steinert, 'Why Normalized Gain Should Continue to Be Used in Analyzing Preinstruction and Postinstruction Scores on

The statistical analyses, comprising the paired-samples t-test, independent samples t-test, and N-Gain Score calculation, indicate a consistent enhancement in writing proficiency within the experimental group after the application of the Picture-Based Controlled Writing method. This enhancement surpassed that of the control group at the final assessment. Therefore, based on the empirical findings obtained in this study, the Picture-Based Controlled Writing method can be regarded as effective in enhancing students' writing ability (*mahārah kitābah*).

Discussion

The findings of this study indicate that the implementation of the Picture-Based Controlled Writing method supports the primary objective of the research, namely improving students' writing skills (*mahārah kitābah*). Conceptually, these results suggest that writing instruction that combines visual stimuli with controlled writing exercises is able to provide stronger cognitive support than conventional instructional approaches. Thus, the research hypothesis stating that the Picture-Based Controlled Writing method is effective in improving students' writing skills is supported by the findings of this study[20], particularly within the context of Arabic language learning in madrasah setting.

The effectiveness of this method can be explained through the learning mechanism of picture-based learning, in which visual stimuli function as a contextual framework that guides students in developing ideas, organizing sequences of events, and applying linguistic structures appropriately in accordance with the school theme (الْمَدْرَسَةُ). In the linguistic context of Arabic, the structures practiced include the accurate use of *fiʿil māḍī* and *fiʿil muḍāriʿ*, the selection of *ḥurūf al-jarr*, and the orderly arrangement of phrases and simple sentences through controlled sentence completion activities linked to visual stimuli. These activities helped students apply grammatical forms and vocabulary in context. This approach is consistent with Bruner's concept of learning through representation, particularly

Concept Inventories', *Physical Review Physics Education Research*, Vol. 16.No. 1 (2020), p. 10108, doi:10.1103/PhysRevPhysEducRes.16.010108

[20] Chubbi Millatina Rokhuma and Fasikha Al-Izhar, 'EFL Student' Experience of Picture Series Collaborative Narrative: Highlighting Indonesia Vocational High School Students' Voice', *Journal of English Teaching and Applied Linguistics*, Vol. 4.No. 2 (2023), doi:10.36655/jetal.v4i2.1092.

when images assist students in constructing meaning before expressing it in linguistic form. Moreover, Wright emphasizes that images facilitate contextual understanding and idea generation, allowing students to write more purposefully while maintaining coherence of meaning. Consequently, the use of images in writing instruction not only serves as an idea trigger but also reduces the cognitive load that often arises in free-writing activities, especially during initial stages of learning[21].

In addition to the visual aspect, the controlled writing component constitutes a key factor in the effectiveness of this method. Control in the form of sentence patterns, fill-the-gap activities, and limitations on textual structure provides linguistic scaffolding that assists students in producing texts gradually and accurately. These findings align with previous research on controlled writing in Arabic language learning, which indicates that structured support can enhance grammatical accuracy and textual coherence, especially at the early stages of mastering *mahārah kitābah*[22]. Thus, students are guided to apply *qawāʿid* functionally within meaningful contexts rather than engaging in unguided or aimless writing.

Although artificial intelligence (AI) was not treated as an independent variable in this study, its role in supporting the implementation of the Picture-Based Controlled Writing method warrants attention. AI was used to generate visual stimuli and selected guided sentence prompts for the pre-test, post-test, and instructional materials. This support facilitated the preparation of consistent and contextually relevant images and controlled writing tasks, allowing the instructional focus to remain on the pedagogical principles of picture-based learning and writing control. Importantly, AI did not influence instructional delivery, classroom interaction, scoring, or data analysis, all of which were managed by the teacher and researcher. Therefore, the effectiveness observed in this study should be attributed primarily to the instructional method itself, while AI

[21] Campin Veddayana and others, 'Systematic Review : How Technology Supports Collaborative Writing Learning in Higher Education', *The Electronic Journal of E-Learning*, V2ol. 3.No. 3 (2025), pp. 64–78.

[22] Zulfa Tsalitsatul Muna, Nur Hidayah, and Ashley Le Souef, 'Mind Mapping as an Innovation in Reading and Writing Learning : A Study of Understanding Arabic Texts', *Alibbaa': Jurnal Pendidikan Bahasa Arab*, Vol. 6.No. 1 (2025), pp. 121–37.

functioned as an enabling tool for efficient and systematic material preparation.

When viewed in terms of the magnitude of students' improvement, the N-Gain Score of the experimental class is 0,53 which falls into the ''moderate gain" category based on Hake's classification[23]. This category indicates that the observed improvement is pedagogically meaningful and not merely a statistical coincidence. A value of 0,53 suggests that the Picture-Based Controlled Writing method is capable of producing a fairly substantial development in writing ability within the context of madrasah learning, although it has not yet reached the category of very high improvement.

The strength of the findings of this study is further reinforced by the effect size (Cohen's d) of 3,53 calculated from the experimental group's pre-test and post-test scores, which is categorized as very large. This high effect size indicates that the improvement in writing ability following the treatment has strong practical significance, not merely statistical significance. In other words, the Picture-Based Controlled Writing method yields a substantial instructional impact on the development of students' *mahārah kitābah*. These findings suggest that the effectiveness of an instructional method should be interpreted holistically by considering statistical significance, the magnitude of improvement and the strength of its impact on learners' abilities[24]. However, the magnitude of improvement should also be interpreted in relation to students' prior educational backgrounds, the school environment, and the classroom atmosphere during the instructional process.

In addition, learners' prior educational backgrounds may have influenced the magnitude of the learning gains observed in this study. Information from the teacher interview and the researcher's in-class teaching experience suggests that variations in students' educational backgrounds resulted in unequal levels of writing readiness, and many learners were accustomed to conventional instruction that emphasized

[23] Universitas Hasyim, 'Empowering Arabic Reading Skills through Interactive Digital Worksheets : A Development Study Using Liveworksheet', *Alibbaa': Jurnal Pendidikan Bahasa Arab*, Vol. 6.No. 2 (2025), pp. 310–29.

[24] Sofie Maria, Ulfa Desvy, and Miftachul Taubah, 'Pedagogical Reform in Arabic Grammar : Innovating Qawā ʿ Id Instruction through the Card Sort Method', *Alibbaa': Jurnal Pendidikan Bahasa Arab*, Vol. 6.No. 2 (2025), pp. 160–75.

imitation rather than independent text production. Consequently, the shift to Picture-Based Controlled Writing required an adjustment to new learning demands such as interpreting visual cues, organizing ideas systematically, and applying Arabic structures within controlled sentence patterns. During the early sessions, this transition may have imposed additional cognitive demands, which helps explain why the learning gain was classified as moderate even though overall improvement was evident.

Second, the school environment and structural conditions of instruction at MA Al-Falah should also be considered when interpreting the N-Gain results. In this study context, Arabic writing lessons were conducted only once a week for two lesson-hours, which constrained the amount of sustained practice that could be provided within the intervention period. Although classroom facilities such as a projector supported the use of visual stimuli, limited instructional time can restrict repetition, feedback cycles, and gradual refinement elements that are often necessary for writing development. Therefore, the moderate gain may reflect realistic outcomes under institutional constraints rather than an inherent limitation of the instructional method.

Finally, classroom atmosphere during the instructional process may have mediated the effectiveness of the treatment. The teacher interview and the researcher's in-class teaching experience indicate that many students tended to be passive during writing activities and relied heavily on imitation, suggesting that active engagement in composing sentences independently was still developing. At the initial stage of implementing a new method, students may require explicit directions and reassurance to participate confidently in controlled writing tasks and respond to visual prompts. However, the structured scaffolding of Picture-Based Controlled Writing can help maintain a manageable learning flow by providing clear targets and step-by-step guidance, supporting learners as they adapt to more varied instructional practices.

Nevertheless, several limitations of this study should be acknowledged. This research was conducted with a limited sample size and focused on specific *qawāʿid* materials; therefore, the generalization of the results to broader contexts should be approached with caution. In addition, the measurement of writing ability was carried out within a relatively short period after the intervention, so the long-term effects of this method cannot yet be determined. Future

studies are recommended to examine the application of this method to more complex *qawāʿid* materials and in different instructional contexts.

From a reflective and critical perspective, the effectiveness of the Picture-Based Controlled Writing method should be interpreted within the specific instructional context of this study. The method appears to be particularly suitable for learners who require structured guidance and visual support in developing writing skills; however, its effectiveness may vary depending on students' prior learning experiences, levels of autonomy, and classroom dynamics. In learning environments where students are already accustomed to independent or free-writing practices, excessive control may need to be gradually reduced to foster creativity and higher-level writing skills. Therefore, while the present findings demonstrate the pedagogical potential of picture-based controlled writing, teachers are encouraged to adapt the level of visual support and writing control according to students' needs and instructional goals. This reflective consideration highlights that instructional effectiveness is not solely determined by the method itself, but by how flexibly it is implemented in diverse classroom contexts.

Overall, this discussion underscores that the Picture-Based Controlled Writing method represents an effective and relevant instructional approach for improving students' writing skills. The integration of visual media and controlled writing exercises is able to create learning experiences that are more meaningful, contextual, and oriented toward linguistic understanding. These findings offer practical implications for Arabic language teachers in designing writing instruction that not only emphasizes mastery of rules but also students' ability to apply those rules functionally within the context of written communication.

Conclusion

This study demonstrates that the Picture-Based Controlled Writing method is effective in improving students' writing skills (*mahārah kitābah*). Writing instruction that integrates visual stimuli with controlled writing guidance helps students understand context, organize ideas coherently, and apply Arabmaic linguistic structures more accurately. The findings indicate that learning becomes more meaningful when students are not only provided with visual idea stimulation but also given systematic direction in developing their written texts.

From a theoretical perspective, this study contributes to the field of writing instruction by demonstrating that picture-based learning alone is insufficient without controlled writing guidance. The integration of visual stimuli and systematic writing control provides a more coherent cognitive framework for developing Arabic writing skills (*mahārah kitābah*), thereby extending existing theories of picture-based learning and controlled writing.

In this study, artificial intelligence (AI) was integrated as a supporting tool in preparing visual stimuli and controlled-writing materials within the Picture-Based Controlled Writing method. This integration supported the consistent implementation of the method and is reflected in the quantitative findings, with a moderate N-Gain score (0.53) and a very large effect size (Cohen's d = 3.53), indicating substantial improvement in students' writing skills. Accordingly, AI functioned as a complementary component within the instructional framework rather than as an independent variable. Future research is recommended to apply this method to broader *qawāʿid* materials, different educational levels, and diverse digital media contexts to strengthen its generalizability and sustainability.

REFERENCES

Ahmed, Arif, and others, 'English Writing Proficiency and Apprehensions Among Saudi College Students : Facts and Remedies', *TESOL International Journal*, Vol. 16.No. 1 (2021), pp. 34–56

Alali, Rommel Mahmoud, and Ali Ahmad Al-barakat, 'Role of Teacher Understanding about Instructional Visual Aids in Developing National and International Student Learning Experiences', *Journal of International Students*, Vol. 13.No. 4 (2023), pp. 331–54

Allagui, Besma, 'A Scaffolding Intervention to Improve Self-Efficacy in Source-Based Argumentative Writing', *Frontiers in Education*, no. November (2024), pp. 1–14, doi:10.3389/fpsyg.2024.1454104

Alvina, Nuri, Nurul Hadi, and Khaled Radhouani, ' تعزيز دافعية طلاب رياض الأطفال لتطوير مهارات اللغة العربية الشفوية من خلال برامج التعليم المكثف', *Alibbaa': Jurnal Pendidikan Bahasa Arab*, Vol. 5.No. 2 (2024), pp. 190–214

Bruner, Jerome S., *Toward a Theory of Instruction* (Harvard University Press, 1966)

Coletta, Vincent P, and Jeffrey J Steinert, 'Why Normalized Gain Should Continue to Be Used in Analyzing Preinstruction and Postinstruction Scores on Concept Inventories', *Physical Review Physics Education Research*, Vol. 16.No. 1 (2020), p. 10108, doi:10.1103/PhysRevPhysEducRes.16.010108

Ghazali, Nor Hasnida Md, 'A Reliability and Validity of an Instrument to Evaluate the School-Based Assessment System : A Pilot Study', *International Journal of Evaluation and Research in Education*, Vol. 5.No. 2 (2016), pp. 148–57

Hasyim, Universitas, 'Empowering Arabic Reading Skills through Interactive Digital Worksheets : A Development Study Using Liveworksheet', *Alibbaa': Jurnal Pendidikan Bahasa Arab*, Vol. 6.No. 2 (2025), pp. 310–29

Hendratno, Nurul Istiq'faroh, Fajar Nur Yasin, 'Students ' Comprehensions Ability on a Digital Storybook : A Quasi Experiment Research with Fry Readability Analysis', *International Journal of Language Education*, Vol. 9.No. 1 (2025), pp. 114–31

Küfi, Elmaziye Özgür, 'Activation of Content - Schemata for Scaffolding L2 Writing : Voices from a Turkish Context',

Journal of Psycholinguistic Research, Vol. 52.No. 6 (2023), pp. 2405–27, doi:10.1007/s10936-023-10002-3

Maria, Sofie, Ulfa Desvy, and Miftachul Taubah, 'Pedagogical Reform in Arabic Grammar : Innovating Qawā ʿ Id Instruction through the Card Sort Method', *Alibbaa': Jurnal Pendidikan Bahasa Arab*, Vol. 6.No. 2 (2025), pp. 160–75

Mishra, Prabhaker, Chandra M Pandey, and Uttam Singh, 'Descriptive Statistics and Normality Tests for Statistical Data', *Annals of Cardiac Anaesthesia*, Vol. 22.No. 1 (2020), pp. 67–72, doi:10.4103/aca.ACA

Mukramah, Cut, Faisal Mustafa, and Diana Fauzia Sari, 'The Effect of Picture and Text Prompts on Idea Formulation and Organization of Descriptive Text', *Indonesian Journal of English Language Teaching and Applied Linguistics*, Vol. 7.No. 2 (2023), pp. 325–41

Muna, Zulfa Tsalitsatul, Nur Hidayah, and Ashley Le Souef, 'Mind Mapping as an Innovation in Reading and Writing Learning : A Study of Understanding Arabic Texts', *Alibbaa': Jurnal Pendidikan Bahasa Arab*, Vol. 6.No. 1 (2025), pp. 121–37

Nunun Indrasari, Riana Julita, 'Guided Questions Technique for Teaching Writing Skill of Descriptive Text', *Englis Education: Jurnal Tadris Bahasa Inggris*, Vol. 11.No. 1 (2021), pp. 160–72

Pérez-jorge, David, and others, 'Technologies Applied to Education in the Learning of English as a Second Language', *Frontiers in Education*, Vol. 10.No. 3 (2025), doi:10.3389/feduc.2025.1481708

Qolami, Hawa, and Ahmad Rizki Nugrahawan, 'The Effectiveness of BARUSIDA Application on Arabic Learning Outcomes of Students at Junior High School', *Journal Indonesia Institute for Conselling, Education and Therpy*, Vol. 4.No. 2 (2023), pp. 75–81

Raimes, Ann, *Techniques In Teaching Writing* (Oxford University Press, 1983)

Rokhuma, Chubbi Millatina, and Fasikha Al-Izhar, 'EFL Student' Experience of Picture Series Collaborative Narrative: Highlighting Indonesia Vocational High School Students' Voice', *Journal of English Teaching and Applied Linguistics*, Vol. 4.No. 2 (2023), doi:10.36655/jetal.v4i2.1092

Seify, Nastaran, and Saeid Najafi Sarem, 'The Impact of Interactional Scaffolding on the Complexity and Accuracy of Argumentative

Writing : A Study of Iranian EFL Learners', *Journal of Applied Linguistics Studies*, Vol. 5.No. 1 (2025), pp. 128–37

Veddayana, Campin, and others, 'Systematic Review : How Technology Supports Collaborative Writing Learning in Higher Education', *The Electronic Journal of E-Learning*, V2ol. 3.No. 3 (2025), pp. 64–78

Wright, Andrew, *Picture for Language Learning* (Cambridge University Press, 1989)

Zahari, Musril, and others, 'Optimizing Student Writing Performance in Higher Education : A Quantitative Study of Teacher Feedback and Classroom Environment', *Social Sciences & Humanities Open*, Vol. 11.No. 10 (2025), p. 101286, doi:10.1016/j.ssaho.2025.101286

Zubaidi, Ahmad, and others, 'Enhancing Arabic Writing Skills Using Chat GPT-Based AI Learning Models : A Tridimensional Human-AI Collaboration Framework', *Indonesian Journal of Applied Linguistics*, Vol. 15.No. 1 (2025), pp. 87–101